



23rd Annual Meeting of the
Organization for Human Brain Mapping

POSTER LISTINGS

June 25–29, 2017

Vancouver Convention Centre | Vancouver, British Columbia, Canada





Poster Listings

Poster Category Key

Monday and Tuesday Posters 3

Wednesday and Thursday Posters 4

Monday and Tuesday Posters

Brain Stimulation Methods 5

Disorders of the Nervous System 10

Emotion and Motivation 34

Imaging Methods 38

Informatics 51

Modeling and Analysis Methods 56

Motor Behavior 69

Neuroanatomy 70

Perception and Attention 76

Physiology, Metabolism and Neurotransmission 84

Wednesday and Thursday Posters

Disorders of the Nervous System 86

Genetics 104

Higher Cognitive Function 108

Imaging Methods 114

Language 125

Learning and Memory 130

Lifespan Development 135

Modeling and Analysis Methods 143

Social Neuroscience 160

Author Index 165

POSTER CATEGORY KEY

Monday and Tuesday Posters

Poster Numbers #1000-2223 (MT)

- Display Days: Your poster should be displayed on your assigned poster board on Monday and Tuesday.
- Set-Up Time: Please set-up your poster from 8:00 – 9:00 am on Monday morning ONLY. **Posters placed before this time, will be removed.**
- Poster Stand-By Times:
 - Even numbered posters between #1000-2222 will stand-by and present their poster on Monday, June 26 from 12:45 – 14:45.
 - Odd numbered posters between #1001-2223 will stand-by and present their poster on Tuesday, June 27 from 12:45 – 14:45.
- Poster Reception: All Monday and Tuesday poster presenters will have a poster reception on Tuesday, June 27 from 17:00 – 18:30. You may stand by your poster during this time.
- Poster Teardown: Monday and Tuesday presenters should remove their posters IMMEDIATELY after the poster reception on Tuesday night at 18:30. **IMPORTANT! Posters not removed by the end of the posted teardown time will be recycled.**

CATEGORY/SUB-CATEGORY	POSTER NUMBERS	CATEGORY/SUB-CATEGORY	POSTER NUMBERS	CATEGORY/SUB-CATEGORY	POSTER NUMBERS
Brain Stimulation Methods		Imaging Methods		Neuroanatomy	
Deep Brain Stimulation	1000-1008	BOLD fMRI	1441-1553	Anatomy and Functional Systems	1983-1992
Direct Electrical/Optogenetic Stimulation	1009-1010	Diffusion MRI	1554-1612	Cortical Anatomy and Brain Mapping	1993-2020
Invasive Stimulation Methods Other	1012-1014	Multi-Modal Imaging	1613-1645	Cortical Cyto- and Myeloarchitecture	2021-2024
Non-invasive Electrical/tDCS/tACS/tRNS	1015-1032			Microcircuitry and Modules	2025-2026
Non-invasive Magnetic/TMS	1033-1039	Informatics		Neuroanatomy Other	2027-2028
Non-Invasive Stimulation Methods Other	1040-1045	Brain Atlases	1646-1662	Normal Development	2029-2032
Sonic/Ultrasound	1046	Databasing and Data Sharing	1663-1685	Subcortical Structures	2033-2037
TDCS	1047-1053	Informatics Other	1686-1698	White Matter Anatomy, Fiber	
TMS	1054-1070	Workflows	1699-1718	Pathways and Connectivity	2038-2072
Disorders of the Nervous System		Modeling and Analysis Methods		Perception and Attention	
Addictions	1071-1119	Bayesian Modeling	1719-1731	Attention: Auditory/Tactile/Motor	2073-2076
Anxiety Disorders	1120-1142	Diffusion MRI Modeling and Analysis	1732-1752	Attention: Visual	2077-2086
Autism	1143-1199	EEG/MEG Modeling and Analysis	1753-1795	Chemical Senses: Olfaction, Taste	2087-2090
Bipolar Disorder	1200-1205	Exploratory Modeling and Artifact Removal	1796-1803	Consciousness and Awareness	2091-2107
Depressive Disorders	1206-1256	Motion Correction and Preprocessing	1804-1821	Perception and Attention Other	2109-2113
Medical illness with CNS impact (e.g. chemotherapy, diabetes, hypertension)	1257-1280	Multivariate modeling	1822-1847	Perception: Auditory/ Vestibular	2114-2126
Obsessive-Compulsive Disorder and Tourette Syndrome	1281-1300	Other Methods	1848-1852	Perception: Multisensory and Crossmodal	2127-2134
Research Domain Criteria studies (RDoC)	1301-1303	PET Modeling and Analysis	1853-1855	Perception: Pain and Visceral	2135-2150
Schizophrenia and Psychotic Disorders	1304-1369	Segmentation and Parcellation	1857-1886	Perception: Tactile/Somatosensory	2151-2160
Sleep Disorders	1370-1379	Task-Independent and Resting-State Analysis	1887-1948	Perception: Visual	2161-2193
Emotion and Motivation		Univariate Modeling	1949-1951	Sleep and Wakefulness	2194-2202
Emotion and Motivation Other	1380-1392	Motor Behavior		Physiology, Metabolism and Neurotransmission	
Emotional Learning	1393-1399	Brain Machine Interface	1952-1961	Cerebral Metabolism and Hemodynamics	2203-2207
Emotional Perception	1400-1424	Mirror System	1962-1963	Neurophysiology of Imaging Signals	2208-2212
Reward and Punishment	1425-1436	Motor Behavior Other	1964-1968	Pharmacology and Neurotransmission	2213-2218
Sexual Behavior	1437-1440	Motor Planning and Execution	1969-1976	Physiology, Metabolism and Neurotransmission Other	2219-2223
		Visuo-Motor Functions	1977-1982		

Wednesday and Thursday Posters

Poster Numbers #3000-4261 (WTh)

- Display Days: Your poster should be displayed on your assigned poster board on Wednesday and Thursday.
- Set-Up Time: Please set-up your poster from 8:00 – 9:00 am on Wednesday morning ONLY.
Posters placed before this time, will be removed.
- Poster Stand-By Times:
 - Even numbered posters between #3000-4260 will stand-by and present their poster on Wednesday, June 28 from 12:45 – 14:45.
 - Odd numbered posters between #3001-4261 will stand-by and present their poster on Thursday, June 29 from 12:45 – 14:45.
- Poster Reception: All Wednesday and Thursday poster presenters will have a poster reception on Thursday, June 29 from 16:00 – 17:30.
- Poster Teardown: Wednesday and Thursday presenters should remove their posters IMMEDIATELY after the poster reception on Thursday night at 18:30. IMPORTANT!
Posters not removed by the end of the posted teardown time will be recycled.

CATEGORY/SUB-CATEGORY	POSTER NUMBERS	CATEGORY/SUB-CATEGORY	POSTER NUMBERS	CATEGORY/SUB-CATEGORY	POSTER NUMBERS
Disorders of the Nervous System		Imaging Methods		Lifespan Development	
Alzheimer's Disease and Other Dementias	3000-3055	Anatomical MRI	3430-3489	Aging	3777-3828
Disorders of the Nervous System Other	3056-3093	EEG	3490-3532	Lifespan Development Other	3829-3845
Eating Disorders	3094-3099	Imaging Methods Other	3533-3545	Normal Brain Development: Fetus to Adolescence	3846-3891
Epilepsy	3100-3136	Imaging of CLARITY	3546		
Other Psychiatric Disorders	3137-3158	MEG	3547-3576	Modeling and Analysis Methods	
Parkinson's Disease and Movement Disorders	3159-3218	MR Spectroscopy	3577-3588	Classification and Predictive Modeling	3892-3943
Stroke	3219-3255	NIRS	3589-3603	fMRI Connectivity and Network Modeling	3944-4099
Traumatic Brain Injury	3256-3291	Non-BOLD fMRI	3604-3609	Image Registration and Computational Anatomy	4100-4111
		PET	3610-3612	Methods Development	4112-4196
		Polarized light imaging (PLI)	3613		
Genetics		Language		Social Neuroscience	
Genetic Association Studies	3292-3307	Language Acquisition	3614-3618	Self Processes	4197-4202
Genetic Modeling and Analysis Methods	3308-3313	Language Comprehension and Semantics	3619-3638	Social Cognition	4203-4232
Genetics Other	3314-3317	Language Other	3639-3647	Social Interaction	4233-4250
Neurogenetic Syndromes	3318-3321	Reading and Writing	3648-3666	Social Neuroscience Other	4251-4261
Transcriptomics	3322-3325	Speech Perception	3667-3679		
		Speech Production	3680-3689		
Higher Cognitive Functions		Learning and Memory			
Decision Making	3326-3350	Implicit Memory	3690-3691		
Executive Function	3351-3376	Learning and Memory Other	3692-3702		
Higher Cognitive Functions Other	3377-3392	Long-Term Memory (Episodic and Semantic)	3703-3727		
Imagery	3393-3400	Neural Plasticity and Recovery of Function	3728-3738		
Music	3401-3413	Skill Learning	3739-3751		
Reasoning and Problem Solving	3414-3417	Working Memory	3752-3776		
Space, Time and Number Coding	3418-3429				

Monday, June 26, 2017 and Tuesday, June 27, 2017

* Indicates poster will also be presented during an Oral Session.

All Information listed, including author affiliations, appear as submitted during the Call For Abstracts.

BRAIN STIMULATION METHODS

Deep Brain Stimulation

- 1000*** **Network effects of subthalamic nucleus deep brain stimulation on the prefrontal cortex**
F. Konrad Schumacher^{1,2,3,4,5}, Florian Amtage^{1,2,4,5}, Eike Middell^{4,6}, Christoph Schmitz^{4,6}, Lena Schumacher^{1,2,5,7,8}, Andreas Horn⁹, Tobias Piroth^{1,5}, Cornelius Weiller^{1,2,4,5}, Björn Schelter^{1,2,4,5,10}, Volker Coenen^{4,5,11}, Christoph Kaller^{1,2,4,5}
¹Dept. of Neurology, Medical Center – University of Freiburg, Freiburg, Germany, ²Freiburg Brain Imaging Center, University of Freiburg, Freiburg, Germany, ³Faculty of Biology, University of Freiburg, Freiburg, Germany, ⁴BrainLinks-BrainTools Cluster of Excellence, University of Freiburg, Freiburg, Germany, ⁵Faculty of Medicine, University of Freiburg, Freiburg, Germany, ⁶NIRx Medizintechnik GmbH, Berlin, Germany, ⁷Dept. of Neuroradiology, Medical Center – University of Freiburg, Freiburg, Germany, ⁸Dept. of Medical Psychology and Medical Sociology, Medical Center – University of Freiburg, Freiburg, Germany, ⁹Dept. for Neurology, Beth Israel Deaconess Center, Harvard Medical School, Boston, United States, ¹⁰Institute for Complex Systems and Mathematical Biology, University of Aberdeen, Aberdeen, United Kingdom, ¹¹Dept. of Stereotactic and Functional Neurosurgery, Medical Center – University of Freiburg, Freiburg, Germany
- 1001** **Structural Imaging Evaluation of Subcallosal Cingulate DBS for Treatment-Resistant Depression**
Kara Johnson^{1,2}, Darren Clark³, Gordon Duffley^{1,2}, Rajamannar Ramasubbu³, Zelma Kiss³, Christopher Butson^{1,2,4}
¹Scientific Computing and Imaging (SCI) Institute, University of Utah, Salt Lake City, UT, ²Department of Bioengineering, University of Utah, Salt Lake City, UT, ³Departments of Clinical Neuroscience and Psychiatry, University of Calgary, Calgary, Alberta, ⁴Departments of Neurology and Neurosurgery, University of Utah, Salt Lake City, UT
- 1002** **Structural network architecture predicts the clinical outcome of DBS in Parkinson's patients**
Nabin Koirala¹, Angela Radetz², Muthuraman Muthuraman³, Sergiu Groppa²
¹Johannes Gutenberg university mainz, Mainz, Deutschland, ²Johannes Gutenberg University, Mainz, Germany, ³Johannes Gutenberg University, Mainz, Germany
- 1003** **Nucleus subthalamicus mapping through analyses of intraoperative spikes and beta oscillations**
Muthuraman Muthuraman¹, Abdul Rauf Anwar², Nabin Koirala¹, Steffen Paschen³, Julia Kroth¹, Martin Glaser⁴, Gunther Deuschl³, Sergiu Groppa¹
¹Johannes Gutenberg University, Mainz, Germany, ²Biomedical Engineering Department, Lahore, Pakistan, ³Department of Neurology, University of Kiel, Kiel, Germany, ⁴Department of Neurosurgery, University Medical Centre of the Johannes Gutenberg University Mainz, Mainz, Germany
- 1004** **Modulation of DBS on the brain signal variability in Parkinson's disease**
Ke Zeng¹, He Chen¹, Chunyan Cao², Bomin Sun², Xiaoli Li¹
¹Beijing Normal University, Beijing, China, ²Affiliated Ruijin Hospital, Shanghai, China

- 1005** **Probabilistic mapping in deep brain stimulation: Different strategies and their impact on analysis**
Till Dembek¹, Jan Roediger¹
¹Department of Neurology, University of Cologne, Cologne, NRW
- 1006** **Brain shift in connectomic targeting for subcallosal cingulate deep brain stimulation**
Ki Sueng Choi¹, Angela Noecker², Patricio Riva-Posse¹, Justin Rajendra¹, Robert Gross¹, Helen Mayberg¹, Cameron McIntyre²
¹Emory University, Atlanta, GA, ²Case Western Reserve University, Cleveland, OH
- 1007** **Tractography patterns of side effects of deep brain stimulation in Parkinson's disease**
Shruti Nanivadekar¹, Paul Taylor², Codrin Lungu¹, Silvina Horovitz¹
¹National Institute of Neurological Disorders and Stroke, Bethesda, MD, United States, ²National Institute of Mental Health, Bethesda, MD, United States
- 1008** **Pattern Classification of Discrete BOLD Activation Induced by Deep Brain Stimulation in the Pig**
Shinho Cho¹, Myung-Ho In¹, Megan Settell¹, Hoon-Ki Min¹, Hang Joon Jo¹, Kendall Lee¹
¹Department of Neurosurgery, Mayo Clinic, Rochester, MN

BRAIN STIMULATION METHODS

Direct Electrical/Optogenetic Stimulation

- 1009** **Direct Cortical Stimulation Results in Slower Reaction Times Compared to Peripheral Touch in Humans**
David Caldwell¹, Jeneva Cronin¹, Kurt Weaver¹, Rajesh Rao¹, Jeffrey Ojemann¹
¹University of Washington, Seattle, WA
- 1010** **Human perception of direct cortical stimulation of somatosensory cortex**
Jeneva Cronin¹, David Caldwell¹, Kurt Weaver¹, Rajesh Rao¹, Jeffrey Ojemann¹
¹University of Washington, Seattle, WA

BRAIN STIMULATION METHODS

Invasive Stimulation Methods Other

- 1012 In-vivo measurements of brain tissue impedance for detecting the epileptogenic zone**
Laurent Koessler¹, Sophie Colnat-Coulbois², Thierry Cecchin³, Janis Hofmanis⁴, Jacek Dmochowski⁵, Anthony Norcia⁶, Louis Maillard¹
¹CNRS UMR7039 & CHRU Nancy, neurology department, Nancy, France, ²CHRU Nancy, neurosurgery department, Nancy, France, ³CNRS UMR7039, Nancy, France, ⁴Ventspils University, Ventspils, Latvia, ⁵City college of New York, Department of biomedical engineering, New York, United States, ⁶Stanford University, Department of Psychology, Stanford, United States
- 1013 Cortico-cortical evoked potentials based effective connectivity study within the human temporal lobe**
Julien Krieg¹, Laurent Koessler², Jacques Jonas³, Sophie Colnat-Coulbois⁴, Jean-Pierre Vignal⁵, Christian Benar⁶, Louis Maillard⁷
¹CNRS UMR7039, Nancy, France, ²CNRS UMR7039 & Neurology department, CHU Nancy, Nancy, France, ³Neurology department, CHU Nancy, Nancy, France, ⁴CHRU Nancy, neurosurgery department, NANCY, France, ⁵CNRS UMR7039 & Neurology department, CHU Nancy, Nancy, France, ⁶INSERM UMR1106, Marseille, France, ⁷CNRS UMR7039 & CHRU Nancy, neurology department, Nancy, France
- 1014 Evaluation of finite-element based modeling of cortical current injection**
Kimia Shayestehfar¹, Moritz Dannhauer², Jeneva Cronin³, David Caldwell³, Alexis Gkogkidis⁴, Rob MacLeod⁵, Tonio Ball⁶, Jeffrey Ojemann³, Dana Brooks¹
¹Northeastern University, Boston, MA, ²University of Utah, Providence, RI, ³University of Washington, Seattle, WA, ⁴Medical Center, Faculty of Medicine, University of Freiburg, Freiburg, Germany, ⁵Scientific Computing and Imaging Institute, Salt Lake City, UT, ⁶University of Freiburg, Freiburg, Germany

BRAIN STIMULATION METHODS

Non-invasive Electrical/tDCS/tACS/tRNS

- 1015* Frequency-dependent tACS modulation of BOLD signal during rhythmic visual stimulation**
Yuhui Chai¹, Jingwei Sheng², Peter Bandettini¹, Jia-Hong Gao²
¹Section of Functional Imaging Methods, National Institute of Mental Health, Bethesda, MD, ²Center for MRI Research, Peking University, Beijing, China
- 1016 Parietal 10-Hz tACS Induces Differential Modulation of Brain Dynamics in the DMN and Rich Club**
Claudia Tesche¹, Jon Houck^{1,2}
¹University of New Mexico, Albuquerque, NM, ²The Mind Research Network, Albuquerque, NM
- 1017 Assessing tACS-induced phosphene perception using adaptive Bayesian optimization**
Romy Lorenz¹, Laura Simmons¹, Ricardo Monti¹, Joy Arthur², Severin Limal¹, Robert Leech¹, Ines Violante¹
¹Imperial College London, London, UK, ²Imperial College London, London

- 1018 Modulating Motor Cortical Network Interactions using Transcranial Direct Current Stimulation.**
Pejman Sehatpour¹, Johanna Kreither¹, Devin Adair², Stephanie Rohrig³, Matthew Hoptman³, Antigona Martinez³, Daniel Javitt¹
¹Columbia University, New York, NY, ²The City University of New York, New York, NY, ³The Nathan Kline Institute, Orangeburg, NY
- 1019 Measurements and models of electric fields in the in vivo human brain during TES**
Yu Huang¹, Anli Liu², Belen Lafon¹, Daniel Friedman², Michael Dayan³, Xiuyuan Wang², Marom Bikson⁴, Orrin Devinsky², Lucas Parra⁴
¹The City College of New York, New York, NY, ²Comprehensive Epilepsy Center, New York University School of Medicine, New York, NY, ³Department of Neurology, Mayo Clinic, Rochester, MN, ⁴City College of New York, New York, United States
- 1020 Modulation of interhemispheric connectivity by alternating current stimulation (tACS) impacts on bim**
Kirstin-Friederike Heise¹, Thiago Santos Monteiro¹, Inge Leunissen¹, Dante Mantini¹, Stephan Swinnen¹
¹KU Leuven, Leuven, Belgium
- 1021 Real-time EEG Forecasting and Phase-locked, 'Closed-loop' tACS.**
Farrokh Mansouri¹, José Zariffa^{1,2}, Jonathan Downar^{3,4}
¹Institute of Biomaterial and Biomedical Engineering, University of Toronto, Toronto, Ontario, Canada, ²Toronto Rehab Institute, University Health Network, Toronto, Ontario, Canada, ³MRI-Guided rTMS Clinic, University Health Network, Toronto, Ontario, Canada, ⁴Department of Psychiatry, University of Toronto, Toronto, Ontario, Canada
- 1022 Using EEG recordings to target active brain areas with transcranial electrical stimulation**
Jacek Dmochowski¹, Laurent Koessler², Anthony Norcia³, Marom Bikson¹, Lucas Parra¹
¹City College of New York, New York, United States, ²CNRS UMR7039, Nancy, France, ³Stanford University, Department of Psychology, Stanford, United States
- 1023 Externally induced theta rhythms modulate brain network dynamics**
Ines Violante¹, Lucia Li¹, David Sharp¹
¹Imperial College London, London, United Kingdom
- 1024 Transcranial Electrical Stimulation for Mild Traumatic Brain Injury: MEG and Symptom Improvements**
Mingxiong Huang¹, Ashley Robb Swan¹, Annemarie Angeles Quinto¹, Scott Matthews², Deborah Harrington¹, Sharon Nichols¹, Barry Bruder³, Corey Snook³, Charles Huang¹, Jeffrey Huang⁴, Dewleen Baker¹, Roland Lee¹
¹University of California, San Diego, San Diego, CA, ²ASPIRE Center, VASDHS Residential Rehabilitation Treatment Program, San Diego, CA, ³IASIS Technologies, Los Angeles, CA, ⁴Westview High School, San Diego, CA
- 1025 Effect of transcutaneous vagus nerve stimulation in tinnitus patients: a functional MRI study**
Natalia Yakunina¹, Sam Soo Kim², Eui-Cheol Nam³
¹Kangwon National University, Institute of Medical Science, Chuncheon, Korea, Republic of, ²Kangwon National University, Department of Radiology, Chuncheon, Gangwon-do, ³Kangwon National University, Department of Otolaryngology, Chuncheon, Gangwon-do
- 1026* Causal contributions of beta and gamma oscillations to motor control**
Inge Leunissen¹, James Coxon², Thiago Santos Monteiro¹, Kirstin-Friederike Heise¹, Stephan Swinnen¹
¹KU Leuven, Leuven, Belgium, ²Monash University, Melbourne, Australia

- 1027 Occipital tDCS Modulates Local Gamma Oscillations and Basal Alpha Levels**
Tony Wilson¹, Timothy McDermott¹, Mackenzie Mills¹, Rachel Spooner¹, Nathan Coolidge¹, Elizabeth Heinrichs-Graham¹
¹University of Nebraska Medical Center, Omaha, NE
- 1028 Toward reliable transcranial electric stimulation**
Alexander Opitz¹, Erin Yeagle², Axel Thielscher³, Charles Schroeder⁴, Ashesh Mehta⁵, Michael Milham⁶
¹Nathan Kline Institute, Orangeburg, NY, ²Hofstra Northwell School of Medicine & The Feinstein Institute for Medical Research, Manhasset, NY, ³Danish Research Center for Magnetic Resonance, Copenhagen, Denmark, ⁴Columbia University College of Physicians and Surgeons & Nathan Kline Institute, New York; Orangeburg, NY, ⁵Hofstra Northwell School of Medicine, Manhasset, NY, ⁶Child Mind Institute, New York, NY
- 1029 Visualising the timing effects of cathodal tDCS on motor task performance using concurrent fMRI**
Emily Hinson¹, Shaun Thein¹, Charlotte Stagg¹
¹University of Oxford, Oxford, United Kingdom
- 1030 Stimulating Thought: a fMRI study of tDCS and inhibitory control in schizophrenia**
Natasza Orlov¹, Owen O'Daly², John Rothwell³, Sukhi Shergill⁴
¹Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, United Kingdom, ²King's College London, London, United Kingdom, ³Institute of Neurology, University College London, London, United Kingdom, ⁴Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, United Kingdom
- 1031 Multisite Prediction of Depression Relapse Following Electroconvulsive Therapy**
Benjamin Wade¹, Jing Sui^{2,3}, Gerhard Helleman⁴, Amber Leaver⁵, Randall Espinoza⁶, Roger Woods⁷, Christopher Abbott⁸, Shantanu Joshi¹, Katherine Narr⁶
¹Ahmanson-Lovelace Brain Mapping Center, Department of Neurology, UCLA, Los Angeles, CA, ²The Mind Research Network, Albuquerque, NM, ³Brainnetome Center and National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, Beijing, China, ⁴Semel Institute, UCLA, Los Angeles, CA, ⁵Department of Psychiatry and Biobehavioral Sciences, University of California at Los Angeles, Los Angeles, United States, ⁶Department of Psychiatry and Biobehavioral Sciences, University of California at Los Angeles, Los Angeles, CA, ⁷UCLA Brain Mapping Center, Los Angeles, United States, ⁸Department of Psychiatry, University of New Mexico, Albuquerque, NM
- 1032 TDCS to augment nicotine withdrawal therapy – a multimodal neuroimaging study**
Daniel Keeser¹, Dominik Meißner², Tobias Rüther², N Reichenbach², H Ludwig², Anna Zeren², Susanne Karch², Ulrich Palm², Temmuz Karali¹, Marco Paolini³, Birgit Ertl-Wagner³, Frank Padberg²
¹Department of Psychiatry, Institute for Clinical Radiology, Ludwig-Maximilians University, Munich, Germany, ²Department of Psychiatry, Ludwig-Maximilians University, Munich, Germany, ³Institute for Clinical Radiology, Ludwig-Maximilians University, Munich, Germany

BRAIN STIMULATION METHODS

Non-invasive Magnetic/TMS

- 1033 Differential Effect of Intermittent Theta Burst rTMS in affected Cortical and Subcortical MCA Stroke**
Kyu-ho Lee¹, Sungju Jee²
¹Chungnam National University Hospital, Daejeon, Korea, Republic of, ²Chungnam National University Hospital, Daejeon, Korea, Republic of
- 1034 Increased activity in picture naming task after continuous TBS over the left Broca's area**
Woo-Kyoung Yoo¹, Hyun Jung Ahn¹, Ho Young Lee¹, Han Jun Kim¹, Suk Hoon Ohn¹, Kwang-Ik Jung¹
¹Hallym University Sacred Heart Hospital, Anyang, Korea, Republic of
- 1035 Changes in rs-fMRI induced by tSMS of the supplementary motor complex**
José Pineda-Pardo^{1,2}, Ignacio Obeso^{1,2}, Antonio Oliviero³, Bryan Strange^{4,5}, José Obeso^{1,2}, Guglielmo Foffani^{1,2}
¹Centro Integral de Neurociencias A.C., HM Hospitales Puerta del Sur., Móstoles, Madrid, ²CEU-San Pablo University, Madrid, Spain, ³FENNSI Group, Hospital Nacional de Paraplégicos, SESCAM, Toledo, Toledo, ⁴Laboratory for Clinical Neuroscience, Centre for Biomedical Technology, UPM, Pozuelo de Alarcón, Madrid, ⁵Department of Neuroimaging, Reina Sofia Centre for Alzheimer's Research, Madrid, Spain
- 1036 Repetitive brain stimulation induces long-term plasticity across populations and spatial scales**
Corey Keller¹, Wei Wu², Rachael Wright³, Lewis Kerwin³, Kasra Sarhadi³, Naho Ichikawa⁴, Julia Huemer⁵, Melinda Wong³, Lisa McTeague⁶, Ashesh Mehta⁷, Amit Etkin⁸
¹Stanford, Mountain View, CA, ²Stanford University, Palo Alto, CA, ³Stanford, Palo Alto, CA, ⁴Hiroshima University, Hiroshima, Japan, ⁵Medical University of Vienna, Vienna, Austria, ⁶MUSC, Charleston, SC, ⁷Hofstra Northwell School of Medicine, Manhasset, NY, ⁸Stanford University, Stanford, CA
- 1037 TMS Reshapes Spatial Distributions of Resting State Beta in Treatment-Resistant Depression**
Dorian Aur¹, Colleen Brenner², Daniel Blumberger³, Jonathan Downar⁴, Zafiris Daskalakis³, Christopher Pang¹, Raymond Lam¹, Fidel Vila-Rodriguez¹
¹University of British Columbia, Vancouver, Canada, ²Loma Linda University, Loma Linda, CA, ³Centre for Addiction and Mental Health, Toronto, Canada, ⁴University Health Network, Toronto, Canada
- 1038 Study of neural excitability in resilience: a TMS-EEG study**
Gabriel Gonzalez-Escamilla¹, Ventaka Chaitanya Chirumamilla¹, Tamara Tamara Bonertz¹, Muthuraman Muthuraman¹, Sergiu Groppa¹
¹Department of Neurology, Johannes Gutenberg University, Mainz, Germany
- 1039* NTMS-tractography reveals different errors may involve different segments of the arcuate fasciculus**
Davide Giampiccolo¹, Giovanni Raffa², Ina Baehrend³, Heike Schneider³, Tizian Rosenstock³, Peter Vajkoczy³, Thomas Picht³
¹University of Verona, Verona, Italy, ²University of Messina, Messina, Italy, ³Charité, Berlin, Germany

BRAIN STIMULATION METHODS

Non-invasive Stimulation Methods Other

- 1040 Evidence for error-based feedback control during intrinsic neuromodulation of emotional responding**
Keith Bush¹, Josh Cisler², Andrew James¹, Clint Kilts¹
¹University of Arkansas for Medical Sciences, Little Rock, AR, ²University of Wisconsin-Madison, Madison, WI
- 1041 7 Tesla Real-time fMRI using a real-time distortion correction algorithm**
Johan van der Meer^{1,2}, Lydia Hellrung³, Myung-Ho In⁴, Florian Götting⁵, Viola Borchardt⁶, Harald Möller⁶, Martin Walter⁵
¹QIMR Berghofer Medical Research Institute, Brisbane, Australia, ²Clinical Affective Neuroimaging Laboratory, Department of Behavioral Neurology, Leibniz Institute for Neurobiology, Magdeburg, Germany, ³Nuclear Magnetic Resonance Unit, Max Planck institute for human cognitive and brain sciences, Dresden, Germany, ⁴Department of Biomedical Magnetic Resonance, Otto-von-Guericke university, Magdeburg, Germany, ⁵Clinical Affective Neuroimaging Laboratory, Magdeburg, Germany, ⁶Nuclear Magnetic Resonance Unit, Max Planck institute for human cognitive and brain sciences, Leipzig, Germany
- 1042 Theta Burst stimulation induces cortical thickness increases in treatment-resistant major depression**
Karen Caeyenberghs¹, Vasileios Stavropoulos², Romain Duprat³, Debby Klooster⁴, Chris Baeken³
¹Australian Catholic University, Melbourne, VIC, ²Federation University Australia, Melbourne, VIC, ³University of Ghent, Ghent, Belgium, ⁴Eindhoven University of Technology, Eindhoven, Netherlands
- 1043 NIRS Observation of Changes in Brain Activity Following Low Field Magnetic Stimulation**
Michael Rohan¹, Rinah Yamamoto¹, Kyoko Ohashi¹, Yunjie Tong², Lia Hocke³, Blaise Frederick⁴, Bruce Cohen¹
¹McLean Hospital, Belmont, MA, ²Biomedical Engineering Department, Purdue University, West Lafayette, IN, ³University of Calgary, Calgary, Canada, ⁴Harvard University/ McLean Hospital, Boston, MA
- 1044 Sustained GABA reduction induced by anodal tDCS in motor cortex: A Proton MR Spectroscopy Study**
Harshal Jayeshkumar Patel¹, Sandro Romanzetti², Antonello Pellicano¹, Kathrin Reetz², Ferdinand Binkofski^{1,3}
¹Division of Clinical Cognitive Sciences, RWTH Aachen University Hospital, Aachen, Germany, ²Department of Neurology, RWTH Aachen University Hospital, Aachen, Germany, ³Institute of Neuroscience and Medicine, Research Center Jülich GmbH, Jülich, Germany
- 1045 Low level light therapy effects on cognitive interference processing**
Adina Mincic¹
¹University of Oradea, Center for Systems Neuroscience, Oradea, Romania

BRAIN STIMULATION METHODS

Sonic/Ultrasound

- 1046 Transcranial focused ultrasound on human dorsolateral prefrontal cortex functional connectivity**
Leo Ai¹, Jerel Mueller², Priya Bansal², Wynn Legon²
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BRAIN STIMULATION METHODS

TDCS

- 1047 Evaluation of a novel MRI technique for mapping in-vivo currents and hemodynamic changes during tDCS**
Mayank S. Jog¹, Lirong Yan², Kay Jann², Danny Wang²
¹University of California Los Angeles, Los Angeles, CA, ²University of Southern California, Los Angeles, CA
- 1048 Bilateral temporal tDCS enhances sleep-dependent episodic memory consolidation**
Matthias Grieder¹, Sarah Mueller¹, Stephanie Winkelbeiner¹, Thomas Dierks¹
¹University of Bern, Bern, Switzerland
- 1049* Test-retest reliability of prefrontal tDCS effects on resting-state connectivity in healthy subjects**
Jana Woerschling¹, Frank Padberg¹, Konstantin Helbich², Alkomiet Hasan¹, Lena Koch¹, Sophia Stoecklein³, Birgit Ertl-Wagner⁴, Daniel Keeser^{5,3}
¹Department of Psychiatry and Psychotherapy, Ludwig-Maximilians-University, Munich, Germany, ²Department of Psychiatry and Psychotherapy, Ludwig-Maximilians-University, Munich, Germany, ³Institute for Clinical Radiology, Ludwig-Maximilians-University, Munich, Germany, ⁴Institute of Clinical Radiology, Ludwig-Maximilians University, Munich, Germany, ⁵Institute of Clinical Radiology, Ludwig-Maximilians University, Munich, Germany
- 1050 Metabolite Changes after tDCS (anodal or sham) and Language Therapy for Primary Progressive Aphasia**
Ashley Harris¹, Bronte Ficek², Constantine Frangakis³, Richard Edden⁴, Argye Hillis², Kyrana Tsapkini²
¹University of Calgary, Calgary, Alberta, ²Johns Hopkins School of Medicine, Baltimore, MD, ³Johns Hopkins School of Public Health, Baltimore, MD, ⁴The Johns Hopkins University, Baltimore, MD
- 1051* Investigation on effects of transcranial direct current stimulation through a multi-scale modeling**
Hyeon Seo¹, Sung Chan Jun¹
¹Gwangju Institute of Science and Technology, Gwangju, Korea, Republic of
- 1052 Integrity of M1-M1 tracts predicts neurochemical response to M1 tDCS in non-stimulated hemisphere**
Ainslie Johnstone¹, Adam Berrington², Clark Lemke², Heidi Johansen-Berg², Uzay Emir², Charlotte Stagg², Velicia Bachtar³
¹University of Oxford, Oxford, Oxfordshire, ²University of Oxford, Oxford, United Kingdom, ³The Drake Foundation, London, United Kingdom

1053 Transcranial direct current stimulation (tDCS) current modeling in children after perinatal stroke*Helen Carlson¹, Patrick Ciechanski², Sabrina Yu², Adam Kirton¹*¹Alberta Children's Hospital, Calgary, Alberta, ²University of Calgary, Calgary, Alberta

BRAIN STIMULATION METHODS

TMS

1054 Network changes in response to thetburst TMS to the rpSTS*Daniel Handwerker¹, Geena Ianni¹, Benjamin Gutierrez¹, Vinai Roopchansingh¹, Javier Gonzalez-Castillo¹, Leslie Ungerleider¹, Peter Bandettini¹, David Pitcher²*¹NIMH, Bethesda, MD, ²The University of York, York, United Kingdom**1055 Evaluating potential anatomical correlates of TMS-evoked EEG responses***Kamal Shadi¹, Constantine Dvrolis¹, Michael Borich²*¹Georgia Institute of Technology, Atlanta, GA, ²Emory University, Atlanta, GA**1056 Profiling the neurophysiology of sensorimotor integration in aging***Katlyn Brown¹, Beatrice Francisco¹, Jason Neva², Samantha Feldman¹, W. Richard Staines³, Lara Boyd⁴*¹University of British Columbia, Vancouver, BC, ²University of British Columbia, Vancouver, British Columbia, ³University of Waterloo, Waterloo, Canada, ⁴University of British Columbia, Vancouver, Canada**1057 Transcallosal inhibition elicited from non-primary motor areas in healthy young & older individuals***Jason Neva¹, Kathryn Hayward^{1,2}, Katlyn Brown¹, Cameron Mang³, Lara Boyd^{1,4}*¹University of British Columbia, Vancouver, BC, ²Florey Institute of Neuroscience and Mental Health, Melbourne, Australia, ³University of Calgary, Calgary, AB, ⁴The Djavad Mowafaghian Centre for Brain Health, Vancouver, BC**1058* Connectomic insights into depression and TMS as a treatment option***Martin Tik¹, Michael Woletz¹, Georg Kranz², Daniela Pfabigan³, Nicole Geissberger¹, Ronald Sladky^{1,4}, Christoph Kraus², Bastian Auer³, Thomas Vanicek², Katharina Paul³, Rupert Lanzenberger², Claus Lamm³, Christian Windischberger¹*¹Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria, ²Department of Psychiatry and Psychotherapy, Medical University of Vienna, Vienna, Austria, ³Faculty of Psychology, University of Vienna, Vienna, Austria, ⁴Psychiatric Hospital, University of Zurich, Zurich, Switzerland**1059 ARTIST: Fully Automated Artifact Rejection for Single-Pulse TMS-EEG Data***Wei Wu¹, Corey Keller¹, Parker Longwell¹, Emmanuel Shpigel¹, Amit Etkin¹*¹Stanford University, Stanford, CA**1060 Differential effects of TMS on working memory depending on previous videogame experience***Marc Palaus¹, Diego Redolar-Ripoll¹, Raquel Viejo-Sobera¹, Elena Marrón¹*¹Cognitive NeuroLab. Open University of Catalonia (UOC), Barcelona, Spain**1061 Intraoperative validation of TMS and fMRI for determining the primary motor cortex***Charlotte Nettekoven¹, Volker Neuschmelting¹, Andrea Faymonville¹, Ana-Maria Oros-Peusquens², Gabriele Stoffels², Shivakumar Viswanathan³, Anne Rehme³, Roland Goldbrunner¹, Christian Grefkes³, Carolin Weiß Lucas¹*¹University Hospital of Cologne, Department of Neurosurgery, Cologne, Germany, ²Institute of Neuroscience and Medicine, Research Centre Jülich, Jülich, Germany, ³University Hospital of Cologne, Department of Neurology, Cologne, Germany**1062 Widespread and non-specific effects of consecutive TMS-fMRI of high-level visual cortex***Edward Silson¹, Iris Groen¹, Chris Baker²*¹NIMH, Bethesda, MD, ²National Institute of Mental Health, Bethesda, MD, United States**1063 Mapping TMS immediate effects by concurrent TMS/fMRI using a dedicated high-sensitivity coil array***Martin Tik¹, Michael Woletz¹, Lucia Navarro de Lara¹, Ronald Sladky^{2,1}, André Hoffmann¹, Anna-Lisa Schuler¹, David Willinger¹, Nicole Geissberger¹, Allan Hummer¹, Christian Windischberger¹*¹Medical University of Vienna, Vienna, Austria, ²University of Zurich, Zurich, Switzerland**1064 The effect of accelerated cTBS on functional connectivity in epilepsy patients***Debby Klooster^{1,2,3}, Sofie Carrette³, Rene Besseling^{1,2,3}, Evelien Carrette³, Robrecht Raedt³, Chris Baeken³, Willeke Stalanssens⁴, Pieter van Mierlo⁴, Anton Louw^{2,1}, Albert Aldenkamp^{2,1,3}, Paul Boon^{3,2,1}, Kristl Vonck³*¹Eindhoven University of Technology, Eindhoven, Netherlands, ²Kempenhaeghe, Heeze, Netherlands, ³Ghent University Hospital, Ghent, Belgium, ⁴Ghent University, Ghent, Belgium**1065 Scalp-based heuristics for locating the nodes of the salience network for use in neurostimulation***Arsalan Mir-Moghtadaei¹, Farrokh Mansouri², Katharine Dunlop¹, Kamran Mir-Moghtadaei³, Peter Giacobbe⁴, Sidney Kennedy⁵, Raymond Lam⁶, Fidel Vila-Rodriguez⁶, Zafiris Daskalakis⁷, Daniel Blumberger⁸, Jonathan Downar⁹*¹University of Toronto, Toronto, Ontario, ²University of Toronto, Toronto, Canada, ³University of Toronto, Mississauga, Ontario, ⁴Department of Psychiatry, University of Toronto, Toronto, ON, ⁵University Health Network, Toronto, Ontario, ⁶University of British Columbia, Vancouver, Canada, ⁷Centre for Addiction and Mental Health, Toronto, Canada, ⁸Center for Addiction and Mental Health, Toronto, ON, ⁹Krembil Research Institute, Toronto Western Hospital, Toronto, ON**1066 Cognitive and neural mechanisms of source memory improvement resulted from rTMS in older adults***Weicong Ren¹, Rui Li¹, Zhiwei Zheng¹, Mingwei Wang², Juan Li¹*¹Institute of Psychology, Chinese Academy of Sciences, Beijing, China, ²Key Laboratory of Brain Aging and Cognitive Neuroscience, Hebei Province, China, Shijiazhuang, China**1067 Duration Mismatch Negativity Reduced by Transcranial Magnetic Stimulation in Superior Temporal Gyrus***Yingying Tang¹, Chunwei Ying², Junjie Wang¹, Zhenying Qian¹, Tianhong Zhang¹, Junfeng Sun², Jijun Wang¹*¹Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, Shanghai, China, ²School of Biomedical Engineering, Shanghai Jiao Tong University, Shanghai, China**1068 Individual level reliability of PAS-induced neural plasticity in the corticospinal system***Yeun Kim¹, Jacqueline Ngo¹, Choi Deblieck², Dylan Edwards³, Bruce Dobkin¹, Allan Wu¹, Marco Iacoboni¹*¹University of California, Los Angeles, Los Angeles, CA, ²Universitair Psychiatrisch Centrum KU Leuven, Kortenberg, Belgium, ³Burke Institute of Medical Research, White Plains, NY

- 1069 Modulation of auditory mismatch negativity by repetitive transcranial magnetic stimulation**
Yi-Ting Lin¹, Fa-Hsuan Lin², Ming H. Hsieh¹
¹National Taiwan University Hospital, Taipei, Taiwan, ²National Taiwan University, Taipei, Taiwan

- 1070 Investigating the effects of sustained attention on motor cortex excitability**
Arsh Momin¹, Alex Chen¹, Jacqueline Palmer², Michael Borich^{2,1}
¹Georgia Institute of Technology, Atlanta, GA, ²Emory University, Atlanta, GA

DISORDERS OF THE NERVOUS SYSTEM

Addictions

- 1071 Altered Cortico-Cerebellar Functional Connectivity and Impulsivity in Internet Gaming Disorder**
Deokjong Lee¹, YOUNG-CHUL JUNG²
¹Yonsei Univ, Seoul, Korea, Republic of, ²Yonsei Univ., Seoul, Korea, Republic of

- 1072 Neuroanatomical changes associated with chronic cocaine consumption: a longitudinal MRI-Analysis**
Sarah Hirsiger¹, Jürgen Hänggi², Etna Engeli¹, Katrin Preller², Matthias Kirschner¹, Matthias Vonmoos¹, Erich Seifritz¹, Marcus Herdener¹, Boris Quednow^{1,3}
¹Psychiatric Hospital of the University of Zurich, Zurich, Switzerland, ²University of Zurich, Zurich, Switzerland, ³Neuroscience Center Zurich, University of Zurich and Swiss Federal Institute of Technology Zurich, Zurich, Switzerland

- 1073 Neural Mechanisms of Impaired Learning from Errors in Dependent Smokers**
Leonie Duehlmeier¹, Bianca Levis¹, Rob Hester¹
¹University of Melbourne, Melbourne, Australia

- 1074 Mesocorticolimbic functional connectivity as a function of methamphetamine exposure and abstinence**
Milky Kohno^{1,2}, Holly McCready^{3,4}, Laura Dennis^{3,4}, William Hoffman^{2,3}
¹Oregon Health and Science University, Portland, OR, ²Veterans Affairs Portland Health Care Center, Portland, OR, ³Oregon Health & Science University, Portland, OR, ⁴Veterans Affairs Portland Health Care System, Portland, OR

- 1075 Closed-loop and individualized training of smoking cue-reactivity with decoded EEG neurofeedback**
Junjie Bu¹, Ru Ma¹, Xiaochu Zhang¹
¹University of Science and Technology of China, Hefei

- 1076 Dopaminergic influences on large scale brain networks: A human MRI study**
Michael Tennekoon¹, Betty Jo Salmeron¹, Thomas Ross², Elliot Stein³
¹National Institute of Health, Baltimore, MD, ²NIDA, Baltimore, MD, ³nida-irp, baltimore, MD

- 1077 HTAAR1 SNP v288v Associated with Altered Ventral Striatal Connectivity in Methamphetamine Abuse**
William Hoffman^{1,2}, Milky Kohno², Xiao Shi², Holly McCready², Laura Dennis², Aaron Janowsky^{1,2}
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- 1078 Modulation of the COMT Val158Met Genotype on Resting-State EEG Coherence in Internet Gaming Disorder**
Ji Yoon Lee^{1,2}, Su Mi Park^{1,3}, Yeon Jin Kim¹, Dai Jin Kim⁴, Jung-Seok Choi^{1,5}
¹SMG-SNU boramae medical center, Seoul, Korea, Republic of, ²Interdisciplinary Program in Neuroscience, Seoul National University College of Natural Sciences, Seoul, Korea, Republic of, ³Department of Clinical Medical Sciences, Seoul National University College of Medicine, Seoul, Korea, Republic of, ⁴Seoul St. Mary's Hospital, Seoul, Korea, Republic of, ⁵Department of Psychiatry and Behavioral Science, Seoul National University College of Medicine, Seoul, Korea, Republic of

- 1079 Cannabis-related hippocampal volumetric abnormalities specific to subregions in dependent users**
Yann Chye¹, Chao Suo¹, Murat Yücel¹, Lauren den Ouden¹, Nadia Solowij², Valentina Lorenzetti^{3,4}
¹Brain and Mental Health Laboratory, School of Psychological Sciences, Monash University, Clayton, Victoria, Australia, ²School of Psychology and Illawarra Health and Medical Research Institute, University of Wollongong, Wollongong, New South Wales, Australia, ³School of Psychology, Institute of Psychology Health and Social Sciences, University of Liverpool, Liverpool, England, ⁴Brain and Mental Health Laboratory, School of Psychological Sciences, Monash University, Clayton, Australia, Australia

- 1080 COMT genetic polymorphism on auditory P300 and neurocognitive functions in Internet gaming disorder**
Yeon Jin Kim¹, MinKyung Park¹, Jae-A Lim¹, Cho Rong Nam¹, Aruem Choi¹, Jung-Seok Choi²
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- 1081 Long-term cannabis effects on brain structural connectivity**
Eleonora Fornari^{1,2}, Alessandra Griffo³, Isabelle Berger⁴, Philippe Maeder⁴, Jean-Marie Annoni⁵, Haithem Chtioui⁶, Bernard Favrat⁷, Christian Giroud⁸, Patric Hagmann⁹, Giovanni Battistella¹⁰
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- 1082 Impulsivity is reduced in social drinkers following real-time fMRI**
Harshawardhan Deshpande^{1,2}, Jonathan Lisinski¹, Sarah Snider¹, Mikhail Koffarnus¹, Warren Bickel^{1,3}, Stephen LaConte^{1,2}
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- 1083 The Self and Susceptibility: The Role of the Medial Prefrontal Cortex in Addiction Comorbidity**
Bradford Martins¹, Ricardo Caceda¹, Josh Cisler², Clint Kilts¹, Andrew James¹
¹University of Arkansas for Medical Sciences, Little Rock, AR, ²University of Wisconsin-Madison, Madison, WI

1084 Real-Time fMRI Neurofeedback as a Treatment for Alcohol Use Disorder – The SyBil-AA Clinical Trial

Martin Fungisai Gerchen¹, Martina Kirsch¹, Nathalie Bahs¹, Patrick Halli¹, Axel Schäfer¹, Sabine Hoffmann¹, Wolfgang Sommer¹, Falk Kiefer¹, Peter Kirsch¹

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1085 Increased attention bias on visual cues in internet gaming disorder: event-related potential study

Jung-Seok Choi¹, Sung Nyun Kim², Minah Kim², Yeon Jin Kim³, MinKyung Park⁴, Jun Soo Kwon²

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1086 Top-down regulation from the prefrontal cortex to insula via hypnosis reduces smoking craving

Ru Ma¹, Xiaoming Li^{1,2}, Lijun Chen¹, Haibao Wang³, Feng Gu¹, Lizhuang Yang¹, Ying Wang¹, Long Han¹, Qichao Wu¹, Wanwan Lv¹, Sabine Vollstadt-Klein⁴, Xiaochu Zhang^{1,5,6,7}

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1087 Working memory training changes the frontal alpha asymmetry of drug abstainers

Yaling Deng¹, Renlai Zhou²

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1088 Nucleus Accumbens Functional Connectivity at Rest is Related to Alcohol Consumption in Young Adults

Ilya Veer¹, Paul Jetzschmann¹, Maria Garbusow¹, Stephan Nebe², Miriam Sebold¹, Robin Frank¹, Eva Friedel¹, Andreas Heinz¹, Michael Smolka², Henrik Walter¹

¹Charité – Universitätsmedizin Berlin, Department of Psychiatry and Psychotherapy CCM, Berlin, Germany, ²Technische Universität Dresden, Department of Psychiatry and Psychotherapy, Dresden, Germany

1089 Striatum and thalamus structure is affected by age and years of crack cocaine addiction in humans.

Eduardo Garza-Villarreal^{1,2,3}, Mallar Chakravarty^{4,5}, Brian Hansen³, Simon Eskildsen³, Gabriel Devenyi⁶, Thania Balducci¹, Ernesto Reyes-Zamorano⁷, Sune Jespersen³, Pamela Perez-Palacios¹, Raihaan Patel^{8,5}, Jorge Gonzalez-Olvera¹

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1090 Cigarette Smoking Affects Subcortical Brain Morphometry in Young Male Adults

Fuchun Lin¹, Xun Han², Yao Wang², Weina Ding², Yawen Sun², Yan Zhou², Hao Lei¹

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1091 Altered Thalamic Morphometry in Adolescents with Internet Gaming Disorder After Multimodal Treatment

Fuchun Lin¹, Huan Li², Ran Tao², Hao Lei¹

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1092* ACC fails to modulate learning of prediction error in nicotine addiction: combining human/animal data

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Function & Disease, and School of Life Sciences, University of Science a, HeFei, Anhui, China, ³CAS

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1093 Microstructural Abnormalities Differ in HIV Patients with and without Chronic Marijuana Use

Chad Otoshi¹, Thomas Ernst¹, Kenichi Oishi², Linda Chang¹

¹University of Hawaii, John A. Burns School of Medicine, Honolulu, HI, ²Johns Hopkins School of Medicine, Baltimore, MD

1094 Insula: Effect of Alcohol Dependence on Structure and Function

Reza Momenan¹, Xi Zhu¹, Carlos Cortes¹, Sasha Brietzke¹

¹NIAAA, NIH, Bethesda, MD

1095 Pavlovian-Instrumental Transfer and its Predictive Properties of Alcohol Consumption in Young Adults

Stephan Nebe¹, Christian Sommer², Maria Garbusow³, Daniel Schad⁴, Quentin Huys⁵, Florian Schlagenhau⁶, Andreas Heinz³, Michael Smolka²

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1096 Alteration of White Matter Structure in Internet Gaming Disorder

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1097 Dynamic functional connectivity predicts cocaine relapse

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1098 Behavioral decoding of functionally related brain areas consistently linked to drug cue reactivity

Ranjita Poudel¹, Michael Riedel², Lauren Hill¹, Jessica Flannery¹, Taylor Salo¹, Angie Laird², Matthew Sutherland¹

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1099 Structural Connectivity in Children and Adolescents with ADHD who Lack Substance Use History

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1100 White Matter Microstructure in Stimulant Dependence: Meta-analytic findings from ENIGMA-Addiction

Anne Uhlmann¹, Scott Mackey², Patricia Conrod³, Hugh Garavan², Dan Stein⁴, Neda Jahanshad⁵, Elliot Stein⁶, Elisabeth Caparelli⁷, Edythe London⁸, Angelica Morales⁹, Dick Veltman¹⁰, Maartje Luijten¹¹, Sheng Zhang¹², Min Zhao¹³, Wenxu Zhuang¹³, Consortium ENIGMA¹⁴

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1101 Cerebellar gray matter volume is differentially affected by age in heavy marijuana users

Adriana Garcia-Hernandez¹, Diego Ladron de Guevara Cervantes², Angelica Vasquez-Hernandez³, Arafat Angulo-Perkins¹, Laura Nava-Gomez¹, Sarael Alcauter¹

¹Universidad Nacional Autonoma de Mexico, Queretaro, Mexico, ²Universidad Autonoma de Guadalajara, Guadalajara, Mexico, ³Universidad de las Americas Puebla, Puebla, Mexico

1102 Effects of single-dose nalmefene on neural cue-reactivity and emotion processing in harmful drinkers

Sabine Vollstädt-Klein¹, Christina Dinter¹, Damian Karl¹, Anne Koopmann¹, Derik Hermann¹, Karl Mann¹, Falk Kiefer¹

¹Central Institute of Mental Health, Mannheim, Germany

1103 Prefrontal cortex deactivation during decision-making in adolescent binge drinkers

Angelica Morales¹, Scott Jones¹, Bonnie Nagel¹

¹Oregon Health Sciences University, Portland, OR

1104 Frontostriatal Resting-state Connectivity and Substance Use in Youth: A Co-Twin Control Analysis

Scott Burwell¹, Stephen Malone¹, Kathleen Thomas¹, Ruskin Hunt¹, William Iacono¹

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1105 Cocaine dependence and borderline personality: clinical and amygdala connectivity characterization

Thania Balducci¹, Eduardo Garza-Villarreal², Ernesto Reyes-Zamorano³, Diego Angeles-Valez⁴, Sarael Alcauter⁵, Isabel Espinoza-Luna⁶, Jorge Gonzalez-Olvera⁷

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1106 Structural Changes in White Matter in Relation to Lifetime Alcohol Exposure in Alcoholic Patients

Jenny Ceccarini¹, Gil Leurquin-Sterk¹, Charlotte Sleurs², Martijn Devrome¹, Sabine Deprez², Stefan Sunaert², Koen Van Laere¹

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1107 Impulsivity and altered reward processing as endophenotypes for gambling disorder

Eve Limbrick-Oldfield¹, Rachel Cocks², Inge Mick², Remy Flechais², Samuel Turton², Anne Lingford-Hughes², Henrietta Bowden-Jones³, Luke Clark¹

¹University of British Columbia, Vancouver, British Columbia, ²Imperial College London, London, United Kingdom, ³CNWL NHS Trust, London, United Kingdom

1108 The Effect of Alcohol Abstinence on Functional Connectivity in Moderate-Heavy Alcohol Consumers

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1109 Neural Correlates of the Gambler's Fallacy in Patients with Gambling Disorder

Eve Limbrick-Oldfield¹, Rachel Cocks², Inge Mick², Michael Aitken³, Anne Lingford-Hughes², Henrietta Bowden-Jones⁴, Luke Clark⁵

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1110 Dynamic Functional Connectivity Discriminates Brain Effects of Alcohol, Nicotine and Cannabis

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1111 Cognitive inhibition and brain networks in cocaine addiction.

Diego Angeles-Valdez¹, Thania Balducci², Jorge Gonzalez-Olvera³, Sarael Alcauter⁴, Ernesto Reyes-Zamorano⁵, Eduardo Garza-Villarreal³

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1112 Altered resting state functional connectivity of left frontoparietal network in heavy cannabis users

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1113 White matter microstructure trajectories in youths at high and low risk for substance use disorders

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- 1114 Heavy cannabis use alters neurochemistry**
Sharlene Newman¹, Hu Cheng¹, Ashley Schnakenberg¹, Eli Calkins¹, Leah Moravec¹, William Hetrick¹, Brian O'Donnell¹
¹Indiana University Bloomington, Bloomington, IN
- 1115 Neuronal circuitry from electronic cigarette use from psychophysiological interaction analysis**
DaWoon Heo¹, Yujin Jang¹, Hyun-Chul Kim¹, Jong-Hwan Lee¹
¹Korea University, Seoul, Korea, Republic of
- 1116 Evaluation of MR-compatible e-cigarette smoking equipment to use in an MRI environment**
Sungman Jo¹, DaWoon Heo¹, Hyun-Chul Kim¹, Jong-Hwan Lee¹
¹Korea University, Seoul, Korea, Republic of
- 1117 Uncinate Connectivity, Cortical Thickness and Verbal Memory Performance in Young Cannabis users.**
Alan Francis¹, Nina Levar¹, Jodi Gilman¹
¹Harvard Medical School, Boston, MA
- 1118 Pattern classification identified large scale functional networks altered by nicotine use**
Reagan Wetherill¹, Hengyi Rao¹, Teresa Franklin¹, Yong Fan¹
¹University of Pennsylvania, Philadelphia, PA, United States
- 1119 Structure-function covariation in methamphetamine users underlying moral judgment**
Shruti Viji¹, Carla Harenski², Samantha Fede², Stefi Baum³, Kent Kiehl², Vince Calhoun²
¹University of Miami, Coral Gables, FL, ²The Mind Research Network, Albuquerque, NM, ³University of Manitoba, Winnipeg, Canada

DISORDERS OF THE NERVOUS SYSTEM

Anxiety Disorders

- 1120 Neuronal processing of affective touch in patients with Posttraumatic Stress Disorder**
Timmy Strauss¹, Kerstin Weidner¹, Ilona Croy¹
¹University Hospital Carl-Gustav-Carus, Dresden, Germany
- 1121 Mean Diffusion Kurtosis Correlated to Severity of Depressive and Postconcussive Symptoms**
Paolo Nucifora¹, Mitchel Kling^{2,3}, Richard Ross^{2,3}, Cobb Scott^{2,3}, Holly Barilla^{2,3}, Janeese Brownlow^{2,3}, Philip Gehrman^{2,3}, Seema Bhatnagar^{3,4}
¹Loyola University Chicago, Maywood, IL, ²Corporal Michael J. Crescenzo VA Medical Center, Philadelphia, PA, ³University of Pennsylvania, Philadelphia, PA, ⁴Children's Hospital of Philadelphia, Philadelphia, PA
- 1122 Eight-Week Mindfulness Training Improve Attentional Control Ability in Test Anxiety**
Wenpei Zhang¹, Renlai Zhou¹
¹Nanjing University, Nanjing, Jiangsu
- 1123 Effects of Mindfulness-based Cognitive Therapy on Premenstrual Syndrome**
Lirong Chen¹, Renlai Zhou²
¹Department of Psychology, Nanjing University, Nanjing, Jiangsu, ²Nanjing University, Nanjing, Jiangsu

- 1124 Altered heartbeat perception is associated with brain structure in generalized anxiety disorder**
Bin Zhang¹, Hui Li¹, Jijun Wang¹
¹Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, Shanghai, China
- 1125 Neural plasticity following psychotherapy in panic disorder: comorbid depression matters!**
Stefanie Kunas¹, Yunbo Yang², Benjamin Straube², Tilo Kircher², Alexander Gerlach³, Volker Arolt⁴, André Wittmann⁵, Andreas Stroehle⁵, Hans-Ulrich Wittchen⁶, Ulrike Lueken⁷
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- 1126 Hippocampal and mesio-temporal neural oscillations in a human anxiety task**
Athina Tzovara¹, Tommaso Fedele², Saurabh Khemka¹, Thomas Grunwald³, Niklaus Krayenbühl², Johannes Sarnthein², Dominik Bach¹
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- 1127 Disrupted Functional Connectivity in Adolescents with Generalized Anxiety Disorder**
Linlin Fan¹, Fan Yang², Ying Lin¹, Mei Liao³, Tianyi Zhai⁴, Yan Zhang³, Lingjiang Li³, Linyan Su³, Zhengjia Dai¹
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- 1128 RtfMRI Neurofeedback of Amygdala Enhances Amygdala-orbitofrontal Connectivity in Combat-related PTSD**
Vadim Zotev¹, Raquel Phillips¹, Masaya Misaki¹, Chung Ki Wong¹, Brent Wurfel¹, Matthew Meyer^{1,2}, Frank Krueger^{3,1}, Matthew Feldner^{4,1}, Jerzy Bodurka^{1,5}
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- 1129 The Threat of a Speech Affects Regional Homogeneity in Patients with Social Anxiety Disorder**
Jonas Engman¹, Andreas Frick¹, Mats Fredrikson¹, Tomas Furmark¹
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1130 Gray matter volume in Social Anxiety Disorder - a voxel-based morphometry multi-center mega-analysis

Janna Marie Bas-Hoogendam^{1,2,3}, Henk van Steenbergen^{1,3}, J. Nienke Pannekoek⁴, Jean-Paul Fouché⁵, Christine Lochner⁶, Coenraad J. Hattingh⁵, Henk R. Cremers⁷, Tomas Furmark⁸, Kristoffer Månsson⁹, Andreas Frick⁸, Jonas Engman⁸, Carl-Johan Boraxbekk^{10,11}, Per Carlbring¹², Gerhard Andersson^{9,13}, Mats Fredrikson^{8,13}, Thomas Straube¹⁴, Jutta Peterburs¹⁴, Heide Klumpp¹⁵, K. Luan Phan¹⁶, Karin Roelofs¹⁷, Dan Stein¹⁸, Nic van der Wee^{2,3}

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1131 Stable effects of GLRB gene variation on fear conditioning in panic disorder

Isabelle Ridderbusch¹, Yunbo Yang¹, Ulrike Lueken², Andreas Stroehle³, Bettina Pfleiderer⁴, Volker Arolt⁵, Hans-Ulrich Wittchen⁶, Juergen Deckert², Tilo Kircher⁷, Benjamin Straube⁷

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1132 Decreased White Matter Integrity in PTSD: Preliminary Results from the PGC-ENIGMA-PTSD Working Group

Emily Dennis¹, Negar Fani², Seth Disner³, Dmitry Isaev⁴, Stefan Du Plessis⁵, Courtney Haswell⁶, Jonathan Ipser⁷, Annerine Roos⁸, Sinead Kelly⁹, Saskia Koch¹⁰, Peter Kochunov¹¹, Mark Logue¹², Danielle Miller¹², Mark Miller¹², Katie McLaughlin¹³, Matthew Peverill¹³, Soraya Seedat⁵, Dan Stein⁷, Paul Thompson⁴, Steven van der Werff¹⁴, Nic van der Wee¹⁴, Neda Jahanshad¹⁵, Rajendra Morey⁶

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1133 Human noradrenergic conflict adaptation response predicts real-world stress resilience

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1134 Cross-frequency phase-amplitude coupling during threat in high and low socially anxious individuals

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1135 L-DOPA decreases spontaneous recovery of fear in a human fMRI study

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1136 Predictors of Internalizing Disorders in Adolescents: A Data-Driven Approach

Kelsey Hudson¹, Philip Spechler¹, Lee Jollans², Bader Chaarani¹, Scott Mackey¹, Nicholas Allgaier¹, Nicholas D'Albarto³, Brittany Fair¹, Catherine Orr¹, Matthew Albaugh⁴, Alexandra Potter⁴, Robert Althoff¹, Richard Watts¹, Robert Whelan², Hugh Garavan¹

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1137 Abnormalities of brain function and morphology in patients with generalized anxiety disorder

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1138 Hippocampal Subfields in PTSD: Preliminary Results from the ENIGMA PTSD Working Group

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1139 Neural Contributions to Improved Cognitive Performance by Threat of Shock at 7T

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1140 Targeting Naturally Occurring Fears Using Unconscious Multivoxel Neurofeedback

Vincent Taschereau-Dumouchel¹, Hakwan Lau¹

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1141 Alterations in Neural Response to Salient Distractors in Social Anxiety DisorderJung Eun Shin¹, Yoon Ji Lee¹, So-Yeon Kim², Soo-Hee Choi¹¹Department of Psychiatry, Seoul National University Hospital, Seoul, Korea, Republic of,²Department of Psychology, Deoksung Women University, Seoul, Korea, Republic of**1142 Locus Coeruleus Activity mediates Hyper-Responsiveness in Posttraumatic Stress Disorder**Thomas Zeffiro¹, Christoph Naegeli², Marco Piccirelli², Assia Jaillard³, Anina Weilenmann², Katayun Hassanpour², Matthias Schick², Michael Rufer², Scott Orr⁴, Christoph Mueller-Pfeiffer⁵¹Neurometrika, Potomac, MD, ²University Hospital Zurich, Zurich, Switzerland, ³CHU de Grenoble, Grenoble, France, ⁴Massachusetts General Hospital and Harvard Medical School, Boston, MA,⁵University Hospital, Zurich, Switzerland

DISORDERS OF THE NERVOUS SYSTEM

Autism

1143 Classification of Resting-state fMRI in Autism and Control Subjects Using a Support Vector MachineTetsuya Iidaka¹, Tomohiro Kogata¹, Epifanio Bagarinao¹¹Nagoya University, Nagoya, Japan**1144 Electrophysiological Marker of Potential Excitatory:Inhibitory Imbalance in Autism Spectrum Disorder**Lauren Shuffrey¹, Lisa Levinson², Karen Froud²¹Columbia University Medical Center, New York, United States, ²Columbia University, New York, NY**1145 Neuroanatomical Prediction of ASD and ADHD Dimensionality Using Machine Learning**Devon Shook¹, Branko van Hulst¹, Yvonne Rijks², Hugo Schnack², Sarah Durston²¹University Medical Center Utrecht, Utrecht, Netherlands, ²University Medical Center Utrecht, Utrecht, Netherlands**1146 Visual-speech recognition in autism is associated with reduced response in visual movement areas.**Kamila Borowiak^{1,2}, Katharina von Kriegstein^{3,4}¹Max Planck Institute für Human Cognitive and Brain Sciences, Leipzig, Germany, ²Berlin School of Mind and Brain, Berlin, Germany, ³Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ⁴Humboldt University of Berlin, Berlin, Germany**1147 Modulation of Brain Activation and Serotonin during Response Inhibition in Autism using Tianeptine**Robert Wichers^{1,2}, James Findon^{1,2}, Vincent Giampietro¹, Dene Robertson¹, Clodagh Murphy^{1,2}, Grainne McAlonan^{1,2}, Katya Rubia³, Christine Ecker⁴, Eileen Daly^{1,2}, Declan Murphy^{1,2}¹Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, United Kingdom, ²The Sackler Institute for Translational Neurodevelopment, King's College London, London, United Kingdom, ³MRC SGDP Centre, King's College London, London, United Kingdom, ⁴Department of Child and Adolescent Psychiatry, Psychosomatics and Psychiatry, Goethe-University Frankfurt, Frankfurt, Germany**1148 Abnormal grey matter microstructure in infants at risk of Autism Spectrum Disorder**Rali Dimitrova^{1,2}, Dafnis Batalle¹, Judit Ciarrusta^{1,2}, Jonathan O'Murcheartaigh¹, Emily Perry², Vladimira Stoencheva², Jose Bueno-Conde¹, Ayesha Javed², Emer Hughes¹, Serena Counsell¹, Declan Murphy², David Edwards¹, Grainne McAlonan²¹Centre for the Developing Brain, King's College London, London, United Kingdom, ²Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, United Kingdom**1149 Aberrant functional connectivity between networks underlying sensory processing in autism**Marianne Oldehinkel^{1,2}, Maarten Mennes², Christian Beckmann^{1,2,3}, Jan Buitelaar^{1,2,4}¹Radboud University Medical Center, Department of Cognitive Neuroscience, Nijmegen, Netherlands, ²Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands, ³Centre for Functional MRI of the Brain (FMRIB), University of Oxford, Oxford, United Kingdom, ⁴Karakter Child and Adolescent Psychiatry University Center, Nijmegen, Netherlands**1150 Language Network Connectivity Indicates Subgroups in Children with Autism Spectrum Disorders**Yangfeifei Gao¹, Annika Linke², Afrooz Jahedi², Sanjana Punyamurthula², Christopher Fong², Inna Fishman², Ralph-Axel Müller²¹San Diego State University/UC San Diego Joint Doctoral Program in Clinical Psychology, San Diego, CA, ²San Diego State University, San Diego, CA**1151 Atypical global signal correlations in adult males with autism**Takashi Itahashi¹, Rieko Okada¹, Chihiro Itoi², Haruhisa Ohta¹, Motoaki Nakamura³, Junya Fujino¹, Chieko Kanai¹, Nobumasa Kato¹, Ryu-ichiro Hashimoto⁴¹Showa University, Tokyo, Japan, ²Chuo University, Tokyo, Japan, ³Kanagawa Psychiatric Center, Kanagawa, Japan, ⁴Tokyo Metropolitan University, Tokyo, Japan**1152 Self-Recognition in Autism Spectrum Disorder: a preliminary fMRI investigation**Sabine Huemer¹, Frithjof Krugger², Virginia Mann², Jean Gehricke²¹Loyola Marymount University, Los Angeles, CA, ²University of California, Irvine, CA**1153 Regional homogeneity of functional connectivity in neonates at risk of neurodevelopmental disorders.**Judit Ciarrusta^{1,2}, Jonathan O'Murcheartaigh^{1,2}, Rali Dimitrova^{1,2}, Dafnis Batalle¹, Lucilio Cordero-Grande¹, Jana Hutter¹, Anthony Price¹, Emer Hughes¹, Ines Pote², Johanna Kangas², Emily Perry², Jose Bueno-Conde¹, Julia Wurie¹, Joseph Hajnal¹, Declan Murphy^{2,3}, David Edwards^{1,4}, Tomoki Arichi^{1,4}, Grainne McAlonan^{2,3}¹Centre for the Developing Brain, King's College London, London, United Kingdom, ²Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, United Kingdom, ³Sackler Institute for Translational Neurodevelopment and NIHR-BRC for Mental Health at South London, London, United Kingdom, ⁴Department of Bioengineering, Imperial College London, London, United Kingdom**1154 Pediatric Autism: Assessing clinical MRI's potential with a large-scale retrospective analysis**Jacob Levman^{1,2,3,4}, Patrick MacDonald¹, Natalie Stewart¹, Ashley Ruyan Lim¹, Albert Galaburda^{5,3}, Emi Takahashi^{1,2,3}¹Division of Newborn Medicine, Boston Children's Hospital, Boston, MA, ²Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Boston, MA, ³Harvard Medical School, Boston, MA, ⁴Department of Mathematics, Statistics and Computer Science, St. Francis Xavier University, Antigonish, NS, Canada, ⁵Department of Neurology, Beth Israel Deaconess Medical Center, Boston, MA**1155 Disrupted Saliency Network Connectivity in 9-Month-Old Infants at High Risk for Autism**Tawny Tsang¹, Janelle Liu¹, Lisa Jackson¹, Susan Bookheimer¹, Mirella Dapretto¹¹UCLA, Los Angeles, CA

1156 The maturation of the alpha rhythm in autism spectrum disorder follows a typical development traject

Pilar Garcés¹, Sarah Baumeister², Luke Mason³, LEAP group EU-AIMS⁴, Daniel Brandeis², Joerg Hipp¹

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1157 Resting-state topological features differentiate autism spectrum disorder from typical development

Shruti Vij¹, Nina deLacy², Stefi Baum³, Lucina Uddin¹, Vince Calhoun⁴

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1158 Resolving cerebellar heterogeneity in autism spectrum disorder

Min Tae Park^{1,2}, Alexandra Bedford¹, Jason Lerch³, Margot Taylor^{3,4}, Stephanie Ameis⁵, Aristotle Voineskos⁶, Armin Raznahan⁷, Mallar Chakravarty^{1,8}

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1159 Left-lateralized white matter diffusion is associated with clinical severity in children with ASD

Colleen Buckless¹, Deana Crocetti², Nick Wymbs³, Stewart Mostofsky⁴

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1160 Abnormal neuronal oscillations in ASD are specific to stimuli requiring holistic processing

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1161 Gene expression analysis of structural cortical differences in autism

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1162 Sex Differences in Developmental Trajectories of Interhemispheric Homotopic Connectivity in Autism

Nataliia Kozhemiako¹, Vasily Vakorin¹, Adonay Nunes¹, Sam Doesburg¹

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1163 Neural correlates of interoception in autism spectrum disorder

Michelle Failla¹, Lauren Bryant¹, Brynna Heflin¹, John Tracy¹, Baxter Rogers¹, Carissa Cascio¹

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1164 Auditory Network Functional Connectivity in 6-Week-Old Infants at High and Low Risk for Autism

Janelle Liu¹, Tawny Tsang¹, Lisa Jackson¹, Susan Bookheimer¹, Mirella Dapretto¹

¹UCLA, Los Angeles, CA

1165 Neural substrates of repetitive behavior in autism spectrum disorder are modulated by sex

Christina Chen¹, Carinna Torgerson¹, Zachary Jacokes¹, Andrei Irimia¹, John Van Horn¹

¹University of Southern California, Los Angeles, United States

1166 The effect of age on vertex-based measures of the grey-white matter contrast in autism

Caroline Mann¹, Anke Bletsch², Derek Andrews³, Eileen Daly⁴, Clodagh Murphy⁵, Declan Murphy³, Christine Ecker⁶

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1167 Connectivity-based parcellation of the amygdala predicts social skills in autism spectrum disorder

Annika Rausch¹, Wei Zhang¹, Christian Beckmann^{1,2,3}, Jan Buitelaar^{1,4}, Wouter Groen⁴, Koen Haak³

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1168 Age-dependent alterations in intrinsic connectivity along the autism trait continuum: a twin study

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1169 Developmental Abnormalities in White Matter Tracts in Autism Spectrum Disorders

Bengi Baran^{1,2}, F. Isik Karahanoglu^{1,2}, Trang Nguyen^{1,2}, Djalel-Eddine Meskaldji³, Nour Azzouz^{1,2}, Mark Vangel⁴, Susan Santangelo⁵, Dara Manoach^{1,2}

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1170 Repetitive behaviors in twins: sex-specific alterations in motor network morphology

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- 1171 Autocorrelation of BOLD signal used as a parameter to classify autistic subjects**
Ugo Vercelli¹, Stefano Moia¹, Jordi Manuella¹, Andrea Nani¹, Tommaso Costa¹, Karina Tatu¹, Sergio Duca¹, Franco Cauda¹
¹GCS fMRI, Koelliker Hospital and University of Turin, Turin, Italy
- 1172* Multidimensional MRI subtyping of autism spectrum disorders**
Seok-Jun Hong¹, Sofie Valk², Boris Bernhardt¹
¹Multimodal Imaging and Connectome Analysis Lab, Montreal Neurological Institute, McGill University, Quebec, Canada, ²Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
- 1173 Changes of ERP correlates of motion processing by the group based SOSTA-FRA intervention in ASD**
Christina Luckhardt¹, Anne Kröger¹, Stephan Bender^{2,1}, Christine Freitag¹
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- 1174 Reading the mind in the eyes and autistic traits: a neuroanatomical study in twins**
Élodie Cauvet¹, Annelies van't Westeinde², Roberto Toro³, Ralf Kuja-Halkola⁴, Janina Neufeld⁵, Katell Mevel⁶, Sven Bölte⁷
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- 1175 Characterizing subtypes of autism spectrum disorder using static and dynamic functional connectivity**
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- 1176 One-Class SVM Suggest an IQ-level Dependent Neuroanatomic Involvement in Female Children with ASD**
Alessia Giuliano¹, Paolo Bosco¹, Piernicola Oliva², Filippo Muratori³, Sara Calderoni⁴, Alessandra Retico¹
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- 1177 Longitudinal Changes of MRI Intensity Contrast in Autism**
Gleb Bezgin¹, John Lewis², Alan Evans²
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- 1178 Aberrant functional connectivity of inhibitory control networks in children with autism**
Willa Voorhies¹, Dina Dajani¹, Shruti Vij¹, Lucina Uddin¹
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- 1179 Altered structural connectivity in autism and associations with executive functioning**
Olivia Doyle¹, David Grayson¹, Damien Fair¹, Joel Nigg¹, Michaela Cordova¹, Eric Fombonne¹
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- 1180 Effective connectivity-based subgrouping reveals heterogeneity of autism symptomatology**
Catherine Burrows¹, Dina Dajani², Paola Odriozola³, Willa Voorhies², Stephanie Lane⁴, Kathleen Gates⁴, Lucina Uddin²
¹Ms., Miami, FL, ²University of Miami, Coral Gables, FL, ³Yale University, New Haven, CT, ⁴University of North Carolina, Chapel Hill, NC
- 1181 Impaired anticipatory control in children with ASD is associated with altered MEG responses**
Fanny Barlaam¹, Sandrine Sonié², Stéphanie Marignier², Sebastien Daligault³, Jordan Alves¹, Judith Vergne¹, Claude Delpuech³, Karim Jerbi⁴, Christina Schmitz¹
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- 1182 Default Mode Network Functional Connectivity in Youth with ASD: Effects of Gender and Diagnosis**
Katherine Lawrence¹, Hilary Bowman¹, Leanna Hernandez¹, Susan Bookheimer², Mirella Dapretto², GENDAAR Research Consortium³
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- 1183 Aberrant functional connectivity development in social brain network in autism from age 2 to 7**
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- 1184 Structural covariance alterations in autism are disorder-specific and age-dependent**
Hsiang-Yuan Lin¹, Yu-Teng Chang², Yu-Chieh Chen¹, Wen-Yih Tseng³, Susan Gau¹
¹National Taiwan University Hospital and College of Medicine, Taipei, Taiwan, ²McGovern Institute for Brain Research, Massachusetts Institute of Technology, Cambridge, MA, ³Institute of Medical Device and Imaging, National Taiwan University College of Medicine, Taipei, Taiwan
- 1185 Sex Differences in Subcortical Morphometry in Children with ASD**
Kathryn Hirabayashi¹, Deana Crocetti², Brian Lee³, Xiaoying Tang⁴, Daniel Tward³, Stewart Mostofsky⁵
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- 1186 Neural and functional correlates of emotional face processing in autism spectrum disorder.**
Natalia Kleinhans¹, Francisco Velasquez¹, Melissa Reilly¹, Neva Corrigan¹, Julia Sweigert¹, Gabriella Greco¹, Todd Richards¹, Stephen Dager¹
¹University of Washington, Seattle, WA, United States
- 1187 Abnormal Praxis-Saliency Network Synchrony in Children with Autism**
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- 1188 Atypical developmental trajectories for cortical thickness in Autism Spectrum Disorder**
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- 1189 Resting-state connectivity in children with and without Autism Spectrum Disorder**
Emily Kilroy¹, Matthew Sachs¹, Laura Harrison¹, Alyssa Concha¹, Elizabeth Goo¹, Christiana Butera¹, Sharon Cermak¹, Lisa Aziz-Zadeh¹
¹University of Southern California, Los Angeles, CA
- 1190 Atypical development of the cortico-striatal connectivity gradient in autism spectrum disorder**
Marianne Oldehinkel^{1,2}, Koen Haak^{1,2}, Maarten Mennes², Jan Buitelaar^{1,2,3}, Christian Beckmann^{1,2,4}
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- 1191 Reduced Short-Term Adaptation of Auditory Steady-State Response in Autism Spectrum Disorders**
Olga Sysoeva¹, Ilia Galuta¹, Anastasia Nikolaeva¹, Andrey Prokofiev¹, Elena Orekhova¹, Tatiana Stroganova¹
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- 1192 Resting-state Functional Connectivity of Ventral Tegmental Area in the Context of Social Functioning**
Sheeba Arnold Anteraper¹, Susan Whitfield-Gabrieli¹, Aaron Mattfeld², Nikita Joshi³, Kaustubh Patil⁴, Gagan Joshi⁴
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- 1193 Anomalous Anterior-Posterior Connectivity in Children with Autism Spectrum Disorder**
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- 1194 Structural connectivity of the developing amygdala in autism spectrum disorder**
Janice Hau¹, Ruth Carper¹, Ralph-Axel Müller¹
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- 1195 Evaluating The Quantitative and Qualitative Models of Sex-Moderation in ASD Cortical Anatomy**
Christopher Hammill¹, Meng-Chuan Lai², Margot Taylor³, Stephanie Ameis⁴, Peter Szatmari⁴, Jason Lerch¹, Evdokia Anagnostou⁵
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- 1196 Addressing heterogeneity challenges in ASD with ADHD impairments using machine learning and fMRI**
Michaela Cordova¹, Eric Feczko¹, Nadir Balba¹, Anders Perrone¹, Oscar Miranda-Dominguez¹, Alice Graham¹, Beth Langhorst¹, Joel Nigg¹, Eric Fombonne¹, Damien Fair¹
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- 1197 Sensory processing, motor planning and sensorimotor integration in variants of 16p11.2**
Leighton Hinkley¹, Corby Dale², Carly Demopoulos², Hardik Kothare³, Danielle Mizuiri³, Elysa Marco¹, Timothy Roberts⁴, Randy Buckner⁵, Pratik Mukherjee⁶, John Houde³, Elliott Sherr¹, Srikantan Nagarajan³, the Simons Variation in Individuals Project Consortium⁷
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- 1198 Differences in white matter fiber tracts development in autism from adolescence to young adulthood**
Susan Gau¹, Hsiang-Yuan Lin¹, Yung-Chin Hsu², Yu-Jen Chen³, Wen-Yih Tseng²
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- 1199 Atypical prefrontal engagement during adaptive executive control in Autism Spectrum Disorders**
Junaid Merchant¹, Xiaozhen You², Ruth Ludlum¹, Katerina Dudley², William Gaillard², Lauren Kenworthy², Chandan Vaidya^{1,2}
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DISORDERS OF THE NERVOUS SYSTEM

Bipolar Disorder

- 1200 Impaired network controllability in young people at high genetic risk for bipolar disorder**
Jayson Jeganathan¹, Alistair Perry¹, Danielle Bassett², Gloria Roberts³, Philip Mitchell³, Michael Breakspear¹
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- 1201 Large-scale functional network dysconnectivity in those at high-genetic risk for bipolar disorder**
Alistair Perry¹, Gloria Roberts², Philip Mitchell², Michael Breakspear¹
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- 1202 Grey matter changes related to the quality of the last episode in bipolar-I disorder patients**
Vanessa Scholz¹, Bianca Kollmann², Julia Linke¹, Michèle Wessa¹
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- 1203 Disruptions in T¹-weighted MRI signal trajectories over age in Bipolar Disorder Type-1**
Christopher Rowley¹, Manpreet Sehmbi¹, Luciano Minuzzi¹, Benicio Frey¹, Nicholas Bock¹
¹McMaster University, Hamilton, Canada

- 1204 Abnormal brain activation during emotion processing of euthymic bipolar I patients**
Linling Li¹, Erni Ji², Yunhai Qiu¹, Zhiguo Zhang³, Haichen Yang²
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²Shenzhen Mental Health Centre, Shenzhen Key Lab for Psychological Healthcare, Shenzhen, China, ³School of Biomedical Engineering, Shenzhen University, Shenzhen, China
- 1205 Subcortical shape analysis from the ENIGMA bipolar disorder working group (N=3,028)**
Christopher Ching^{1,2}, Boris A. Gutman², Derrek Hibar², Paul M. Thompson^{2,3}, Ole Andreassen⁴,
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DISORDERS OF THE NERVOUS SYSTEM

Depressive Disorders

- 1206 Altered Functional Connectivity patterns of Refractory and Nonrefractory Major Depressive Disorders**
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 Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China,
³Huaxi MR Research Center (HMRRC), Department of Radiology, West China Hospital of Sichuan
 University, Chengdu, China
- 1207 Discriminative Analysis of Resting-state Effective Connectivity in Major Depression**
Long-fei Su¹, Yong Yang¹
¹OCCPAP, Chengdu, China
- 1208 Increased amygdala reactivity and symptom improvement after psilocybin treatment for depression**
Leor Roseman¹, Lysia Demetriou², Matt Wall², David Nutt¹, Robin Carhart-Harris¹
¹Imperial College London, London, United Kingdom, ²Imanova, London, United Kingdom
- 1209 Associations between depressive symptoms and striatal function: evidence for environmental aetiology**
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 University, Cardiff, United Kingdom, ³MRC CNGG Institute of Psychological Medicine and Clinical
 Neurosciences, Cardiff School of Medicine, Cardiff University, Cardiff, United Kingdom
- 1210 Effective Connectivity Analysis of Autobiographical Memory Retrieval in Major Depression**
Long-fei Su¹, Ke-yu Liu²
¹OCCPAP, Chengdu, China, ²Third Military Medical University, Chongqing, China
- 1211 Structural Covariance (SCov) Network Modeling in Major Depressive Disorder**
Jodie Gray¹, Peter Fox¹
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- 1212 Decreased inter-hemispheric connectivity in insula is associated with illness duration of depression**
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 Beijing, China, ²Bioimaging Core, Faculty of Health Sciences, University of Macau, Macau, China,
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 China, ⁴Department of Psychiatry, University of Connecticut Health Center, Farmington, United States
- 1213 Preliminary evidence for prenatal maternal SSRIs effects on neonatal resting state networks.**
Naama Rotem-Kohavi¹, Lynne Williams², Naznin Virji-Babul³, Angela Martina Muller⁴, Bruce Bjornson⁵,
Ursula Brain², Janet Werker⁶, Steven Miller⁷, Ruth Grunau^{8,2}, Tim Oberlander^{8,2}
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 Vancouver, Canada, ⁶University of British Columbia, Department of Psychology, Vancouver, Canada,
⁷Hospital of Sick Kids, Toronto, Canada, ⁸University of British Columbia, Department of Pediatrics,
 Vancouver, Canada
- 1214 Abnormal brain activation during cognitive tasks in major depressive disorder: a NIRS study.**
Szu-Hui Lee¹, Cheng-Ta Li², Yu-Wen Chang³
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 Taipei Veterans General Hospital, Taipei, Taiwan, ³National Yang-Ming University Institute of Brain
 Science, Taipei, Taiwan
- 1215* MicroRNA132 Associated Multimodal Neuroimaging Patterns Impaired in Unmedicated Major Depression**
Shile Qi^{1,2}, Xiao Yang^{3,4}, Liansheng Zhao^{3,4}, Tianzi Jiang^{1,2,5}, Vince Calhoun^{6,7,8,9}, Nora Perrone-Bizzozero^{8,9},
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 Albuquerque, NM, USA, ⁹Department of Psychiatry and Behavioral Sciences, University of New
 Mexico, Albuquerque, NM, USA
- 1216 Relationship between the cortical function and symptoms severity in major depressive disorder.**
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1217 Predicting Electroconvulsive Therapy Outcome with Structural MRI: Accuracy with Independent Datasets

Rongtao Jiang^{1,2}, Christopher Abbott³, Tianzi Jiang^{1,2,4}, Yuhui Du⁵, Randall Espinoza⁶, Katherine Narr^{6,7}, QINGBAO YU⁵, Jiayu Chen⁵, Dongdong Lin⁵, Thomas Jones³, Benjamin Wade⁷, Miklos Argyelan^{8,9,10}, Georgios Petrides^{8,9,10}, Vince Calhoun^{3,5,11}, Jing Sui^{1,4,5}

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1218 Altered intra-network functional connectivity in patients with bipolar and major depressive disorder

Yuan He¹, Ying Wang^{2,3}, Junjing Wang¹, Shuming Zhong⁴, Feng Deng¹, Xiaoyan Wu¹, Yanbin Jia⁴, Huiqing Hu¹, Zhangzhang Qi³, Li Huang³, Ruiwang Huang¹

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1219 Reduced Olfactory Bulb Volume in Depression is mediated by Insula Volume

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1220 Heterogeneity in major depressive disorder: influence of gender and subtype on emotional processing

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1221 The ability of MRS to measure glutamate changes ketamine response in major depression

Jen Evans¹, Allison Nugent¹, Niall Lally¹, Li An¹, Carlos Zarate¹

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1222 Disrupted Cognitive Control Networks Underlie Executive Dysfunction in Adolescent Depression

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1223 Abnormal brain structure in patients with major depressive disorder and bipolar disorder

Lixiang Chen¹, Ying Wang^{2,3}, Chen Niu¹, Shuming Zhong⁴, Xiaoyan Wu¹, Yanbin Jia⁴, Huiqing Hu¹, Zhangzhang Qi³, Ping Chen¹, Li Huang³, Ruiwang Huang¹

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1224 Disrupted Individual Morphological Cortical Networks in Treatment-Resistant Depression

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1225 Fronto-limbic functional disconnection in depressed patients with suicidal ideation

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1226 Differences in white matter microstructural integrity between male and female with depression

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1227 Collaborative Classification of Major Depressive Disorder via Distributed LASSO

Dajiang Zhu¹, Qingyang Li², Brandalyn Riedel¹, Neda Jahanshad¹, Derrek Hibar¹, Ilya Veer³, Henrik Walter⁴, Lianne Schmaal⁵, Dick Veltman⁵, Dominik Grotegerd⁶, Udo Dannlowski⁷, Tim Hahn⁸, Claas Kähler Kähler⁷, Matthew Sacchet⁹, Ian Gotlib⁹, Pedro Rosa¹⁰, Geraldo Busatto Filho¹¹, Maristela Schaufelberger¹¹, Fabio Duran¹⁰, Steven van der Werff¹², Nic van der Wee¹², Tony Yang¹³, Tiffany Ho¹³, Ben Harrison¹⁴, Christopher Davey¹⁴, Jieping Ye¹⁵, Paul Thompson¹

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1228 Integrative network analysis of resting-state fMRI and RNA-Seq data for major depressive disorder

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1229 Subcortical Volumes and Proinflammatory Cytokines Model Depression Status, Severity, and Anhedonia

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1230 Altered hippocampal functional networks in treatment-resistant depression

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1231 Alterations in gamma power post ketamine and placebo infusions in healthy and depressed patients

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1232 Base-line brain activity in depression: a meta-analysis of resting state functional imaging studies

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1233 Decreased Amygdala Inhibition in Depression: Effects of Diagnosis, Medication and Predisposition

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1234 Brain Networks involved in Seasonal Affective Disorder: A Neuroimaging PET Study of 5-HTT Expression

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1235 Grey Matter Volumes in Neonates Exposed to Antenatal Maternal Depression

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1236 Brain activation during ambiguous emotional processing associated to anxiety severity in depression

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1237 Coupling between affective instability and functional subnetworks in remitted recurrent depression

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1238 Sex differences in the clinical characteristics and brain GMV changes in unmedicated MDD patients

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1239 Neurobiology of processing vocal emotions in unipolar depression

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1240 Changes in gamma-aminobutyric acid levels following ketamine infusion in major depression

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- 1241 White Matter Differences in Major Depression: Meta-analytic findings from ENIGMA-MDD DTI**
Sinead Kelly¹, Laura van Velzen², Sean Hatton³, Lyubomir Aftanas⁴, Andre Aleman⁵, Bernhard Baune⁶, Elodie Boudes⁷, Ivan Brack⁴, Yuqi Cheng⁸, Colm Connolly⁹, Udo Dannlowski¹⁰, Michael Deppe¹¹, Thomas Frodl¹², David Glahn¹³, Ian Gotlib¹⁴, Nynke Groenewold¹⁵, Dominik Grotegerd¹⁶, Wenbin Guo¹⁷, Tiffany Ho¹⁸, Harald Kugel¹⁹, Hiroshi Kunugi²⁰, William Kremin²¹, Jim Lagopoulos²², Meng Li²³, Tristram Lett²⁴, Frank Mac Master²⁵, Andrew McIntosh²⁶, Quinn McLellan²⁵, Katie McMahon²⁷, Susanne Meinert²⁸, Tom Nickson²⁶, Miho Ota²⁰, Maria Portella²⁹, Annerine Roos³⁰, Matthew Sacchet¹⁴, Philipp Saemann³¹, Dan Stein³², Rose Swansburg²⁵, Leonardo Tozzi³³, R.R.J.M. Vermeiren³⁴, Nic van der Wee³⁴, Steven van der Werff³⁴, Dick Veltman³⁵, Henrik Walter³⁶, Martin Walter²³, Margaret Wright³⁷, Tony Yang¹⁸, Greig de Zubicaray³⁸, Paul M. Thompson³⁹, Neda Jahanshad⁴⁰, Lianne Schmaal⁴¹

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- 1242 SSRI treatment reduces response in the emotion processing network in acute MDD: a fMRI study**
David Willinger¹, Martin Tik¹, Christoph Kraus¹, Daniela Pfabigan², Nicole Geissberger¹, André Hoffmann¹, Thomas Vanicek¹, Bastian Auer², Georg Kranz¹, Katharina Paul², Claus Lamm², Rupert Lanzenberger¹, Christian Windischberger¹
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- 1243 Neural Correlates of Successful Inhibitory OFC-rTMS in Major Depressive Disorder**
Peter Fettes¹, Peter Giacobbe², Daniel Blumberger³, Jonathan Downar⁴

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- 1244 Social Dominance in Major Depressive Disorder**
Zhuoya Cui^{1,2}, Lusha Zhu³, Iris Vilares⁴, Vanessa Brown^{2,5}, Pearl Chiu^{2,5,1}, Brooks King-Casas^{2,5,1}

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- 1245 Regional Brain Volume Correlates with Rumination and Autobiographical Memory**
Emily Sin¹, Xiujuan Geng^{1,2,3}, Wan-chi Valda Cho¹, Tatia Lee^{1,2,3}

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- 1246 Impaired Insulin Sensitivity is Associated with Brain Abnormalities in Depressed Adolescents**
Owen Phillips¹, Sara Leslie², Laila Soudi², Alexander Onopa², Lizzy Weisman², Alexis Staver², Anne Marcy², Manpreet Singh²

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- 1247 Emotion dysregulation and functional connectivity in children with and without depression.**
Katherine Lopez¹, Joan Luby¹, Andy Belden¹, Deanna Barch¹

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- 1248 Cross-species convergence in stress-related structural covariance network patterns**
Yuliya Nikolova¹, Keith Misquitta¹, Brad Rocco¹, Jacob Ellegood², Jason Lerch³, Ahmad Hariri⁴, Etienne Sibille¹, Mounira Banasr¹

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- 1249 Real-time fMRI modulation of DMN is enhanced with cognitive behavioral therapy in depression**

Pearl Chiu^{1,2}, Jonathan Lisinski¹, Allison McKinnon¹, Vanessa Brown^{1,2}, Katie McCurry^{1,2}, Amnah Eltahir^{1,3}, Brooks King-Casas^{1,2}, Stephen LaConte^{1,3}

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- 1250 TDCS As Treatment for Major Depression-Technical Data from a Blind Selection of Active tDCS Sessions**

Ulrike Kumpf¹, Sven Hilbert², Daniel Keeser¹, Ulrich Palm¹, Malek Bajbouj³, Christian Plewnia⁴, Berthold Langguth⁵, Peter Zwanzger⁶, Frank Padberg¹

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- 1251 Amygdala response may distinguish participants with history of major depressive disorder**
Xiaofu He^{1,2}, Diana Rodriguez Moreno², Zhi Liu¹, Larry Amsel^{1,2}, George Musa^{1,2,3}, Zhishun Wang^{1,2}, Christina Hoven^{1,2,3}
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- 1252 Clinical staging of major depressive disorder: Multimodal-imaging approach**
Ki Sueng Choi¹, Justin Rajendra¹, Boadie Dunlop¹, Helen Mayberg¹
¹Emory University, Atlanta, GA
- 1253 Abnormal High Frequency Resting-State EEG Source Functional Connectivity in Depression**
Alexis Whitton¹, Stephanie Deccy², Manon Ironside², Diego Pizzagalli¹
¹McLean Hospital & Harvard Medical School, Belmont, MA, ²McLean Hospital, Belmont, MA
- 1254 ENIGMA-MDD hippocampal subfield analysis of first episode and recurrent Major Depressive Disorder**
Philipp Sämann¹, David Hoehn¹, Michael Czisch², Neda Jahanshad³, Christopher Whelan⁴, Derrek Hibar⁵, Laura van Velzen⁶, Laura Han⁶, Ilya Veer⁷, Henrik Walter⁸, Katharina Wittfeld⁹, Dick Veltman¹⁰, Paul Thompson¹¹, Lianne Schmaal¹²
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- 1255 Longitudinal Effect of ECT on Regional White Matter Connectivity in Major Depressive Disorder**
David Lee¹, Randall Espinoza², Stephanie Njau¹, Benjamin Wade¹, Amber Leaver³, Megha Vasavada⁴, Roger Woods⁵, Katherine Narr², Shantanu Joshi¹
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- 1256 Altered neuronal connectivity patterns in depressed patients after electroconvulsive therapy**
Kirsch Beatrice¹, Daniel Keeser^{1,2}, Susanne Karch¹, Valerie Kirsch³, Temmuz Karali¹, Marco Paolini², Frank Padberg¹, Birgit Ertl-Wagner⁴, Oliver Pogarell¹
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DISORDERS OF THE NERVOUS SYSTEM

Medical Illness with CNS Impact (e.g. Chemotherapy, Diabetes, Hypertension)

- 1257 Investigating structural brain change with heart failure using voxel-based morphometry**
Karsten Mueller¹, Friederike Thiel¹, Andrej Teren^{2,3}, Frank Beutner^{2,3}, Gerhard Schuler^{2,3}, Stefan Frisch⁴, Joachim Thiery^{5,3}, Harald Möller¹, Arno Villringer^{1,3,6}, Matthias Schroeter^{1,3,6}
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- 1258 Longitudinal Assessment of Brain Volumes and Cognitive Function in Treated Aviremic HIV+ Patients**
Ryan Sanford¹, Beau Ances², Louis Collins¹
¹McGill University, Montreal, Quebec, ²Washington University, St. Louis, MO
- 1259 Effects of intranasal insulin application on the hypothalamic BOLD response to glucose.**
Annemarieke van Opstal¹, Abimbola Akintola¹, Marjan van Elst¹, Rudi Westendorp², Hanno Pijl¹, Diana van Heemst³, Jeroen van der Grond³
¹Leiden University Medical Center, Leiden, Netherlands, ²University of Copenhagen, Copenhagen, Denmark, ³Leiden University Medical Center, Leiden, Netherlands
- 1260 Gut permeability and the brain: a RS-fMRI and DTI study of the role of the brain-gut axis in IBS**
Suzanne Witt¹, Olga Bednarska¹, Adriane Icenhour¹, Sigrid Elsenbruch², Johan Söderholm¹, Maria Engström¹, Emeran Mayer³, Åsa Keita¹, Susanna Walter¹
¹Linköping University, Linköping, Sweden, ²University of Duisburg-Essen, Essen, Germany, ³UCLA, Los Angeles, CA

1261 ENIGMA-HIV DTI: International Effects of CD4+ Count on White Matter Microstructure in HIV+ Adults

Talia Nir¹, Jean-Paul Fouché², Hei Lam¹, Beau Ances³, Bruce Brew⁴, Joga Chaganti⁴, Christopher Ching¹, Katherine Clifford⁵, Lucette Cysique^{4,6}, Christine Fennema-Notestine⁷, Igor Grant⁷, Vikash Gupta¹, Jaroslaw Harezlak⁸, Jodi Heaps⁹, Charles Hinkin¹⁰, Jacqueline Hoare², John Joska², Kalpana Kallianpur¹¹, Taylor Kuhn¹⁰, Christine Lebrun-Frenay¹², Andrew Levine¹³, Lydiane Mondot¹⁴, Beau Nakamoto¹⁵, Bradford Navia¹⁶, Robert Paul⁹, Xavier Pennec¹⁷, Eric Porges¹⁸, Wasana Prasitsuebsai¹⁹, Kanchana Pruksakaew¹⁹, Cecilia Shikuma²⁰, Michael Taylor⁷, April Thames¹⁰, Victor Valcour⁵, Matteo Vassallo²¹, Adam Woods¹⁸, Paul Thompson¹, Neda Jahanshad¹, Ronald Cohen^{18,22,23}, Dan Stein²

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1262 Compensation in Hippocampal Connectivity in Breast Cancer Patients with Cognitive Concerns

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1263 White matter density in solid tumor survivors using advanced diffusion models

Charlotte Sleurs¹, Jurgen Lemiere¹, Daan Christiaens², Thibo Billiet³, Marjolein Verly¹, Jeroen Blommaert⁴, Ron Peeters⁵, Stefan Sunaert⁵, Anne Uyttebroeck¹, Sabine Deprez⁵

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1264 Prefrontal abnormalities in non-demented individuals with diabetes

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1265 Vascular Microstructure Changes with Lupus Measured by Intravoxel Incoherent Motion Imaging (IVIM)

Mark DiFrancesco¹, Mekibib Altaye¹, Jamie Meyers-Eaton¹, Hermine Brunner¹

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1266 Hippocampal Volumes and Executive Function in Young Adults with Congenital Heart Disease

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1267 Prospective assessment of gray matter density and cognition in older women on chemotherapy

Bihong Chen¹, Taihao Jin¹, Sunita Patel¹, Arti Hurria¹

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1268 Patients with Antiphospholipid Syndrome but Neurological Symptoms Have Progressive Brain Damages

Fabricio Pereira¹, Francesco Macri², Cyrine Snene², Joel Greffier², Ahmed Larbi², Jean-Paul Beregi², Jean-Christophe Gris³

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1269 Cerebral Blood Flow in Sickle Cell Anemia Children Treated with Hydroxyurea

Ping Zou¹, Matt Scoggins¹, Kathleen Helton¹, Jane Hankins¹, Jane Schreiber¹, Robert Ogg¹

¹St. Jude Children's Research Hospital, Memphis, TN

1270 Inverse Registration Method to Automate ROIs for Neurological Populations

Alyssa Ailion¹, Alexandria Cook¹, Tricia King¹

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1271 Abnormal cortex gyrification in HIV infected children with and without encephalopathy

Jean-Paul Fouché¹, Nicole Phillips¹, Kirsten Donald², Dan Stein¹, Jacqueline Hoare¹

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1272 The Anemic Brain: Hemoglobin Level Predicts Brain Volume in Watershed areas and Cognitive function

Soyoung Choi¹, Sharon O'Neil², Anand Joshi¹, Adam Bush¹, Matt Borzage², Julie Coloigner²,

Thomas Coates², John Wood², Richard Leahy¹

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1273 Slowed α Peak Frequency in HE Is Linked to the Reduced CFF and Decreased Occipital GABA Levels

Thomas Baumgarten¹, Julia Neugebauer¹, Georg Oeltzschner², Gerald Kircheis³, Dieter Häussinger³, Wittsack Hans-Jörg⁴, Markus Butz¹, Alfons Schnitzler¹

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1274 Are central neuroplastic alterations of brain morphology involved in chronic neck pain?Robby De Pauw¹, Iris Coppieters¹, Hannelore Aerts¹, Karen Caeyenberghs², Barbara Cagnie¹¹Ghent University, Ghent, Belgium, ²Australian Catholic University, Melbourne, VIC**1275 Cortical Morphometry in Gaucher Disease: findings from the ENIGMA Storage Disease working group**Leyla Namazova-Baranova¹, George Karkashadze¹, Anatoly Anikin¹, Kirill Savostyanov¹, Vladimir Smirnov¹, Anait Gevorgyan¹, Olga Komarova¹, Olga Gundobina¹, Nato Vashakmadze¹, Andrey Surkov¹, Magda Karkashadze¹, Andrey Getman¹, Olga Kozhevnikova¹, Olga Maslova¹, Alexander Pushkov¹, Anna Veselova¹, Dmitry Kapilushniy¹, Natalia Zhurkova¹, Tinatin Gogberashvili¹, Goar Movsisyan¹, Liliya Osipova¹, Yulia Ermolina¹, Tatiana Konstantinidi¹, Anastasia Solovieva¹, Alexey Firumyants¹, Mikhail Belyaev², Ekaterina Khrameeva², Boris A. Gutman³, Vladimir Zelman⁴, Paul M. Thompson³, Alexandr Baranov¹, for the ENIGMA Storage Diseases Working Group¹¹Scientific Center of Children's Health, Moscow, Russian Federation, ²Skolkovo Institute of Science and Technology, Moscow, Russian Federation, ³Imaging Genetics Center, University of Southern California, Marina Del Rey, CA, USA, ⁴Department of Anesthesiology, Keck School of Medicine of the University of Southern California, Los Angeles, CA, USA**1276 Longitudinal Changes in White Matter and Cognition in Children Treated for Posterior Fossa Tumours**Marita Partanen¹, Jovanka Skocic¹, Eric Bouffet¹, Suzanne Laughlin¹, Douglas Strother², Dina McConnell³, Juliette Hukin³, Donald Mabbott¹¹The Hospital for Sick Children, Toronto, Canada, ²Alberta Children's Hospital, Calgary, Canada, ³British Columbia Children's Hospital, Vancouver, Canada**1277 Cortical Morphometry and White Matter Integrity in Children with Hepatic Glycogen Storage Disease**Leyla Namazova-Baranova¹, George Karkashadze¹, Anatoly Anikin¹, Kirill Savostyanov¹, Vladimir Smirnov¹, Anait Gevorgyan¹, Olga Komarova¹, Olga Gundobina¹, Nato Vashakmadze¹, Andrey Surkov¹, Magda Karkashadze¹, Andrey Getman¹, Olga Kozhevnikova¹, Olga Maslova¹, Alexander Pushkov¹, Anna Veselova¹, Dmitry Kapilushniy¹, Natalia Zhurkova¹, Tinatin Gogberashvili¹, Goar Movsisyan¹, Liliya Osipova¹, Yulia Ermolina¹, Tatiana Konstantinidi¹, Anastasia Solovieva¹, Alexey Firumyants¹, Mikhail Belyaev², Ekaterina Khrameeva², Boris A. Gutman³, Vladimir Zelman⁴, Paul M. Thompson³, Alexandr Baranov¹, for the ENIGMA Storage Diseases Working Group¹¹Scientific Center of Children's Health, Moscow, Russian Federation, ²Skolkovo Institute of Science and Technology, Moscow, Russian Federation, ³Imaging Genetics Center, University of Southern California, Marina Del Rey, CA, USA, ⁴Department of Anesthesiology, Keck School of Medicine of the University of Southern California, Los Angeles, CA, USA**1278 Brain mechanisms underlying symptom improvement in chronic visceral pain after mindfulness training**Ravi Bhatt^{1,2,3}, Jennifer Labus^{1,3}, Cody Ashe-McNalley^{1,3}, Arpana Gupta³, Suzanne Smith^{1,3}, John Serpa⁴, Jean Stains^{1,3}, Bruce Naliboff^{1,3}, Kirsten Tillisch^{1,3}¹David Geffen School of Medicine at UCLA, Los Angeles, CA, ²Pediatric Pain and Palliative Program at UCLA, Los Angeles, CA, ³G Oppenheimer Center for Neurobiology of Stress and Resilience, University of California Los Angeles, Los Angeles, CA, ⁴VA Greater Los Angeles, Los Angeles, CA**1279 An fMRI taste task as a test of long-term clinically significant weight loss**Eunice Chen¹, Ingrid Olson², Jason Chein², Mike McCloskey², Michael Edwards², Feroze Mohamed³, W Scott Hoge⁴, Zoran Obradovic², Thomas Olino²¹Temple University, Philadelphia, United States, ²Temple University, Philadelphia, PA, ³Thomas Jefferson University Hospital, Philadelphia, PA, ⁴Brigham and Women's Hospital, Boston, MA**1280 Associations Between Blood Pressure and Cerebrovascular Reactivity in Response to Breath-Holding**Nicolette Schwarz¹, Tori Ferland¹, David Salat¹, William Milberg¹, Regina McGlinchey¹, Elizabeth Leritz¹¹Harvard Medical School / VA Boston, Boston, MA

DISORDERS OF THE NERVOUS SYSTEM

Obsessive-Compulsive Disorder and Tourette Syndrome

1281 Impact of treatment on resting cerebral blood flow and metabolism in OCD: a meta-analysisAnouk van der Straten^{1,2}, Damiaan Denys^{1,2}, Guido van Wingen^{1,2}¹Academic Medical Center, Amsterdam, Netherlands, ²University of Amsterdam, Amsterdam, Netherlands**1282 Volumetric and shape analysis of hippocampal subfields in drug naive obsessive-compulsive disorder**Lianqing Zhang¹, Xinyu Hu¹, Ming Zhou¹, Lu Lu¹, Xiaoxiao Hu¹, Qiyong Gong¹, Xiaoqi Huang²¹Huaxi MR Research Center (HMRRC), Department of Radiology, West China Hospital of Sichuan University, Chengdu, China, ²West China Hospital of Sichuan University, Chengdu, China**1283 Dysfunctional Activation Profiles to rsFC: Conjoint Assessment in Obsessive Compulsive Disorder**Harsh Parekh¹, Vaibhav Diwadkar², Karthik Ramaseshan³, Phillip Easter², Ashley Burgess², Gregory Hanna⁴, Paul Arnold⁵, David Rosenberg²¹Wayne State University, Sterling Heights, MI, ²Wayne State University, Detroit, United States, ³Wayne State University, Detroit, United States, ⁴University of Michigan, Ann Arbor, United States, ⁵University of Calgary, Calgary, Canada**1284 Altered functional connectivity in resting state networks in Tourette's disorder**Siyan (Sarah) Fan¹, Odile van den Heuvel¹, Danielle Cath², Stella de Wit¹, Chris Vriend¹, Dick Vetlman¹, Ysbrand van der Werf¹¹VU Medical Center Amsterdam NL, Amsterdam, Netherlands, ²Utrecht University, Utrecht, Netherlands**1285 Cortical-striatal connectivity in obsessive compulsive disorder is hyper-modulated by working memory**Jane Harness¹, Karthik Ramaseshan², Ashley Burgess¹, Phillip Easter¹, Paul Arnold³, Gregory Hanna⁴, David Rosenberg¹, Vaibhav Diwadkar¹¹Wayne State University, Detroit, United States, ²Wayne State University, Detroit, United States, ³University of Calgary, Calgary, Canada, ⁴University of Michigan, Ann Arbor, United States**1286 The active rest state: Cortical-hippocampal synchrony during rest subserves associative learning**Mathura Ravishankar¹, Alexandra Morris¹, Karthik Ramaseshan¹, Jeffrey Stanley¹, Vaibhav Diwadkar¹¹Department of Psychiatry and Behavioral Neurosciences, Wayne State University School of Medicine, Detroit, United States

1287 Morphologic and clinical differences between Early- and Late-onset obsessive-compulsive disorderKeisuke Ikari¹, Tomohiro Nakao¹, Kiyotaka Nemoto², Shigenobu Kanba³¹Department of Neuropsychiatry Graduate School of Medical Sciences Kyushu University, Fukuoka, Japan, ²Division of Clinical Medicine, Faculty of Medicine, University of Tsukuba, Tsukuba, Japan, ³Department of Neuropsychiatry, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan**1288 Cingulum integrity associates with choline concentration in obsessive compulsive disorder patients**Ruilin Wang^{1,2}, Yajing Zhu^{1,2}, qing fan³, yao li^{4,2}¹Med-X Research Institute, Shanghai Jiao Tong University, Shanghai, China, ²School of Biomedical Engineering, Shanghai Jiao Tong University, Shanghai, China, ³Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, Shanghai, China, ⁴Med-X Research Institute, Shanghai Jiao Tong University, Shanghai, China**1289 Altered coupling within and between the triple-network model in obsessive-compulsive disorder**Jie Fan¹, Mingtian Zhong², Jun Gan¹, Wanting Liu¹, Chaoyang Yang¹, Haiyan Liao³, Hongchun Zhang³, Jinyao Yi⁴, xiongzhao zhu¹¹Medical Psychological Center, the Second Xiangya Hospital, Central South University, Changsha, China, ²School of Psychology, South China Normal University, Guangzhou, China, ³Department of Radiology, Second Xiangya Hospital, Central South University, Changsha, China, ⁴Second Xiangya Hospital of Central South University, Changsha, China**1290 Basal Ganglia Response to Reward Anticipation and Receipt in Tourette Syndrome and ADHD**Sophie Akkermans^{1,2}, Daan van Rooij^{1,2}, Jilly Naaijen^{1,2}, Natalie Forde^{3,1}, Thaira Openneer³, Pieter Hoekstra³, Jan Buitelaar^{1,2,4}¹Radboud University, Donders Institute for Brain, Cognition and Behaviour, Centre for Cognitive Neuroimaging, Nijmegen, Netherlands, ²Radboud University Medical Center, Donders Institute for Brain, Cognition and Behaviour, Department of Cognitive Neuroscience, Nijmegen, Netherlands, ³University of Groningen, University Medical Center Groningen, Department of Psychiatry, Groningen, Netherlands, ⁴Karakter Child and Adolescent Psychiatry University Centre, Nijmegen, Netherlands**1291 ENIGMA-OCD Working Group Meta-Analysis of Individualized Cortical-Subcortical Structural Covariance**Je-Yeon Yun¹, Paul Arnold², Francesco Benedetti³, Jan Beucke⁴, Yuqi Cheng⁵, Damiaan Denys⁶, Patricia Gruner⁷, Marcelo Hoexter⁸, Chaim Huyser⁹, Neda Jahanshad¹⁰, Kathrin Koch¹¹, Luisa Lazaro¹², David Mataix-Cols¹³, Jose Menchon¹⁴, Pedro Morgado¹⁵, Takashi Nakamae¹⁶, Tomohiro Nakao¹⁷, Y.C. Reddy¹⁸, Helen Simpson¹⁹, Noam Soreni²⁰, Gianfranco Spalletta²¹, David Tolin²², Susanne Walitza²³, Zhen Wang²⁴, Paul Thompson²⁵, Dan Stein²⁶, Odile van den Heuvel²⁷, Jun Soo Kwon²⁸¹Seoul National University Hospital, Seoul, Korea, Republic of, ²Cumming School of Medicine, University of Calgary, Calgary, Alberta, Canada, ³Division of Neuroscience, Ospedale San Raffaele, Milano, Italy, ⁴Department of Psychology, Humboldt-Universität zu Berlin, Berlin, Germany, ⁵Department of Psychiatry, First Affiliated Hospital of Kunming Medical University, Kunming, China, ⁶Department of Psychiatry, Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands, ⁷Department of Psychiatry, Yale University School of Medicine, New Haven, CT, ⁸Department of Psychiatry, Institute of Psychiatry, University of São Paulo School of Medicine, São Paulo, Brazil, ⁹De Bascule, Academic Center for Child and Adolescent Psychiatry, Amsterdam, Netherlands, ¹⁰Keck School of Medicine of the University of Southern California, Marina del Rey, United States, ¹¹TUM NIC Neuroimaging Center, Neuroradiology, Klinikum Rechts der Isar, München, Germany, ¹²Institute of Neurosciences, Hospital Clínic Universitari, Barcelona, Spain, ¹³Centre for Psychiatric Research and Education, Karolinska Institutet, Stockholm, Sweden, ¹⁴Bellvitge Biomedical Research Institute-IDIBELL, L'Hospitalet de Llobregat, Barcelona, Spain, ¹⁵School of Health Sciences, University of Minho, Braga, Portugal, ¹⁶Kyoto Prefectural University of Medicine, Kyoto, Japan, ¹⁷Department of Neuropsychiatry Graduate School of Medical Sciences Kyushu University, Fukuoka, Japan, ¹⁸National Institute of Mental Health & Neurosciences, Bangalore, India, ¹⁹Columbia University, New York, NY, ²⁰Anxiety Treatment and Research Center, Hamilton, Canada, ²¹IRCCS Santa Lucia Foundation, Rome, Italy, ²²Hartford Hospital, Hartford, CT, ²³Psychiatric Hospital, University of Zurich, Zurich, Switzerland, ²⁴Shanghai Mental Health Center Shanghai Jiao Tong University School of Medicine, Shanghai, China, ²⁵Imaging Genetics Center, University of Southern California, Marina Del Rey, CA, ²⁶Department of Psychiatry and Mental Health, University of Cape Town, Cape Town, South Africa, ²⁷VU Medical Center Amsterdam NL, Amsterdam, Netherlands, ²⁸Seoul National University College of Medicine, Seoul, Korea, Republic of

- 1292 Cortical abnormalities associated with pediatric and adult obsessive-compulsive disorder**
Premika Boedhoe¹, Lianne Schmaal², Paul Arnold³, Francesco Benedetti⁴, Jan Beucke⁵, Yuqi Cheng⁶, Damiaan Denys⁷, Kate Fitzgerald⁸, Patricia Gruner⁹, Marcelo Hoexter¹⁰, Chaim Huyser¹¹, Anthony James¹², Kathrin Koch¹³, Jun Soo Kwon¹⁴, Luisa Lazaro¹⁵, David Mataix-Cols¹⁶, Jose Menchon¹⁷, Takashi Nakamae¹⁸, Tomohiro Nakao¹⁹, Erika Nurmi²⁰, Y.C. Reddy²¹, Helen Simpson²², Noam Soreni²³, Gianfranco Spalletta²⁴, David Tolin²⁵, Susanne Walitza²⁶, Zhen Wang²⁷, Paul Thompson²⁸, Dan Stein²⁹, Odile van den Heuvel³⁰

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- 1293 A neural model for the anxiolytic effects of deep brain stimulation in patients with OCD**
Egill Axfjord Fridgeirsson¹, Martijn Figee¹, Judy Luigjes¹, Guido van Wingen¹, Damiaan Denys¹
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- 1294 Anterior insula-orbital frontal cortex functional connectivity index insight in OCD**
Jie Fan¹, xiongzhaoh zhu¹, Mingtian Zhong², Jun Gan¹, wangting Liu¹, Chaoyang Niu¹, Hongchun Zhang³, Haiyan Liao³, Jinyao Yi⁴, Changlian Tan⁵
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- 1295 Intrinsic functional connectivity of emotion regulation networks in Obsessive Compulsive Disorder**

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- 1296 Putative neurochemical abnormalities influenced by subcortical iron deficiency in Tourette syndrome.**

Ahmad Seif Kanaan^{1,2}, Alfred Anwander¹, Andreas Schäfer³, Berkin Bilgic⁴, Torsten Schlumm¹, Jamie Near⁵, Harald Möller¹, Kirsten Müller-Vahl²

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- 1297 Neurofeedback of the orbitofrontal cortex for obsessive-compulsive disorder (OCD)**

Mariela Rance¹, Patricia Gruner², Suzanne Wazylink², Dustin Scheinost¹, Pittenger Christopher², Michelle Hampson¹

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- 1298 Error monitoring dissociates ventral from dorsal cortico-striatal networks in patients with OCD**

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- 1299 Common neural mechanisms of working memory and inhibition deficits in obsessive compulsive disorder**

Stephan Heinzel¹, Christian Kaufmann², Rosa Grützmann², Julia Klawohn², Anja Riesel², Katharina Bey³, Leonard Lennertz³, Michael Wagner³, Norbert Kathmann²

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- 1300 ICA of Resting-State fMRI in Obsessive-Compulsive Disorder**

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DISORDERS OF THE NERVOUS SYSTEM

Research Domain Criteria Studies (RDoC)

1301 Low Accumbens BOLD Response and Inflammation Level Differentiated Healthy and Depressed Individuals

Masaya Misaki¹, Jonathan Savitz^{1,2}, Hideo Suzuki^{1,3}, Brett McKinney⁴, Wayne Drevets⁵, Jerzy Bodurka^{1,6}

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1302* Network Dysconnectivity Associated With Psychopathology Across Clinical Diagnostic Categories

Cedric Huchuan Xia¹, Rastko Ciric¹, Zongming Ma², Russell Shinohara³, Richard Betzel⁴, Shi Gu^{1,4}, Monica Calkins¹, Philip Cook⁵, Angel Garcia de la Garza¹, Tyler Moore¹, David Roalf¹, Kosha Ruparel¹, Daniel Wolf¹, Ruben Gur¹, Raquel Gur¹, Danielle Bassett⁴, Theodore Satterthwaite¹

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1303 Functional Organization and Network Roles in MDD and PTSD: Categorical and Dimensional Perspective

Zhen Yang¹, Shi Gu^{2,3}, Irem Aselcioglu¹, Theodore Satterthwaite^{4,1}, Philip Cook^{5,1}, Stephen Bruce⁶, Desmond Oathes¹, Danielle Bassett^{2,7}, Yvette Sheline^{1,5,8}

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DISORDERS OF THE NERVOUS SYSTEM

Schizophrenia and Psychotic Disorders

1304 Neural Correlates of Humor Comprehension Processing Impairments in Schizophrenia – an fMRI Study

Przemysław Adamczyk¹, Mirosław Wyczesany², Aleksandra Domagalik³, Arur Daren¹, Kamil Cepuch⁴, Piotr Błądziński¹, Andrzej Cechnicki¹, Tadeusz Marek^{3,4}

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1305 Altered Neurocognitive Aging in Adults with Clinical High Risk for Psychosis

Lana Kambeitz-Ilanovic¹, Shalaila Haas^{1,2}, Eva Meisenzahl³, Hans-Jürgen Möller¹, Peter Falkai^{1,2}, Nikolaos Koutsouleris^{1,2}

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1306 Central and non-central networks, cognition, positive symptoms and genetics in schizophrenia

Clara Alloza Romero¹, Mark Bastin¹, Simon Cox¹, Jude Gibson¹, Barbara Duff¹, Scott Semple¹, Heather Whalley¹, Stephen Lawrie¹

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1307 Abnormal functional brain connectivity in children and adolescents at risk for Schizophrenia

Hugo Sandoval¹, Vince Calhoun², Michael Escamilla³, Mercedes Ramirez⁴, Luis Ramos-Duran³, Carola Mullins³, Gerardo Jeffery⁵, Jose Gavito³

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1308 The functional connectome and negative symptom dimensions in schizophrenia

Nicky Klaasen¹, Edith Liemburg^{1,2,3}, Remco Renken¹, Jan-Bernard Marsman¹, Esther Opmeer¹, André Aleman^{1,4}

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1309 Schizophrenia Exhibits Bi-Directional Brain-Wide Alterations in Cortico-Striato-Cerebellar Circuits

Jie Lisa Ji¹, Caroline Diehl¹, Charles Schleifer¹, Genevieve Yang¹, Gina Creatura¹, Grega Repovs², John Murray¹, Anderson Winkler³, Alan Anticevic¹

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1310 Characteristic gray matter reductions in remitted and non-remitted patients with schizophrenia

Jing Ying Huang¹, Chih-Min Liu^{2,3}, Tzung-Jeng Hwang^{2,3}, Hai-Gwo Hwu^{2,3}, Wen-Yih Tseng^{1,3,4,5}

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1311 Elevated Perfusion of Limbic Brain Regions in Non-help-seeking Subjects with Psychotic Experiences

Rick Wolthuisen^{1,2,3}, Garth Coombs III^{3,4}, Emily Boeke^{1,3,5}, Stefan Ehrlich², Stephanie DeCross^{1,3}, Shahin Nasr^{6,7,8}, Daphne Holt^{1,3,9}

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- 1312 Altered structural connectivity identifies psychotic symptoms in patients with 22q11DS**
Maria Carmela Padula¹, Elisa Scariati¹, Marie Schaer¹, Corrado Sandini¹, Maude Schneider¹, Dimitri Van De Ville², Stephan Eliez¹
¹University of Geneva, Geneva, Switzerland, ²Ecole Polytechnique Fédérale de Lausanne, Lausanne, Vaud
- 1313 Working memory in childhood onset schizophrenia patients and their nonpsychotic siblings**
Siyuan Liu¹, Frances Loeb¹, Xueping Zhou¹, Kirsten Craddock¹, Judith Rapoport¹
¹CPB, NIMH, NIH, Bethesda, MD
- 1314 Investigating Scale-free Dynamics and Complexity in Schizophrenia: Evidence From Resting-state MEG**
Golnoush Alamian¹, Thomas Thiery¹, Tarek Lajnef¹, Dmitrii Altukhov², Laura Whitlow³, James Walters⁴, Krish Singh⁵, Karim Jerbi¹
¹CERNEC, Université de Montréal, Montréal, Québec, Canada, ²MEG Center, Moscow State Pedagogical University, Moscow, Russian Federation, ³Cardiff University, Cardiff, United Kingdom, ⁴School of Medicine, Cardiff University, Cardiff, United Kingdom, ⁵School of Psychology, Cardiff University, Cardiff, United Kingdom
- 1315 Impaired Cerebral Autoregulation is Associated with Functional Connectivity in Schizophrenia**
Hsiao-Lun Ku¹, Timothy Joseph Lane², Hsin-Chien Lee¹, Jiunn-Kae Wang¹, David Yen-Ting Chen¹, I-Chao Liu¹, Yung-Chan Chen¹, Yao-Tung Lee¹, I-Cheng Lin¹, Chia-Pei Lin¹, Nai-Fang Chi¹
¹Shuang Ho Hospital, Taipei Medical University, New Taipei City, Taiwan, ²Taipei Medical University, Taipei City, Taiwan
- 1316 Common/Distinct Changes of Prefrontal-thalamic-cerebellar Circuit in Schizophrenia and Depression**
Yuchao Jiang¹, Mingjun Duan¹, Xi Chen¹, Jinnan Gong¹, Cheng Luo¹, Dezhong Yao¹
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- 1317 Music Therapy Improves the Functional Connectivity on insular in Schizophrenia**
Hui He¹, Mi Yang¹, Xi Chen¹, Mingjun Duan¹, Yongxiu Lai¹, Junming Shao¹, Cheng Luo¹, Dezhong Yao¹, Bharat Biswal¹
¹Key Laboratory for NeuroInformation of Ministry of Education, UESTC, Chengdu, China
- 1318 Associations between dynamic connectivity, actigraphy and apathy**
Michelle Servaas¹, Claire Kos¹, Nicolas Gravel¹, Remco Renken¹, Jan-Bernard Marsman¹, Marie-Jose van Tol¹, Andre Aleman¹
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- 1319 Brain Subtyping Enhances the Neuroanatomical Discrimination of Schizophrenia**
Dom Dwyer¹, Carlos Cabral¹, Lana Kambeitz-Illankovic¹, Joseph Kambeitz¹, Vince Calhoun², Peter Falkai¹, Christos Pantelis³, Eva Meisenzahl⁴, Nikolaos Koutsouleris¹
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- 1320 Diathesis-stress modeling of early adversity, prodromal symptoms and brain response to faces**
Johannes Pulkkinen¹, Vesa Kiviniemi¹, Jouko Miettunen¹, Jennifer Barnett², Graham Murray², Tomas Paus³, Juha Veijola¹
¹University of Oulu, Oulu, Finland, ²University of Cambridge, Cambridge, United Kingdom, ³Rotman Research Institute, Baycrest, Toronto, Canada
- 1321 Visual backward masking and the schizophrenia spectrum: EEG correlates**
Janir Ramos da Cruz^{1,2}, Ophélie Favrod¹, Albulena Shaqiri¹, Maya Roinishvili^{3,4}, Eka Chkonia^{4,5}, Patrícia Figueiredo², Michael H. Herzog¹
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- 1322 Distinct Cortical Thinning Pattern in Never-treated Schizophrenia**
Pujun Guan¹, Wenbin Li¹, Tong Shan¹, Kaiming Li¹, Qiyong Gong¹
¹Huaxi MR Research Center (HMRRC), Department of Radiology, West China Hospital of Sichuan University, Chengdu, China
- 1323 Cognitive remediation therapy modulates resting state brain activity and cognition in schizophrenia**
Fengmei Fan¹, Yizhuang Zou¹, L. Elliot Hong², Yunlong Tan¹, Shuping Tan¹
¹Beijing Huilongguan Hospital, Beijing, China, ²Maryland Psychiatric Research Center, Baltimore, MD

1324 ENIGMA-Relatives – Brain Volumes in First-Degree Relatives of Schizophrenia and Bipolar Patients

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1325 A data-fusion approach for linking multiple functional connectivity patterns in schizophrenia

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1326 Dopamine Functioning in Schizophrenia and Healthy Adults: A Connectome-Wide Association Study

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1328 Mapping cortical thickness in chronic schizophrenia between treatment resistant and responders

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1329 Glutamate Levels in the ACC of Patients with Schizophrenia, Unaffected Siblings and Controls

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1330* Polygenic Risk Score for Schizophrenia of CACNA1C Associated with Parahippocampal Hyperconnectivity

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1331 Resting-state connectivity is associated with treatment response in people with schizophrenia

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1332 Schizophrenia Prediction Using Optimal Combination Of Multiple Imaging Genomics Data

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1333 Schizophrenia: the relationship between purchase decision-making and self-referential processing

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1334 Prediction of psychosis using labeled cortical distance mapping and machine-learning methods

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- 1335 Reciprocal Disruptions in Cortico-Thalamic and Hippocampal Connectivity in Youth with 22q11 Deletion**
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- 1336 Contribution of subcortical structure to cognitive function in first episode schizophrenia**
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- 1337 Randomized and Dys-modular Network Architecture of Functional Connectome in Psychiatric Disorders**
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- 1338 Brain areas associated with insight in psychotic disorders: a meta-analysis**
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- 1339 Vitamin D and Intracranial Volume Associated in Psychosis Spectrum Disorders and Healthy Controls**
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- 1340 Brain Abnormalities and IQ in First-Degree Relatives of Patients with Schizophrenia**
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- 1341 Cortical Gray-White Matter Contrast Underlying Symptoms and Verbal Memory in First Episode Psychosis**
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- 1342 Identify schizophrenia with a movie in scanner**
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- 1343 White matter correlates of the disorganized speech dimension in schizophrenia**
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- 1344 White matter correlates of impaired gesture performance and recognition in schizophrenia**
Petra Viher¹, Peter Savadjiev², Katharina Stegmayer¹, Nikos Makris³, Andrea Federspiel¹, Sarina Karchmacharya², Stephan Bohlhalter⁴, Tim Vanbellingen⁴, Roland Wiest⁵, Martha Shenton², Werner Strik¹, Marek Kubicki², Sebastian Walther¹
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- 1345 Influence of Genetics on Time-varying Functional Network Connectivity in Schizophrenia**
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- 1346 Quantitative multi-parametric MRI of periodic catatonia shows increasing iron in the cingulate area**
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- 1347 Deficits in Iterative Visual Processing in Schizophrenia**
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- 1348 Negative symptoms and basal ganglia in adolescents with early-onset psychosis**
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- 1349 Connectivity during hallucinations: a dynamic causal modeling study**
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- 1350 Altered metastable brain dynamics in schizophrenia**
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- 1351 MeQTL-driven epigenetic effect on brain gray matter in schizophrenia**
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- 1352 Dysfunctional Cortico-Hippocampal Network Dynamics in Schizophrenia vs. Healthy Control**
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- 1353 Inspecting intra-cortical myelin organization in schizophrenia using MRI at 7 Tesla**
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- 1354 3D Local White Matter Integrity Analysis in Psychosis Spectrum Youths**
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- 1355* Functional brain networks underlying impaired disconfirmatory evidence integration in schizophrenia**
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- 1356 Cortical Abnormalities in Schizophrenia: An ENIGMA Schizophrenia Working Group Meta-Analysis**
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- 1357 fMRI Functional Connectivity and Signal Amplitude in Early Schizophrenia and Genetic High Risk**
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- 1358 Stroop interference-related electrophysiological effect in remitted schizophrenia**
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- 1359 Altered large scale functional networks in unaffected family members of schizophrenia patients**
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- 1360 The possible role of D2 receptor-mediated neurotransmission in the insula and related limbic system**
Yohan Joo¹, Jeong-Hee Kim², Young-Don Son³, Hang-Keun Kim³, Jong-Hoon Kim^{1,4}
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- 1361 Altered Functional Connectivity in Auditory Pathway related to Auditory Verbal Hallucination**
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- 1362 Impaired sensory processing and integration in schizophrenia**

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- 1363 Novel Sliding-Window approach reveals deviant maturation of structural covariance in 22q11DS**

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- 1364 Disorganization Syndrome Predicts Activity within the Semantic Integration Network in Schizophrenia**

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- 1365 Global Cerebellar Connectivity Extent is Lower in Schizophrenia than in Healthy Controls**

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- 1366 Disrupted Thalamic Modular Connectivity in Schizophrenia**

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- 1367 Clustering cognitive profiles in schizophrenia: a multimodal neuroimaging study**

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- 1368 Real time fMRI feedback targeting default mode network (DMN) reduces auditory hallucinations**

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- 1369 Aberrant functional modes and abnormal connectivity patterns are coupled in schizophrenia patients**

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DISORDERS OF THE NERVOUS SYSTEM

Sleep Disorders

- 1370 Structural covariance and functional connectivity networks in idiopathic hypersomnia**

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- 1371 Spontaneous Theta Rhythm Predicts Insomnia Duration: a Resting-State EEG Study**
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- 1372 Chronotype-specificity in cortical thickness - grey matter reflects when you go to bed**
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- 1373 Disrupted brain network topology in Insomnia Disorder: A diffusion tensor Imaging study.**
Min Guan¹, Cuihua Zhao¹, Rui Chen¹, Enfeng Wang¹, Zhonglin Li¹, Zhi Zou¹, Shewei Dou¹, Yongli Li¹, Meiyun Wang¹, Dapeng Shi¹
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- 1374 Structural connectivity in rapid eye movement sleep behavior disorder patients**
Min-Hee Lee¹, Areum Min¹, Yoon Ho Hwang¹, Seung Ku Lee², Bong Soo Han³, Dong Youn Kim¹, Chang-Ho Yun⁴, Chol Shin²
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- 1375 The analysis of cortical surface area in partial sleep deprivation**
Areum Min¹, Min-Hee Lee¹, Yoon Ho Hwang¹, Bong Soo Han², Dong Youn Kim¹
¹Department of Biomedical Engineering, Yonsei University, Wonju, Korea, Republic of, ²Department of Radiological Science, Yonsei University, Wonju, Korea, Republic of
- 1376 Altered brain network topology in insomnia disorder: A resting-state fMRI study**
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¹HeNan Provincial People's Hospital, Zheng Zhou, China
- 1378 Impact of Bright Light Therapy on Structural Abnormalities following a mild Traumatic Brain Injury**
Sahil Bajaj¹, Anna Alkozei¹, William Killgore¹
¹University of Arizona, Tucson, AZ, United States
- 1379 Dynamics of brain's cortical measures following a mild traumatic brain injury**
Sahil Bajaj¹, Anna Alkozei¹, William Killgore¹
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EMOTION AND MOTIVATION

Emotion and Motivation Other

- 1380 Enduring effects of reappraisal on emotional responses and memory**
Danyang Kong¹
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- 1381 Electrical stimulation of the medial prefrontal cortex to regulate induced anger**
Ziv Ben Zion¹, Rany Abend^{1,2,3}, Guy Gurevitch^{1,2}, Alon Erdman¹, Halen Baker¹, Talma Hendler^{1,2,4,5}, Gadi Gilam¹
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- 1382 Neural substrates of reward decision making and theory of mind: an ALE meta-analysis study**
Shu-Hui Lee¹, Shen-Hsing Annabel Chen¹
¹Nanyang Technological University, Singapore
- 1383 Neural substrates of the influence of emotional cues on cognitive control in risk-taking adolescents**
Nikki Lee¹, Wouter Weeda², Catherine Insel³, Leah Somerville³, Lydia Krabbendam¹, Mariette Huizinga¹
¹Vrije Universiteit Amsterdam, Amsterdam, Netherlands, ²Leiden University, Leiden, Netherlands, ³Harvard University, Cambridge, MA
- 1384 The relationship between outcome prediction and cognitive fatigue: a convergence of paradigms.**
Glenn Wylie¹, Helen Genova¹, John DeLuca¹, Ekaterina Dobryakova²
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- 1385 A dynamic brain network that represents negative affect during the social evaluative threat stressor**
Michael Tobia¹, Koby Hayashi¹, Grey Ballard¹, Christian Waugh¹
¹Wake Forest University, Winston-Salem, NC
- 1386* The seductive power of curiosity: When it overrides physical risk – an fMRI investigation**
Johnny King Lau^{1,2}, Hiroki Ozono³, Asuka Komiya⁴, Kou Murayama^{1,2}
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- 1387 The motivational drive of desirable beliefs**
Bojana Kuzmanovic¹, Lionel Rigoux^{1,2}, Marc Tittgemeyer¹
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- 1388 Unraveling the Mystery of Humorlessness: The Neural Correlates of Gelotophobia**
Yu-Chen Chan¹
¹National Tsing Hua University, Taiwan
- 1389* Brain Network of Emotion Regulation in Soldiers with Trauma**
D Rangaprakash¹, Michael Dretsch², Thomas Daniel³, Thomas Denney³, Jeffrey Katz³, Gopikrishna Deshpande³
¹University of California Los Angeles, Los Angeles, CA, ²Human Dimension Division, HQ TRADOC, Fort Eustis, VA, ³Auburn University, Auburn, AL
- 1390 Neural and behavioral interplay of intrinsic and extrinsic motivation**
Nils Kohn¹, Eelco van Dongen², Hongxia Duan², Tom Roovers², Alan Sanfey², Guillén Fernández³
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- 1391 The correlation between mood states and functional connectivity within the default mode network**
Guangheng Dong¹, marc potenza²
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- 1392 Savoring emotions: Differential neurobiological underpinnings of positive and negative rumination**
Julia Linke¹, Sonja Ascheid²
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EMOTION AND MOTIVATION

Emotional Learning

- 1393 The Neural Correlates of the Acquisition of Fear of Touch-Related Pain**
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- 1394 Neural correlates of habituation and anticipatory responses in human fear conditioning**
Laura Leuchs¹, Ines Eidner¹, Max Schneider¹, Michael Czisch¹, Victor Spoormaker¹
¹Max-Planck-Institute of Psychiatry, Munich, Germany

- 1395* Fear acquisition induces spatio-temporal patterns of activity from salience to default mode network**
Blazej Baczowski^{1,2}, Sabine Oligschläger^{1,2,3}, Michael Gaebler^{1,4,5}, Susanne Erk⁶, Henrik Walter⁶, Arno Villringer¹, Ilya Veer⁶, Daniel Margulies¹
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- 1396 Implementation of EEG Emotion Recognition System Based on Hierarchical Convolutional Neural Networks**
Jinpeng Li¹, Huiguang He¹
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- 1397 Brain networks underlying successful emotion regulation with real-time fMRI neurofeedback**
Ronald Sladky¹, Hanne Scheerer¹, Antonia Scheiblich¹, Jessica Kohlberg¹, Erich Seifritz¹, Uwe Herwig¹, Frank Scharnowski¹, Annette Brühl¹
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- 1398 Reinforcement learning over time: effects of spacing on the mechanisms supporting feedback learning**
G Elliott Wimmer¹, Jamie Li¹, Russell Poldrack¹
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- 1399 Neural Changes Related to the Training of Emotion Regulation**
Farah Naaz¹, Lindsay Knight¹, Teodora Stoica¹, Leonard Faul¹, Brooke Siers¹, Samantha Patton¹, Brendan Depue¹
¹University of Louisville, Louisville, KY

EMOTION AND MOTIVATION

Emotional Perception

- 1400 Disgust and Fear works differently on LPP: The Modulation of Emotional Faces and Scenes**
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- 1401 Reliability of amygdala activation to affective pictures: Reactivity we can count on?**
Tammi Kral¹, Jeanette Mumford¹, Sasha Sommerfeldt¹, Brianna Schuyler¹, Stacey Schaefer¹, Andrew Schoen¹, Richard Davidson¹
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- 1402 The impact of androstadienone on the neural correlates of interference control**
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- 1403 Modulation of cortical interoceptive processing during emotion perception of others**
Jaejoong Kim¹, bumseok Jeong¹
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- 1404 Perspective Taking during Laughter Perception**
Dirk Wildgruber¹, Jan Ritter¹, Heike Jacob¹, Benjamin Kreifelts¹
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- 1405 Alteration of Heartbeat Evoked Magnetic Fields (HEFs) by Emotional Affective Sound Stimuli**
Yutaka Kato^{1,2}, Yuichi Takei², Satoshi Umeda³, Masaru Mimura⁴, Masato Fukuda²
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- 1406 Gender Differences for Affective Auditory Stimulus – MEG/EEG Source Localization Study**
Moonyoung Kwon¹, Hohyun Cho¹, Sangtae Ahn², Sung Chan Jun¹
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- 1407 Brain responses to angry body expressions during a working memory task: An fNIRS study**
Giulia Mastrella^{1,2}, Pierre Jolicœur^{3,2}, Jorge Armony^{4,2,3,5}
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- 1408 The role of cognitive load in modulating pain responses during reappraisal**
Agnieszka Adamczyk¹, Mirosław Wyczesany², Tomasz Ligeza¹
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- 1409 The catastrophizing brain: the specific role of rdACC/dmPFC as revealed by fMRI pattern analysis**
Kenneth Yuen¹, Anna Gerlicher², Alexandra Thanellou³, Raffael Kalisch²
¹Johannes Gutenberg University Medical Center, Mainz, Germany, ²Neuroimaging Center, Johannes Gutenberg University Medical Center, Mainz, Germany, ³Institution for Counselling & Psychological Studies, Athens, Greece
- 1410 Brain network re-configuration during emotional speech assessed by graph theoretical analysis**
Shih-Yen Lin^{1,2}, Chen-Pei Lin¹, Ling-Ling Liao³, Chi-Chun Lee³, Li-Wei Kuo^{1,4}
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- 1411 Functional connectivity analysis of pleasant and unpleasant states using fMRI**
Syoya Ishida¹, Satoru Hiwa¹, Keisuke Hachisuka², Eiichi Okuno², Tomoyuki Hiroyasu³
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- 1412 Neural mechanisms of emotion categorization : a combined fMRI and pupillometric study**
Kim Wende¹, Roman Kessler¹, Kristin Zimmermann², Anna Thorwart³, Andreas Jansen⁴
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- 1413 Explicit versus Implicit Emotion Processing: a 7 Tesla fMRI study**
Nicole Geissberger¹, Ronald Sladky^{2,1}, Martin Tik¹, André Hoffmann¹, Michael Woletz¹, David Willinger¹, Simon Robinson¹, Christian Windischberger¹
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- 1414 A novel paradigm for facial emotion processing**
David Willinger¹, Ronald Sladky^{1,2}, Nicole Geissberger¹, Martin Tik¹, Christian Windischberger¹
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- 1415 Gender Differences in the Neural Substrates of Down-Regulating Negative Emotion and Social Threat**
Teodora Stoica¹, Lindsay Knight¹, Farah Naaz¹, Leonard Faul¹, Samantha Patton¹, Brendan Depue¹
¹University of Louisville, Louisville, KY
- 1416 A Multi-modal Investigation of the Neural Mechanisms Underlying Fear and Anxiety**
Lindsay Knight¹, Farah Naaz¹, Brooke Siers¹, Brendan Depue¹
¹University of Louisville, Louisville, KY
- 1417 Emotion recognition in pediatric brain tumor patients: viewing patterns and white matter structure**
Iska Moxon-Emre^{1,2,3}, Eric Bouffet¹, Suzanne Laughlin¹, Jovanka Skocic¹, Cynthia de Medeiros¹, Donald Mabbott^{1,2}
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- 1418 Reliability from adolescence to young adulthood of emotion task-related fMRI signal in the amygdala**
Sasha Sommerfeldt¹, Jeanette Mumford¹, Tammi Kral¹, Cecilia Westbrook¹, Cory Burghy¹, Stacey Schaefer¹, Daniel Grupe¹, Robin Goldman¹, Richard Davidson¹
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- 1419 Theta waves and ripples in human mesial temporal ECoG during viewing of dynamic fearful faces**
Tommaso Fedele¹, Athina Tzovara², Thomas Grunwald³, Peter Hilfiker³, Dominik Bach², Niklaus Krakenbühl¹, Hennric Jokeit³, Johannes Sarthein¹
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- 1420 A stereo EEG study of high frequency neural activity in emotion processing**
Saurabh Sonkusare^{1,2}, Vinh Thai Nguyen¹, Sasha Dionisio³, Michael Breakspear¹, Christine Guo¹
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- 1421 Pre- and On-Task Amygdala Activity influence Reaction Times in an Emotional Capture Experiment**
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- 1422 Impact of early life stress on brain activation related to emotional reappraisal**
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- 1423 Inflammatory marker interleukin-6 is related to altered fronto-limbic activity in neurotypical youth**
Leanna Hernandez¹, Jessica Chiang¹, Lauren Sherman², Jennifer Pfeifer³, Mirella Dapretto¹
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- 1424 Task-based representations and the amygdala: representational similarity analysis of affect labeling**
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EMOTION AND MOTIVATION

Reward and Punishment

- 1425 Interaction between traumatic events and resilience affects reward processing**
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- 1426 Reward Enhances Connectivity between the Ventral Striatum and the Default Mode Network**
Ekaterina Dobryakova¹, David Smith²
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- 1427 Cheating for the good of others – and oneself: Neural correlates of unethical behavior**
Fabian Simmank¹
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- 1428* Meta-analytic clustering dissociates activation and behavior profiles across reward processing data**
Jessica Flannery¹, Michael Riedel¹, Ranjita Poudel¹, Taylor Salo¹, Katie Bottenhorn¹, Lauren Hill¹, Angie Laird¹, Matthew Sutherland¹
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- 1429 Neural correlates of personality in reward processing**
Katja Vu¹, Egill Rostrup², Jayachandra Raghava², Birte Glenthøj¹, Mette Nielsen¹
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- 1430 Opposing effects of reward and punishment during skill learning**
Adam Steel^{1,2}, Edward Silson³, Charlotte Stagg², Chris Baker³
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- 1431 Incentives to Perform: The Effects of Reward on Working Memory**
Younsun Cho¹, Charles Schleifer¹, Martina Starc², Jie Lisa Ji¹, Nicole Santamauro¹, Brendan Adkinson¹, Michael Lituchy³, John Krystal¹, John Murray¹, Grega Repovs⁴, Alan Anticevic¹
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- 1432 Altered reward processing in individuals who have experienced high early life stress**
Rasmus Birn¹, Barb Roeber¹, Madeline Harms¹, Seth Pollak¹
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- 1433 Investigating Reward-Based Attentional Capture in ADHD**
Ernest Miheli¹, Laura Rai¹, Aoife Sweeney¹, Amin Kheir², Robert Whelan^{1,3,4}, Louise Gallagher², Clare Kelly^{1,2,3,5}
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- 1434 Exogenous testosterone application modulates resting-state connectivity in men within reward circuit**
Mikhail Votinov^{1,2}, Lisa Wagens², Felix Hoffstaedter^{3,4}, Simon Eickhoff^{3,4}, Ute Habel^{2,5}
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- 1435 Cross-Species Vocal Social Reward Processing in the Dog Brain**
Attila Andics^{1,2}, Anna Gábor¹, Márta Gácsi¹, Tamás Faragó¹, Dóra Szabó¹, Ádám Miklósi^{1,2}
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- 1436 Impaired prediction error and striatal-midbrain connectivity during reward learning in Depression**
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EMOTION AND MOTIVATION

Sexual Behavior

1437 Avoiding Erotic Stimuli: Neural Mechanisms of Sexual Inhibition.

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1438 The Effects of the Novel Sex Hormone Kisspeptin on Resting State Functional Connectivity

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1439 Aberrant insula-centered resting-state functional network in psychogenic erectile dysfunction

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1440 The Disrupted Baseline Brain Activity of the Insular in Psychogenic Erectile Dysfunction Patients

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IMAGING METHODS

BOLD fMRI

1441 Neural basis of future thinking in major depression: a fMRI study

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1442 Holistic RS-fMRI data is greater than the sum of its parts in analyzing age - HIV interactions

Anna Egbert^{1,2}, Emilia Lojek¹, Agnieszka Pluta^{1,3}, Tomasz Wolak³, Stephen Rao⁴, Robert Bornstein⁵, Bharat Biswal², Keerthana Karunakaran², Suril Gohel², Mateusz Rusiniak³, Bogna Szymanska⁶, Andrzej Horban⁶, Ewa Firlag-Burkacka⁶, Marta Sobanska¹, Natalia Gawron¹, Adela Desowska¹, Mateusz Choinski¹, Jakob Czarnecki¹, Przemyslaw Bienkowski⁷, Halina Sienkiewicz-Jaros⁷, Anna Scinska-Bienkowska⁷

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1443 When gut speaks, brain listens: Exploring the influence of gut microbiota on emotional decision making

Deepika Bagga^{1,2}, Karl Koschutnig², Bhageshvar Mohan³, Christoph Aigner⁴, Johanna Reichert^{1,2}, Peter Holzer^{2,5}, Veronika Schöpf^{1,2}

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1444 Simulating the effect of head motion in fMRI

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1445 Multi-band acquisition influences multi-scale entropy estimation from resting state BOLD

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1446 Self-regulation of Primary Motor Cortex by Motor Imagery modulates Default Mode Network Connectivity

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1447 Consumption temperature of beverages influences homeostatic and hedonic brain responses.

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1448 When Bottom Up Meets Top Down: Negative Stimulus Valence and Attention in Emotion Dysregulation

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1449 Association of Cortical Thickness and Functional Connectivity Abnormalities in Chronic Pain Patients

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- 1450 Common spatial pattern method for ADHD Classification: a resting-state fMRI study**
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- 1451 The cortical connectivity of the periaqueductal gray and the conditioned threat of breathlessness**
Olivia Faull¹, Kyle Pattinson¹
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- 1452 Comparison of motor imagery paradigms for functional MRI**
Seyed Amir Hossein Batouli¹, Minoo Sisakhti², Tahereh Farhadi², Mohammad Ali Oghabian²
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- 1453 Improving simultaneous multi-slice and 3D-EPI fMRI using rank-constrained reconstruction**
Mark Chiew¹, Karla Miller¹
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- 1454 Single-patient analysis of impaired RS-fMRI connectivity**
Azzurra Invernizzi^{1,2}, Kaat Alearts², Dante Mantini^{2,3,4}
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- 1455 Investigation of Sensory Effects in the Lumbar Spinal Cord by fMRI Imaging Methods**
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- 1456 Altered functional connectivity in anterior cingulate cortex in IBS with comorbid anxiety**
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- 1458 Modelling fMRI Repetition Suppression in FFA**
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- 1459 Impact of Temporal Autocorrelation on Statistical Mapping in Multiband EPI-based fMRI**
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- 1460 Comparing finger mapping designs for assessment of somatosensory plasticity in patients**
Judith Eck^{1,2}, Inge Timmers^{3,1}, Emma Biggs^{1,4}, Till Steinbach¹, Quentin Noirhomme², Hanneke Bouwsema^{3,5}, Henk Seelen^{3,5}, Rainer Goebel¹, Renate Schweizer^{6,7}, Amanda Kaas¹
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- 1461 Abnormal Brain Regional Homogeneity and Resting-State Functional Connectivity in non-NPSLE**
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- 1462 Dependence of BOLD fMRI detection sensitivity in multiband EPI on spatial smoothing**
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- 1463 Developing the ENIGMA resting state fMRI analysis pipeline**
Bhim Adhikari¹, Neda Jahanshad², Dinesh Shulka¹, Jessica Turner³, Dominik Grotegerd⁴, Axel Krug⁵, Els Fieremans⁶, Jelle Veraart⁷, Dmitry Novikov⁸, Premika Boedhoe⁹, Odile van den Heuvel¹⁰, Jonathan Ipser¹¹, Anne Uhlmann¹¹, Dan Stein¹¹, David Glahn¹², L. Elliot Hong¹, Paul M. Thompson¹³, Peter Kochunov¹
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- 1464 Human brain activation pattern induced by acupuncture stimulation: An fMRI study**
Mi Young Lee¹, Ju Sang Kim¹
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- 1465 An Application of Spectral Entropy for Studying fMRI Interpretability**
Christopher O'Grady¹, Steve Patterson², James Rioux^{2,3,4}, Antonina Omisade^{5,6}, Javeria Hashmi^{5,7}, Steven Beyea^{2,4}
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- 1466 Acute psychosocial stress dynamically impacts limbic hemodynamic response latency**
Immanuel Elbau¹, Benedikt Bruecklmeier², Michael Czisch³, Janine Arloth¹, Darina Czamara¹, Manfred Uhr¹, Ines Eidner³, Binder Elisabeth¹, Philipp Saemann⁴
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- 1467 Efficient quasi-exact test for event related fMRI analysis**
Nicolas von Ellenrieder¹, Hui Ming Khoo¹, Jean Gotman¹
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- 1468 Intrinsic Functional Connectivity in Young Children Exposed to a Multilingual Environment**
Camilia Thieba¹, Xiangyu Long¹, Catherine Lebel¹, Deborah Dewey¹
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- 1469 Exploiting pattern similarity approaches to examine genetic relationships in HCP task fMRI data**
Jo Etzel¹, Todd Braver²
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- 1470 The de-selfing brain: Reduced default mode network activity during the experience of awe**
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- 1471 Is the Neural Inversion Effect in human FFA a reliable index of face processing?**
Kuo Liu¹, Chiu-Yueh Chen¹, Chun-Chia Kung¹
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- 1472 Analysis Static and Dynamic Changes of Brain Functional Network Connectivity Caused by Acupuncture**
Ru Li¹, Peng Liu¹, Xunjuan Yang¹, Jinbo Sun¹, Wei Qin¹
¹Life Sciences Research Center, School of Life Sciences and Technology, Xidian University, Xi'an, China
- 1473 Discrimination between Guilt and Shame: fMRI Investigation Using Multi-voxel Pattern Analysis**
Chan-A Park¹, Jihye Noh¹, Ji-woo Seok¹, Chaejoon Cheong^{1,2}
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- 1474 Glucose, fructose and lactisole effects on brain areas underpinning working memory.**
Davide Zanchi¹, Anne Meyer-Gerspach², Antoinette Depoorter³, Andre Schmidt¹, Christoph Beglinger², Bettina Wölnerhanssen⁴, Stefan Borgwardt¹
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- 1475 Effects of Internet Gaming Disorder on Neural Activity of Self-Referential Processing**
Young Hoon Jung¹, Yu-Bin Shin¹, Sunghyon Kyeong², Min-Kyeong Kim³, Eunjo Kim³, Jae-Jin Kim^{1,2,3}
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- 1476 Cross-disorder and disorder-specific neural connectivity alterations related to polygenic risk score**
Tianqi Wang¹, Xiaolong Zhang¹, Ang Li¹, Meifang Zhu¹, Shu Liu¹, Wen Qin², Jin Li¹, Chunshui Yu², Tianzi Jiang¹, Bing Liu¹
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- 1477 Supplementary Motor Area Connectivity Correlates with Hand Motor Recovery after Cerebral Infarction**
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- 1478 PESTICA 4.0: Evaluation of a new physiologic estimation in HCP resting state fMRI data**
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- 1479 Assessment of Retinal Gene Therapy Durability using the Human Visual Cortex**
Manzar Ashtari^{1,2,3}, Elena Nikonova⁴, Kathleen Marshall⁵, Gloria Young¹, Puya Aravand¹, Wei Pan⁶, Gui-shuang Ying⁶, Aimee Willett¹, Mani Mahmoudian¹, Albert Maguire^{1,2,5}, Jean Bennett^{1,2,5}
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- 1480 Neural activity associated with letter naming speed task manipulations**
Noor Al Dahhan¹, Donald Brien¹, John Kirby¹, Douglas Munoz¹
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- 1481* Comparable Dynamic Resting-state Functional Connectivity of FMRI and LFPs via Hidden Markov Models**
Zhaoyue Shi¹, Mitch Wilkes¹, Pai-Feng Yang¹, Ruiqi Wu¹, Feng Wang¹, Tung-Lin Wu¹, Li Min Chen¹, John Gore¹
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- 1482 Effects of aspirin on vascular responses: A 7T Functional MRI study**
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- 1483* The effect of k-space sampling and signal decay on the effective spatial resolution in fMRI**
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- 1484 The role of fMRI in the diagnosis and prognosis of patients with disorders of consciousness**
Betty Wutzl^{1,2}, Cristina Florea¹, Kerstin Schwenker¹, Frank Rattay², Eugen Trinka¹, Franz Gerstenbrand³, Stefan Golaszewski^{1,3}
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- 1485 Not all motion is created equally: Temporal smoothness of head displacement impacts connectivity**
Arielle Tambini¹, Courtney Gallen¹, Krzysztof Gorgolewski², Mark D'Esposito¹, Jean-Baptiste Poline³
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- 1486 A Double-Blind Placebo Controlled Pharmacological-fMRI study in HIV Patients and Tobacco Smokers**
Linda Chang¹, Ahnate Lim¹, Bosco Huang¹, Thomas Ernst¹
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- 1487 Impaired Functional Connectivity within Mesocircuit in Patients with Disorders of Consciousness**
Ping Chen¹, Qiuyou Xie², Xiaoyan Wu¹, You Wang³, Yequn Guo², Lixiang Chen¹, Zhihong Lv², Shufei Zhang¹, Ronghao Yu², Ruiwang Huang¹
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- 1488 Test-retest reliability of graph metrics and functional connectivity in the resting brain network**
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- 1489 Altered amplitude of low-frequency fluctuation in euthymic patients with pediatric bipolar disorder**
Ming-Xiang Wei¹, Wei-Jia Gao², QING JIAO¹, Dong CUI¹, Wei-Fang CAO¹, Yong-Xin GUO¹, Da-Li Lu³, Qian Xiao³, Lin-Yan SU³, Guang-Ming LU⁴
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- 1490 Brain Spontaneous Activity and Functional Connectivity Density in Borderline Personality Disorder**
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- 1491 A 3D spatial phase approach to fMRI spatial dynamics, with applications to schizophrenia**
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- 1492 Brain Substrates Activated by Respiratory Interoceptive Stimuli: An fMRI study**
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- 1493 Pre-training localizer activity predicts real-time fMRI neurofeedback learning success**
Amelie Haugg^{1,2,3}, Ronald Sladky^{1,2,3}, Yury Koush⁴, Matthias Kirschner⁵, Hanne Scheerer¹, Marcus Herdener⁵, Nikolaus Weiskopf^{6,7}, Annette Brühl¹, Frank Scharnowski^{1,2,3}
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- 1494 A transdiagnostic investigation of cognitive control during reward processing**
Kristina Otto¹, Carolin Moessnang¹, Janina Schweiger¹, Michael Schneider¹, Heike Tost¹, Andreas Meyer-Lindenberg¹
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- 1495 Individual variability of functional connectivity during preterm brain development**
Yuehua Xu¹, Miao Cao¹, Xuhong Liao¹, Tina Jeon², Minhui Ouyang², Lina Chalak³, Nancy Rollins⁴, Hao Huang², Yong He¹
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- 1496 Cerebral reorganization of hand movement perception in a deafferented patient**
Anne Kavounoudias¹, Baptiste Fauvel¹, Marie Chancel¹, Bruno Nazarian², Jean-Luc Anton³, Olivier Félician⁴
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- 1497 The global mean cerebral BOLD signal is present in incoming arterial blood**
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- 1498 Functional connectivity of the posterior cingulate cortex in the native space in elderly**
Manon Edde¹, Bixente Dilharreguy¹, Catherine Helmer², Jean-François Dartigues³, Michèle Allard¹, Gwenaëlle Catheline¹
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- 1499 A clearer state of mind: The functional role of large-scale neural networks in placebo anxiolysis**
Benjamin Meyer¹, Kenneth Yuen¹, Raffael Kalisch¹
¹Johannes Gutenberg University Medical Center, Mainz, Germany
- 1500 Using Imagery to Engrain Memory: Neural Basis of the Imageability Effect**
Ami Tsuchida¹, Xiaoqian Chai¹, Denise Klein¹, Brenda Milner¹
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- 1501 Empathy and compassion in the treating physician**
Nathalie Wrobel¹, Maria Reingardt¹, Irving Kirsch², Randy Gollub³, Jian Kong⁴, Ted Kaptchuk⁵, Karin Jensen¹, Predrag Petrovich¹
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- 1502 Effect of field inhomogeneity due to head motion on BOLD fMRI Signal**
Anahita Talebi Amiri¹, F. Isik Karahanoglu², Paul Wighton³, Dara Manoach⁴, Dimitri Van De Ville⁵, Andre van der Kouwe³
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- 1503 Reorganization of Neural Activation and White Matter Following Compression of the Motor Cortex**
Layla Gould¹, Michael Kelly¹, Marla Mickleborough¹, Chelsea Ekstrand¹, Kyle Brymer¹, Tasha Ellchuk², Ron Borowsky¹
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- 1504* Oxytocin receptor gene polymorphisms modulate the reward system in a non-social decision-making task**
Katja Brodmann¹, Anja Richter², Roberto Goya-Maldonado¹, Esther Diekhof³, Oliver Gruber⁴
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- 1505 Investigating recurrence in temporal coupling of human brain networks in 7500 resting fMRI datasets**
Anees Abrol^{1,2}, Eswar Damaraju^{1,2}, Julia Stephen², Eric Claus², Andrew Mayer², Vince Calhoun^{1,2}
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- 1506 Effect of short TRs on fMRI sensitivity while controlling for temporal auto-correlation**
Amy McDowell¹, David Carmichael¹
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- 1507 Acceleration of FMRI data with priors and low-rank constraints**
Harry Mason¹, Karla Miller¹, Mark Chiew¹
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- 1508 Functional MRI and Delay Discounting in Patients Infected with Hepatitis C**
Holly McCready¹, Milky Kohno¹, Alissa Bazinet¹, Laura Dennis¹, Jenifer Loftis¹, William Hoffman², Marilyn Huckans²
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- 1509 Modulation of dopaminergic networks by intranasal insulin**
Sharmili Edwin Thanarajah¹, Sandra Iglesias², Bojana Kuzmanovic³, Lionel Rigoux⁴, Klaas Enno Stephan², Jens Brüning⁵, Marc Tittgemeyer⁵
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- 1510 Inter-network Connectivity Regulates DMN Deactivation via Regional Glutamate and GABA Concentrations**
Hong Gu¹, Yuzheng Hu¹, Xi Chen², Yong He³, Yihong Yang¹
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- 1511 Investigating the Human Posterior Cingulate Cortex Using Meta-Analytic Connectivity Modeling**
Jessica Busler¹, Meredith Reid², Jennifer Robinson²
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- 1512 Improvement of 7T high-resolution GRAPPA accelerated EPI using a FLASH based calibration scan**
Lalith Talagala¹, Joelle Sarlls²
¹National Institutes of Health, Bethesda, MD, ²National Institutes of Health, Bethesda, MD
- 1513 Simulating fMRI neurofeedback**
Ethan Oblak¹, Jarrod Lewis-Peacock¹, James Sulzer¹
¹The University of Texas at Austin, Austin, TX
- 1514 Improving attention through network-based neurofeedback training**
Gustavo Pamplona¹, Frank Scharnowski², Yury Koush³, Carlos Salmon¹
¹USP, Ribeirão Preto, Brazil, ²University of Zürich, Lausanne, Switzerland, ³Yale University, New Haven, United States

1515* Tracking the emergence of hierarchical conceptual knowledgeDavid Neville¹, Stephanie Theves¹, Guillén Fernández¹, Christian Doeller^{2,1}¹Donders Institute for Brain, Cognition and Behaviour, Centre for Cognitive Neuroimaging, Nijmegen, Netherlands, ²Kavli Institute for Systems Neuroscience, Centre for Neural Computation, Egil and Pauline Braathen, Trondheim, Norway**1516 Group information guided ICA shows more sensitivity to group differences than dual-regression**Mustafa Salman¹, Yuhui Du², Eswar Damaraju³, Vince Calhoun⁴¹University of New Mexico, Mind Research Network, Albuquerque, NM, ²The Mind Research Network, Albuquerque, NM, ³Mind Research Network, Albuquerque, NM, ⁴The Mind Research Network & LBERI; Department of Electrical and Computer Engineering, UNM, Albuquerque, NM**1517 Ultra-Fast vs Slow EPI Acquisition: Implications for Physiological Noise Correction**Feliberto De la Cruz¹, Andy Schumann¹, Stefanie Köhler¹, Karl-Jürgen Bär¹, Gerd Wagner¹¹Jena University Hospital, Jena, Germany**1518 Task Comparison for Language fMRI in Neurosurgical Patients**Prashin Unadkat¹, Luca Fumagalli¹, Laura Rigolo¹, Alexandra Golby¹, Yanmei Tie¹¹Brigham and Women's Hospital, Harvard Medical School, Boston, United States**1519 Spatial normalization of fMRI data using T1 versus EPI: A comparison**Vince Calhoun¹, Tor Wager², Anjali Krishnan³, Keri Rosch⁴, Karen Seymour⁴, Mary Beth Nebel⁵, Stewart Mostofsky⁴, Prashanth Nyalakanai⁶, Kent Kiehl⁶¹The Mind Research Network & The University of New Mexico, Albuquerque, NM, ²Department of Psychology and Neuroscience, University of Colorado at Boulder, Boulder, CO, ³Department of Psychology, Brooklyn College of the City University of New York, New York, United States, ⁴Kennedy Krieger Institute & Johns Hopkins University, Baltimore, MD, ⁵Kennedy Krieger Institute, Baltimore, MD, ⁶The Mind Research Network, Albuquerque, NM**1520 Default Mode Network modifications in Fabry's Disease**Giuseppe Pontillo¹, Sirio Cocozza¹, Francesco Saccà², Eleonora Riccio³, Teresa Costabile², Gaia Olivo¹, Silvia Migliaccio³, Mario Quarantelli⁴, Enrico Tedeschi¹, Antonio Pisani³, Arturo Brunetti¹¹Department of Advanced Biomedical Sciences, University "Federico II", Naples, Italy, ²Department of Neurosciences, University "Federico II", Naples, Italy, ³Department of Public Health, Nephrology Unit, University "Federico II", Naples, Italy, ⁴Institute of Biostructure and Bioimaging, National Research Council, Naples, Italy, Naples, Italy**1521 Single-shot Spiral fMRI at 7 T with High Resolution and Geometric Fidelity**Lars Kasper^{1,2}, Christoph Barmet^{2,3}, Maria Engel², Jakob Heinze¹, Bertram Wilm², Thomas Schmid², Klaas Enno Stephan^{1,4,5}, Klaas P. Pruessmann²¹Translational Neuromodeling Unit, IBT, University of Zurich and ETH Zurich, Zurich, Switzerland, ²Institute for Biomedical Engineering, ETH Zurich and University of Zurich, Zurich, Switzerland, ³Skoep Magnetic Resonance Technologies, Zurich, Switzerland, ⁴Wellcome Trust Centre for Neuroimaging, University College London, London, United Kingdom, ⁵Max Planck Institute for Metabolism Research, Cologne, Germany**1522 How to validate the canonical hemodynamic response function?**Wiktor Olszowy¹, Guy Williams¹, Catarina Rua¹, John Aston²¹Wolfson Brain Imaging Centre, Department of Clinical Neurosciences, University of Cambridge, Cambridge, United Kingdom, ²Statistical Laboratory, University of Cambridge, Cambridge, United Kingdom**1523 Brain Functional Connectivity Correlates of Music-Induced Analgesia in Fibromyalgia**Victor Pando¹, Fernando Barrios², Sarael Alcauter³, Eduardo Garza-Villarreal⁴¹National Autonomous University of Mexico, MEXICO, Mexico, ²Universidad Nacional Autonoma de Mexico, Queretaro, Queretaro, ³Universidad Nacional Autonoma de Mexico, Queretaro, Mexico, ⁴Instituto Nacional de Psiquiatria, Mexico City, Mexico**1524 fMRI of the human visual thalamus with inner-field-of-view imaging using 2D selective RF excitation**Tomke Schoss¹, Carsten Schmidt-Samoa¹, Severin Heumüller¹, Melanie Wilke^{1,2,3}, Jürgen Finsterbusch⁴, Peter Dechent¹¹Department of Cognitive Neurology, University Medical Center Göttingen, Göttingen, Germany, ²German Primate Center, Leibniz Institute for Primate Research, Göttingen, Germany, ³DFG Center for Nanoscale Microscopy & Molecular Physiology of the Brain (CNMPB), Göttingen, Germany, ⁴Department of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Hamburg, Germany**1525 Interaction effect of voice-specific function and BDNF Val66Met: An fMRI study**Michihiko Koeda¹, Atsushi Watanabe², Yumiko Ikeda³, Hiroyuki Karibe⁴, Amane TATENO¹, Masato Matsuura⁵, Hidenori Suzuki³, Yoshiro Okubo¹¹Department of Neuropsychiatry, Nippon Medical School, Tokyo, Japan, ²Division of Personalized Genetic Medicine, Nippon Medical School Hospital, Tokyo, Japan, ³Department of Pharmacology, Nippon Medical School, Tokyo, Japan, ⁴Department of Pediatric Dentistry, School of Life Dentistry, Nippon Dental University, Tokyo, Japan, ⁵Tokyo Medical and Dental University, Tokyo, Japan**1526 Cortical connective field estimates from resting state fMRI activity recorded at 3T**Azzurra Invernizzi¹, Hinke Halbertsma¹, Nicolas Gravel², Frans W. Cornelissen³¹University of Groningen, Groningen, Netherlands, ²Groningen University, Groningen, Netherlands, ³Laboratory of Experimental Ophthalmology, University Medical Center Groningen, Groningen, Netherlands**1527 Expansion of white matter fMRI applications to standard 3T MRI**Matthew Courtemanche¹, Carolyn Sparrey¹, Xiaowei Song², Alex MacKay³, Ryan D'Arcy^{1,2}¹Simon Fraser University, Surrey, Canada, ²Fraser Health Authority, Surrey, Canada, ³University of British Columbia, Vancouver, Canada**1528 The brainstem circuitry of respiratory-gated auricular vagus nerve stimulation (RAVANS) at 7 Tesla.**Roberta Sclocco^{1,2}, Ronald Garcia^{3,4}, Jonathan Polimeni¹, Ishtiaq Mawla¹, Nicola Toschi⁵, Lawrence Wald¹, Riccardo Barbieri⁶, Norman Kettner², Vitaly Napadow^{1,2}¹Athinoula A. Martinos Center for Biomedical Imaging, MGH, Harvard Medical School, Charlestown, MA, ²Department of Radiology, Logan University, Chesterfield, MO, ³Athinoula A. Martinos Center for Biomedical Imaging, MGH, Harvard Medical School, Boston, MA, ⁴Connor Center for Women's Health and Gender Biology, Division of Women's Health, Brigham and Women's Hospital, Boston, MA, ⁵Department of Biomedicine and Prevention, University of Rome Tor Vergata, Rome, Italy, ⁶Department of Electronics, Information and Bioengineering, Politecnico di Milano, Milano, Italy**1529 Brain Metabolite Levels, Especially Glutamate, Affect Functional Connectivity in Alcohol Dependence**Donna Murray¹, Duygu Tosun-Turgut¹, Thomas Schmidt², Norbert Schuff¹, Dieter Meyerhoff¹¹University of California San Francisco, San Francisco, CA, ²San Francisco VA Medical Center, San Francisco, CA

- 1530 Head motion suppression in Magnetic Resonance Imaging using simple biofeedback**
Florian Krause^{1,2}, Caroline Benjamins^{1,2}, Judith Eck^{1,2}, Michael Luhrs^{1,2}, Rick van Hoof², Rainer Goebel^{1,2,3}
¹Maastricht University, Department of Cognitive Neuroscience, Maastricht, Netherlands, ²Brain Innovation B.V., Maastricht, Netherlands, ³The Netherlands Institute for Neuroscience, Amsterdam, Netherlands
- 1531 Neuroimaging of Behavioral Inhibition: Methodology and an fMRI Study in Healthy People**
Pavla Linhartová¹, Matyáš Kuhn¹, Richard Barteček², Pavel Theiner², Michal Mikl¹, Petra Zemánková¹, Tomáš Kašpárek², Martin Bareš³
¹Department of Psychiatry, Masaryk University, Brno, Czech Republic, ²Department of Psychiatry, University Hospital Brno, Brno, Czech Republic, ³First Department of Neurology, St. Anne's University Hospital Brno, Brno, Czech Republic
- 1532 Reduced intraparietal sulcus activation in adult women with TS during covert visuospatial attention**
Dennis Dimond^{1,2,3,4}, Signe Bray^{3,4,5,6}
¹Department of Neuroscience, Cumming School of Medicine, University of Calgary, Calgary, Alberta, Canada, ²International and Industrial Imaging Training (I3T) Program, Cumming School of Medicine, University of Calgary, Calgary, Alberta, Canada, ³Child and Adolescent Imaging Research Program, University of Calgary, Calgary, Alberta, Canada, ⁴Alberta Children's Hospital Research Institute, University of Calgary, Calgary, Alberta, Canada, ⁵Department of Radiology, Cumming School of Medicine, University of Calgary, Calgary, Alberta, Canada, ⁶Department of Pediatrics, Cumming School of Medicine, University of Calgary, Calgary, Alberta, Canada
- 1533 Investigating neural inhibition underlying negative fMRI responses using a systems biology approach.**
Sebastian Sten^{1,2}, Karin Lundengård^{1,2}, Suzanne Witt², Fredrik Elinder³, Gunnar Cedersund^{4,3}, Maria Engström^{1,2}
¹Department of Medical and Health Sciences, Linköping University, Linköping, Sweden, ²Center for Medical Image Science and Visualization (CMIV), Linköping University, Linköping, Sweden, ³Department of Clinical and Experimental Medicine, Linköping University, Linköping, Sweden, ⁴Department of Biomedical Engineering, Linköping University, Linköping, Sweden
- 1534 Using SMS multi-echo fMRI to improve functional imaging of the cortex and subcortex at 7T**
Alexander Puckett¹, Saskia Bollmann², Jake Palmer³, Markus Barth², Ross Cunnington¹
¹University of Queensland; Queensland Brain Institute, Brisbane, QLD, ²University of Queensland; Centre for Advanced Imaging, Brisbane, QLD, ³University of Queensland; School of Psychology, Brisbane, QLD
- 1535 A study of the signal to noise ratio in low frequency fluctuations in the cadaveric human brain**
Jaime Gomez Ramirez¹, Chris Long², Eva Alfayate², Jose A. Pineda-Pardo³, Bryan Strange^{4,1}
¹Fundacion Reina Sofia. Centre for Research in Neurodegenerative Diseases, Madrid, Spain, ²Fundacion Reina Sofia, Madrid, Spain, ³Centro Integral de Neurociencias A.C., HM Hospitales-Puerta del Sur, CEU-San Pablo University, Madrid, Spain, ⁴Universidad Politecnica de Madrid and Fundacion Reina Sofia., Madrid, Spain
- 1536 Faithful reconstruction of imagined letters from 7T fMRI measures in early visual cortex**
Mario Senden¹, Thomas Emmerling¹, Martin Frost¹, Rainer Goebel²
¹Maastricht University, Maastricht, Netherlands, ²Brain Imaging Center, University of Maastricht, Maastricht, Netherlands
- 1537 Negative BOLD responses: Investigating links to structural and functional connectivity**
Ross Wilson¹, Karen Mullinger², Susan Francis³, Stephen Mayhew¹
¹Centre for Human Brain Health (CHBH), University of Birmingham, Birmingham, United Kingdom, ²Sir Peter Mansfield Imaging Centre, School of Physics, University of Nottingham, Nottingham, United Kingdom, ³SPMIC, School of Physics and Astronomy, University of Nottingham, Nottingham, United Kingdom
- 1538 Investigating the Effect of Monocular Deprivation on Retinotopic Maps in the Visual Cortex**
Lyes Bachatene¹, Russell Butler¹, Kevin Whittingstall²
¹Université de Sherbrooke, Sherbrooke, Canada, ²University of Sherbrooke, Sherbrooke, Canada
- 1539 Varying the spatial observation scale in fMRI analysis leads to substantially different results**
Philipp Kellmeyer¹, Tonio Ball¹
¹University of Freiburg - Medical Center, Freiburg im Breisgau, Germany
- 1540 Holomorphic Functions to Characterizing Human Retinotopic Mapping**
Duyan Ta¹, Yalin Wang¹, Zhong-Lin Lu², Alyssa Brewer³, Brian Barton³
¹Arizona State University, Tempe, AZ, ²The Ohio State University, Columbus, OH, ³University of California, Irvine, Irvine, CA
- 1541 Evaluation of olfactory activation patterns in anosmic patients with peripheral and central injuries**
Mohsen Kohanpour¹, Farhad Nowrouzian², Seyed Amir Hossein Batouli³, Mohammad Ali Oghabian⁴
¹Medical University of Tehran, Tehran, Iran, Islamic Republic of, ²Neuroimaging and Analysis Group, Tehran, Iran, Islamic Republic of, ³Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of, ⁴Medical Physics and Biomedical engineering, Tehran University of medical sciences, Tehran, Iran, Islamic Republic of
- 1542 Neuronal Response to Food Cues is Altered Following 10 kg Weight Loss**
Kristina Legget¹, Marc-Andre Cornier¹, Allison Hild¹, Jason Tregellas¹
¹University of Colorado School of Medicine, Aurora, CO
- 1543 Physiological noise limits MVPA at high resolution**
Hendrik Mandelkow¹, Jacco de Zwart², Catie Chang³, Jeff Duyn³
¹NIH, Bethesda, United States, ²National Institutes of Health, Bethesda, MD, ³NIH, Bethesda, MD
- 1544 Gender-differential effects of intranasal oxytocin on resting-state anterior cingulate activity**
Desiree Gulliford¹, Huaihou Chen², Eric Porges³, Tian Lin¹, Håkan Fischer⁴, David Feifel⁵, Ronald Cohen³, Natalie Ebner¹
¹Department of Psychology, University of Florida, Gainesville, FL, ²Department of Biostatistics, University of Florida, Gainesville, FL, ³Center for Cognitive Aging and Memory, Dept of Clinical and Health Psychology, University of Florida, Gainesville, FL, ⁴Stockholm University, Stockholm, Sverige, ⁵Department of Psychiatry, University of California, San Diego, CA
- 1545 Neural differences in methamphetamine users during risk processing**
Vita Drouman¹, Feng Xue¹, Emily Barkley-Levenson², Hei Yeung Lam¹, Stephen Read¹
¹University of Southern California, Los Angeles, CA, ²HOFSTRA, Hempstead, NY
- 1546* Exploring motion navigator choices in the TURBINE motion correction scheme for fMRI**
Nadine Graedel¹, Mark Chiew¹, Karla Miller¹
¹Oxford Centre for Functional MRI of the Brain, University of Oxford, Oxford, United Kingdom
- 1547 A proposal for a system that facilitates quantitative replication of fMRI studies**
Johan Jansma¹, Geert-Jan Rutten¹
¹Elisabeth-TweeSteden Hospital, Tilburg, Netherlands

- 1548 Resting State Activity of Brain During Different Phases of the Menstrual Cycle in Schizophrenia**
Handan Noyan¹, Andaç Hamamcı², Zeynep Fırat³, Ayşegül Sarsılmaz⁴, Alp Üçok⁵
¹Department of Neurosciences, Istanbul University, Istanbul, Turkey, ²Yeditepe University, Istanbul, Turkey, ³Yeditepe University Hospital, Istanbul, Turkey, ⁴Yeditepe University Hospital, Istanbul, Turkey, ⁵Department of Psychiatry, Istanbul Faculty of Medicine, Istanbul, Turkey
- 1549 Frequency Specific in Drug-naïve and L-dopa-treated PD Patients: A Resting-state fMRI Study**
Xuemei Fu¹, Long qian², Weiguo Liu³, Huaiqiu Zhu¹, Jia-Hong Gao²
¹Department of Biomedical Engineering, College of Engineering, Peking University, Beijing, China, ²Center for MRI Research, Peking University, Beijing, China, ³Department of Neurology, Affiliated Brain Hospital of Nanjing Medical University, Nanjing, China
- 1550 Brain Networks involved in retrieving spatial knowledge derived from route and survey perspectives.**
YaSyun Syu¹, Sung-Mu Lee², WU JIN AN³, CHUN-YU Lin⁴
¹National Cheng Kung University, Tainan, Taiwan, ²National Cheng Kung University and Academia Sinica, Taipei, Taiwan, ³National Cheng Kung University, Hsinchu County, 竹東鎮, ⁴National Cheng Kung University, West Central District, TAINAN CITY
- 1551* Multiband and Multiband Multiecho: rsfMRI comparison study**
Zahra Fazal¹, Daniel gomez¹, José Marques¹, David Norris^{1,2}
¹Donders Center for Cognitive and Neuroimaging, Nijmegen, Netherlands, ²Erwin L. Hahn Institute for Magnetic Resonance Imaging, Essen, Germany
- 1552 Depth-Dependent BOLD as a Measure of Directed Connectivity During Language Processing**
Daniel Sharoh¹, Tim van Mourik¹, Lauren Bains¹, Katrien Segaert², Kirsten Weber³, Peter Hagoort^{1,3}, David Norris^{4,5}
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- 1553 Tracking subject sleep stage using recurrent neural network**
Eswar Damaraju¹, Devon Hjelm², Sergey Plis³, Vince Calhoun⁴
¹Mind Research Network, Albuquerque, NM, ²Mind Research Network, Albuquerque, NM, NM, ³The Mind Research Network, ECE Dept. University of New Mexico, Albuquerque, NM, ⁴The Mind Research Network, Albuquerque, NM

IMAGING METHODS

Diffusion MRI

- 1554 Minimum Fractional Anisotropy Bias in Diffusion Tensor Imaging of the Brain**
Youngseob Seo¹
¹Korea Research Institute of Standards and Science, Daejeon, Korea, Republic of

- 1555 High resolution 7T diffusion MRI: Diffusion characteristics of midbrain anatomy and Trigeminal**
Ralf Luetzkendorf¹, Robin Heidemann², Thorsten Feiweier², Sebastian Baecke¹, Michael Luchtman¹, Joerg Stadler³, Joern Kaufmann¹, Johannes Bernarding¹
¹Otto-von-Guericke-University, Magdeburg, Germany, ²Siemens Healthcare GmbH, Erlangen, Germany, ³Leibniz Institute for Neurobiology, Magdeburg, Germany
- 1556 Tract-based Spatial Statistics for radiation-induced brain injury in head and neck tumor treatment**
Tengfei Li¹, Hongtu Zhu¹, Abdallah Mohamed¹, Ding Yao¹, Meheissen Mohamed¹, Hesham Elhalawani¹, Yan Jin¹, Clifton Fuller¹
¹University of Texas MD Anderson Cancer Center, Houston, TX
- 1557 Measuring Disruption of the Structural Connectome in Diffuse Traumatic Brain Injury**
Birkan Tunc¹, Berkan Solmaz¹, Drew Parker¹, John Whyte², Tessa Hart², Amanda Rabinowitz², Morgan Rohrbach², Junghoon Kim², Ragini Verma¹
¹University of Pennsylvania, Philadelphia, United States, ²Moss Rehabilitation Research Institute, Philadelphia, United States
- 1558 Structural Connections of Functionally-defined Human Insular Subdivisions**
Jason Nomi¹, Elana Schettini², Iris Broce³, Anthony Dick³, Lucina Uddin¹
¹University of Miami, Coral Gables, FL, ²University of Miami, Coral Gables, FL, ³Florida International University, Miami, FL
- 1559 White matter differences in depression: Impact of comorbid substance abuse on white matter health**
Ashley Clausen^{1,2}, Maurizio Bergamini¹, Namik Kirlic¹, Robin Aupperle^{1,2}
¹Laureate Institute for Brain Research, Tulsa, OK, ²University of Tulsa, Tulsa, OK
- 1560 Anatomical connectivity and social perception abnormalities in ASD**
Alice Vinçon-Leite¹, Ana Saitovitch¹, Hervé Lemaître², Jean-Marc Tacchella¹, Elza Rechtman¹, Elise Douard¹, Nadia Chabane³, Anne Philippe⁴, David Grevent¹, Raphael Calmon¹, Francis Brunelle¹, Nathalie Boddaert¹, Monica Zilbovicius¹
¹INSERM U1000, Institut Imagine, Paris, France, ²INSERM U1000, Institut Imagine, Université Paris Sud, Paris, France, ³INSERM U1000, Paris, France, ⁴UMR 1163, Institut Imagine, Paris, France
- 1561 Accelerated diffusion MRI using Gaussian Processes**
Wenchuan Wu¹, Peter Koopmans¹, Jesper Andersson¹, Karla Miller¹
¹Oxford Centre for Functional MRI of the Brain, University of Oxford, Oxford, United Kingdom
- 1562 Cortico-striatal-thalamo-cortical white matter structure in Tourette syndrome and ADHD**
Natalie Forde^{1,2}, Marcel Zwiers¹, Sophie Akkermans¹, Jilly Naaijen¹, Jan Buitelaar¹, Pieter Hoekstra²
¹Radboud UMC, Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands, ²UMCG, Groningen, Netherlands
- 1563 White matter microstructure in bipolar depression may compensate for psychomotor retardation**
Sarah Steinau^{1,2}, Sebastian Walther¹, Christoph Schneider¹, Oliver Höfle³, Katharina Stegmayer¹, Andrea Federspiel¹, Roland Wiest⁴, Tobias Bracht¹
¹University Hospital of Psychiatry, University of Bern, Bern, Switzerland, ²University Hospital of Psychiatry, Department of Forensic Psychiatry, Zurich, Switzerland, ³University Hospital of Neurology, Inselspital, Bern, Switzerland, ⁴Institute of Diagnostic and Interventional Neuroradiology, Bern, Switzerland

1565 Characterizing microstructural alterations in a mTBI ratmodel: a multi-shell diffusion MRI analysisKim Braeckman¹, Benedicte Descamps¹, Christian Vanhove¹, Karen Caeyenberghs²¹UGent, Ghent, Belgium, ²Australian Catholic University, Melbourne, Australia**1566 Bimanual deficits in TBI in relation to transcallosal connectivity within the motor network**Jolien Gooijers¹, Alexander Leemans², Stephan Swinnen³¹KU Leuven, Leuven, Belgium, ²Image Sciences Institute, University Medical Center Utrecht, Utrecht, Netherlands, ³KU Leuven, Leuven, Belgium**1567* High resolution diffusion MRI and tractography of post mortem human brains using kT-dSTEAM at 9.4T**Francisco J. Fritz¹, Desmond H Y Tse^{1,2}, Shubharthi Sengupta¹, Robbert L. Harms¹, Tim K.Loderhose¹, Bram Kraaijeveld¹, Andreas Herrler³, Arno Lataster³, Svenja Caspers^{4,5}, Katrin Amunts^{4,5}, Benedikt A. Poser¹, Alard Roebroek¹¹Cognitive Neuroscience Department, Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, Netherlands, ²Department of Neuropsychology and Psychopharmacology, Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, Netherlands,³Department of Anatomy&Embryology, Faculty of Health, Medicine & Life Science, Maastricht University, Maastricht, Netherlands, ⁴Institute for Neuroscience and Medicine (INM-1), Research Centre Jülich, Jülich, Germany, ⁵O. Vogt Institute for Brain Research, University Hospital Düsseldorf, Düsseldorf, Germany**1568 Brain structural plasticity in world class gymnasts detected using a tract profile-based analysis**Feng Deng¹, Ling Zhao¹, Junjing Wang¹, Huiyuan Huang¹, Miao Zhong¹, Xiaoyan Wu¹, Chen Niu¹, Yuan He¹, Shufei Zhang¹, Ruiwang Huang¹¹Center for the Study of Applied Psychology, Key Laboratory of Mental Health and Cognitive Science of Guangdong Province, School of Psychology, Brain Study Institute, South China Normal University, Guangzhou, China**1569 Difference of cortical activation between the sitting and standing positions: A fNIRS study**Jeong Pyo Seo¹, Mi Young Lee², Ju Sang Kim², Sung Ho Jang¹¹College of Medicine, Yeungnam University, Daegu, Korea, Republic of, ²Daegu Haany University, Gyeongsangsi, Korea, Republic of**1570 Injury characteristics of the Papez circuit in patients with diffuse axonal injury: A diffusion tens**YouSung Seo¹, SoMin Shin¹, SungYup Kim¹, Sung Ho Jang²¹Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of, ²College of Medicine, Yeungnam University, Daegu, Korea, Republic of**1571 A novel algorithm for segmenting white matter hyperintensities based on mean apparent propagator MRI**Chih-Hsien Tseng^{1,2}, Yung-Chin Hsu¹, Wen-Yih Tseng^{1,2,3,4}¹Institute of Medical Device and Imaging, National Taiwan University College of Medicine, Taipei, Taiwan, ²Institute of Biomedical Engineering, National Taiwan University College of Medicine, Taipei, Taiwan, ³Graduate Institute of Brain and Mind Sciences, National Taiwan University College of Medicine, Taipei, Taiwan, ⁴Molecular Imaging Center, National Taiwan University, Taipei, Taiwan**1572 Loss of consciousness and injury of the ascending reticular activating system in mild TBI**Sung Ho Jang¹, Mi Young Lee², Ju Sang Kim², Jeong Pyo Seo¹¹College of Medicine, Yeungnam University, Daegu, Korea, Republic of, ²Daegu Haany University, Gyeongsangsi, Korea, Republic of**1573 Injury of the ascending reticular activating system in patients with diffuse axonal injury: A diffus**Sung Ho Jang¹, SoMin Shin², SungYup Kim², YouSung Seo²¹College of Medicine, Yeungnam University, Daegu, Korea, Republic of, ²Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of**1574 Relation between memory impairment and injury of the fornical crus in patients with mild TBI**YouSung Seo¹, SoMin Shin¹, SungYup Kim¹, Sung Ho Jang²¹Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of, ²College of Medicine, Yeungnam University, Daegu, Korea, Republic of**1575 Growing up after neonatal critical illness: the long-term consequences**Raisa Schiller¹, Ryan Muetzel², Dick Tibboel¹, Hanneke IJsselstijn¹, Tonya White¹¹Erasmus MC - Sophia Children's Hospital, Rotterdam, Netherlands, ²Erasmus MC, Rotterdam, Netherlands**1576 Performances of DKI and DTI in detecting white matter alteration in obstructive sleep apnea syndrome**Hongwei Wen¹, Wenfeng Li², Yun Peng², Yue Liu², Huiguang He³¹Institute of Automation, Chinese Academy of Sciences, Beijing, China, ²Beijing Children's Hospital, Capital Medical University, Beijing, China, ³Institute of Automation, CAS, Beijing, China**1577 "Dirty" DTI: Poor diffusion imaging data quality overstates differences in clinical samples**David Roalf¹, Theodore Satterthwaite¹, Mark Elliott¹, Angel Garcia de la Garza¹, Petra Rupert¹, Megan Quarmley¹, Adon Rosen¹, Kosha Ruparel², Russell Shinohara¹, Raquel Gur², Ruben Gur¹¹University of Pennsylvania, Philadelphia, PA, ²Department of Psychiatry, University of Pennsylvania, Philadelphia, PA**1578 Jugular Vein Compression Ameliorates White Matter Alterations in High School Female Soccer Athletes**Weihong Yuan¹, Kim Barber Foss¹, Jonathan Dudley², Jonathan Ellis¹, Staci Thomas¹, Brooke Gadd¹, James Leach¹, Katie Kitchen¹, Janet Adams¹, Christopher Dicesare¹, David Smith¹, Kelsey Logan¹, Paul Gubanich¹, Mekibib Altaye¹, Greg Myer¹¹Cincinnati Children's Hospital Medical Center, Cincinnati, OH, ²Cincinnati Children's Hospital Reading and Literacy Discovery Center, Cincinnati, OH**1579 White Matter Changes in long-term Tai Chi Chuan Practitioners: a Diffuse Tensor Imaging Study**Gaoxia Wei¹, Zhuqing Gong¹, Yuaochao Zhang²¹Institute of Psychology, Chinese Academy of Sciences, Beijing, Beijing, ²University of Electronic Science and Technology of China, Chengdu, China**1580 White matter microstructure in previously concussed adolescent athletes: implications on cognition**Yukai Zou¹, Ikbeom Jang¹, Nicole Vike¹, Thomas Redick¹, Larry Leverenz¹, Eric Nauman¹, Thomas Talavage¹, Joseph Rispoli¹¹Purdue University, West Lafayette, IN**1581* Distortion corrected EPI with joint interleaved blip up/down reconstruction**Benjamin Zahneisen¹, Murat Aksoy¹, Julian Maclaren¹, Dominik Fleischmann¹, Roland Bammer¹¹Stanford University, Stanford, CA

1582 Test-retest reliability of tract-specific diffusion measures

Mariam Boukadi¹, Karine Marcotte¹, Christophe Bedetti², Marianne Chapleau¹, Samuel Deslauriers-Gauthier³, Jean-Christophe Houde³, Arnaud Boré², Maxime Descoteaux³, Simona Brambati¹

¹Université de Montréal, Montreal, Canada, ²Centre de recherche de l'Institut universitaire de gériatrie de Montréal (CRIUGM), Montreal, Canada, ³Université de Sherbrooke, Sherbrooke, Canada

1583 Spatial Harmonization of Anisotropy in Neonatal Diffusion MRI

Pew-Thian Yap¹, Weili Lin², Dinggang Shen³

¹University of North Carolina, Chapel Hill, NC, ²University of North Carolina at Chapel Hill, Chapel Hill, NC, ³University of North Carolina at Chapel Hill, CHAPEL HILL, NC

1584 Structural Connectivity Correlates of CBT and SSRI Response in a Transdiagnostic Sample

Olu Ajilore¹, Julia DiGangi¹, Joshua Nathan¹, Jennifer Francis¹, Scott Langenecker¹, Alex Leow¹, Heide Klumpp¹, K. Luan Phan¹

¹University of Illinois at Chicago, Chicago, United States

1585 The fiber connections of homogenous subregions identified in the SMA

Ruan Hongtao¹, Ha Yuankai¹

¹Fudan University, Shanghai, China

1586 White Matter Abnormalities in Bipolar Patients: A Study of TBSS and Atlas-level Analyses.

Shufei Zhang¹, Ying Wang^{2,3}, Feng Deng¹, Shuming Zhong⁴, Chen Niu¹, Yanbin Jia⁴, Ping Chen¹, Zhangzhang Qi³, Huiqing Hu¹, Li Huang³, Ruiwang Huang¹

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1587 Aberrant topological asymmetry of brain white matter network in human X monosomy

Chenxi Zhao¹, Liyuan Yang¹, Suyu Zhong¹, Sheng Xie², Gaolang Gong¹

¹State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China, ²Department of Radiology, China-Japan Friendship Hospital, Beijing 100029, China, Beijing, China

1588 A full DTI pipeline with quality control steps in AFNI-FATCAT (and implementing other software)

Paul Taylor¹, Amritha Nayak², M. Irfanoglu², Daniel Glen³, Richard Reynolds³

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1589 Structural connectivity between the core and extended face processing circuitry

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1590 Relationship between DTI and 1H MRS measures in HIV-infected and uninfected children at age 7

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1591 A Surface-based Diffusion MRI Approach for Comparing White Matter Connections of Human PIVC and PIC

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1592 White matter structural covariance after acupuncture treatment in carpal tunnel syndrome: a DTI study

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1593 Denoising of Diffusion MRI Data Using Manifold Neighborhood Matching

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1594 The Joint Effect of Aging and HIV Infection on Integrity of the Corpus Callosum

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1595 Neurofilament light chain and white matter integrity in familial frontotemporal dementia

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1596 Cortical fiber orientation mapping using in-vivo 7T diffusion MRI

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1597 Inter- and Intra-subject Reproducibility of Diffusion Tensor Imaging at Different Times of Day

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1598 Brain morphometry driven by DTI data in Moebius Syndrome and Hereditary Congenital Facial Paresis

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1599 White matter differences in children with a spastic diplegia gait pattern due to HIVE compared to CP

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1600 Automatic Clustering of White Matter Fibers with Outlier Detection

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1601 Diffusion Imaging Reveals White Matter Damage in Ice Hockey Players Soon After Concussion

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1602 Along-track White Matter Fiber Bundle Template of 100 Normal Adults

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1603 FiberNet: A Deep Learning Framework for Clustering of White Matter Tracts

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1604 Utility of Concurrent Magnetic Field Monitoring in Tracking Short Cortico-Cortical Fibers

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1605 BDNF Genotype-related Different Changes of White Matter Integrity during Motor Recovery after Stroke

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1606 High Resolution DTI and Fiber Tractography Highlights Abnormalities of the Limbic System in MS

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1607 Framework to evaluate cortical FA mapping from motion corrected fetal diffusion weighted image

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1608 Performances of diffusion kurtosis imaging and diffusion tensor imaging in patients with epilepsy

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1609 Distinct anatomical connectivity alterations between left and right mesial temporal lobe epilepsy

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1610 Longitudinal evaluation of military training stress effects on white matter diffusion metrics

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- 1611 Abnormalities in Gray Matter Microstructure in 22q11 Deletion Syndrome**
zora kikinis¹, Yogesh Rath², Valerie Sydnor³, Nikos Makris⁴, Sylvain Bouix³, Ioana Coman⁵, Kevin Antshel⁶, Wanda Fremont⁵, Marek Kubicki⁷, Martha Shenton^{7,8}, Wendy R. Kates⁹
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- 1612 Tract based Fractional Anisotropy predicts specific IQ indices**
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IMAGING METHODS

Multi-Modal Imaging

- 1613* Toward real-time head motion correction for EEG-fMRI: EEG-derived motion components classification**
Chung Ki Wong¹, Vadim Zotev¹, Raquel Phillips¹, Masaya Misaki¹, Jerzy Bodurka^{1,2}
¹Laureate Institute for Brain Research, Tulsa, OK, ²University of Oklahoma, Norman, OK
- 1614 Accurate multi-scale peak detection of cardioballistic artifact period directly from EEG-fMRI data**
Chung Ki Wong¹, Qingfei Luo¹, Vadim Zotev¹, Raquel Phillips¹, Jerzy Bodurka^{1,2}
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- 1615 Multimodal social brain network and facial affect recognition in schizophrenia**
Godefridus Koevoets¹, Jessica Nijs¹, Rene Kahn¹, Wiepke Cahn¹, Neeltje van Haren¹
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- 1616 Multimodal investigation of diurnal fluctuations in MRI measures of brain structure and function**
Cibu Thomas¹, Adam Steel¹, Aaron Trefler¹, Neda Sadeghi², Carlo Pierpaoli², Chris Baker¹
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- 1617 Development of new EEG-fMRI source imaging method for continuous task paradigm**
Junghoon Kim¹, Haiguang Wen¹, Yizhen Zhang¹, Zhongming Liu¹
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- 1618 Predictor of second language learning success: the development of temporal cortex**
Chihiro Hosoda¹, Masashi Hamada¹, Yulri Nonaka¹, Hiroaki Maeshima¹, Kazuo Okanoya¹
¹University of Tokyo, Tokyo, Japan
- 1619 EEG-Informed Reconstruction of Accelerated FMRI Data Acquisition**
Mark Chiew¹, Jostein Holmgren², Dean Fido¹, Catherine Warnaby¹, Karla Miller¹
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- 1620 Age and CBF factors on patients with Glioblastoma: studied by perfusion and diffusion MRI**
bob hou¹, Sanjay Bhatia¹, Jeff Carpenter¹, Malcolm Mattes¹, Ryan Turner¹
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- 1622 Altered Resting-state Brain Function and Structure in Tourette Syndrome Children**
Hongwei Wen¹, Yue Liu², Shengpei Wang¹, Jishui Zhang², Yue Zhang², Yun Peng², Huiguang He³
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- 1623 Language lateralisation in adults who were born very preterm**
Chieh-En Jane Tseng¹, Sean Froudish-Walsh², Jasmin Kroll¹, Vyacheslav Karolis¹, Philip Brittain¹, Chiara Nosarti¹
¹King's College London, London, United Kingdom, ²Icahn School of Medicine at Mount Sinai, New York, NY
- 1624 Detecting gamma frequency neural activity using simultaneous multiband EEG-fMRI**
Makoto Uji¹, Ross Wilson¹, Susan Francis², Karen Mullinger^{1,2}, Stephen Mayhew¹
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- 1625 Sequential adjustments of cognitive control processes: New insights from simultaneous EEG-fMRI study**
Thomas Hinault¹, Kevin Larcher², Natalja Zazubovits³, Jean Gotman⁴, Alain Dagher⁵, Michael Ferreira⁵
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- 1626 Stimulus and state dependence of frequency band specific simultaneous EEG-FMRI correlations**
Russell Butler¹, Maxime Descoteaux¹, Pierre-Michel Bernier¹, Guillaume Gilbert², Kevin Whittingstall³
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- 1627 Quantification of myelin after stroke: comparing probabilistic diffusion with myelin water fraction**
Bimal Lakhani¹, Alex MacKay¹, Lara Boyd¹
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- 1628 Comparison of brain connectivity between older adults with impaired and normal cognition**
Adrian Tsang^{1,2,3}, Cheryl McCreary^{1,2,3}, Linda Andersen^{1,2,3}, Brad Goodyear^{1,2,3}, Richard Frayne^{1,2,3}
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- 1629 Network spread of intracranially induced oscillatory activity in the human brain**
Tristan MOREAU¹, Julià Amengual¹, Chloé Stengel¹, Mario CHAVEZ¹, Claude ADAM², Antoni Valero-Cabre¹
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- 1630 EEG Source Imaging using fMRI Informed Time-variant Constraints: A Simulation Study**
Jing Xu¹, Jia-Hong Gao¹
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- 1631 Multimodal imaging analysis in Charles Bonnet Syndrome: a case report**
Charlotte Martial¹, Carol Di Perri¹, Carlo Cavaliere², Sarah Wannez¹, Steven Laureys¹
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- 1632 EEG-fMRI reveals top-down modulation of brain coupling with early visual processing of faces**
Mareike Bayer¹, Tom Johnstone²
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- 1633 Simultaneous EEG-fMRI Study of EEG Oscillations and BOLD Response in the Auditory Cortex**
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- 1634 Investigating the neurophysiological basis of temporal dynamics in resting state BOLD signals**
Anish Mitra¹, Patrick Wright², Abraham Snyder³, Joseph Culver², Marcus Raichle²
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- 1635 MEG can record epileptic spikes from mesial structures: a simultaneous MEG /SEEG recordings and ICA**
Francesca Pizzo¹, Nicolas Roehri¹, Samuel Medina¹, Jean Michel Badier¹, Sophie Chen¹, Agnes Trebuchon¹, Martine GAVARET¹, Romain Carron¹, Fabrice BARTOLOMEI¹, Christian BENAR¹
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- 1636 Time-varying correlations between simultaneous BOLD-fMRI and EEG signals recorded at rest**
Prokopis Prokopiou¹, Stephen Mayhew², Andrew Bagshaw², Georgios Mitsis³
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- 1637 Trimodal integration of concurrent EEG-fMRI and dMRI connectomes in temporal lobe epilepsy**
Jonathan Wirsich^{1,2,3}, Ben Ridley², Pierre Besson², Elisabeth Soulier², Sylviane Confort-Gouny², Louise Tyvaert⁴, Fabrice BARTOLOMEI³, Christian BENAR³, Jean-Philippe Ranjeva², Maxime Guye²
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- 1638 Extremely preterm children exhibit increased interhemispheric language connectivity in fMRI and MEG**
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- 1639 Default Mode Network Resting State Functional Connectivity in Oppositional Defiant Disorder**
Timothy Michaels¹, Monica Ly², Peter Molfese², Lihong Wang³, Chi-Ming Chen⁴, Jeffrey Burke⁴
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- 1640 Optimal Combining Inference of Multiple MR Imaging Phenotypes: Simulations and Applications to MELAS**
Xu Chen¹, Thomas Nichols², Roy Haast¹, Kamil Uludag¹, Elia Formisano¹
¹Maastricht University, Maastricht, Netherlands, ²University of Warwick, Coventry, United Kingdom
- 1641 Detecting thalamic correlates of cortical oscillations using simultaneous EEG-fMRI at 7 Tesla**
Laura Lewis^{1,2}, Jonathan Polimeni^{2,3}, Kavin Setsompop^{2,3}, Thomas Witte^{2,3}, Bruce Rosen^{2,3}, Giorgio Bonmassar^{2,3}
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- 1642 Integrated IEEG HFA activity/rsfMRI connectivity discern memory deficits in refractory epilepsy**
Chaitanya Ganne¹, James Krage², Xiaosong He¹, Michael Kahana², Michael Sperling¹, Ashwini Sharan¹, Shatha Alwethinani¹, Na Young Kim¹, Noah Sideman¹, Joseph Tracy¹
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- 1643 Does Structural Connectivity Really Predict Functional Connectivity in Resting State Brain Networks?**
Kevin Solar¹, Chase Figley¹, Susan Courtney², Jennifer Kornelsen¹
¹University of Manitoba, Winnipeg, Manitoba, ²Johns Hopkins University, Baltimore, MD
- 1644 Characterization of the spatial correspondence between simultaneous fMRI and EEG**
Nicholas Heugel¹, Scott Beardsley¹, Einat Liebenthal²
¹Marquette University, Milwaukee, WI, ²Brigham & Women's Hospital, Harvard Medical School, Boston, MA
- 1645 Inter-regional morphometric similarity reveals the underlying neurobiology of the human brain**
Jakob Seidlitz^{1,2}, Frantisek Vasa¹, Maxwell Shinn¹, Rafael Romero-Garcia¹, Kirstie Whitaker¹, Petra Vertes¹, Paul Reardon², NSPN Consortium³, Armin Raznahan², Edward Bullmore¹
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INFORMATICS

Brain Atlases

- 1646 Tentative atlas of language areas from fMRI mapping of 8 language tasks in 144 healthy right-handers**
Nathalie Tzourio-Mazoyer¹, Gael Jobard², Fabrice Crivello³, Marc Joliot⁴, Bernard Mazoyer⁴
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- 1647 Atlas influence in Structural Connectivity analyses of Clinical Data**
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- 1648 Construction and segmentation of pediatric head tissue atlases for electrical head modeling**
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- 1649 Network Coupling from Group-wise Whole-brain Connectivity-based Parcellation**
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- 1650 BCI-DNif Brain Atlas: A Volumetric and Surface Atlas Delineated by Anatomical and Functional MRI**
Anand Joshi¹, Soyoung Choi¹, Minqi Chong¹, Gaurav Sonkar², Jorge Gonzalez-Martinez³, Dileep Nair³, David Shattuck⁴, Hanna Damasio⁵, Richard Leahy¹
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- 1651 Characterizing Interindividual Variability of Motion Sensitive Regions**
Taicheng Huang¹, Zonglei Zhen¹, Yiyi Song¹, Jia Liu²
¹State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China, ²School of Psychology, Beijing Normal University, Beijing, China
- 1652 BraVa Cerebral Artery Database Converted to NIFTI MRI Format**
Timothy Herron¹, Nina Dronkers^{1,2,3}, And Turken¹
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- 1653 An Atlas of Brainstem Connectomes from HCP Data**
Yuchun Tang^{1,2}, Wei Sun¹, Arthur Toga¹, John Ringman³, Yonggang Shi¹
¹Laboratory of Neuro Imaging, USC Stevens Neuroimaging and Informatics Institute, Los Angeles, CA, ²School of Basic Medical Sciences, Shandong University, Jinan, China, ³Department of Neurology, Keck School of Medicine of USC, Los Angeles, CA
- 1654* Navigating the “little brain”: Comprehensive mapping of cognitive function in the human cerebellum**
Jorn Diedrichsen¹, Maedbh King², Richard Ivry³
¹Western University, London, Canada, ²Western University, London, ON, ³University of California, Berkeley, Berkeley, CA
- 1655 A probabilistic atlas of the thalamic nuclei combining ex vivo MRI and histology**
Juan Eugenio Iglesias¹, Ricardo Insausti², Garikoitz Lerma-Usabiaga³, Koen Van Leemput^{4,5}, Sebastien Ourselin¹, Bruce Fischl^{5,6}, Cesar Caballero Gaudes³, Pedro Paz-Alonso³
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- 1656 Mapping Cognitive concepts to brain activity with high-resolution data and a cognitive atlas**
Ana Luísa Pinho¹, Gael Varoquaux², Bertrand Thirion³
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- 1657 Navigating the “little brain”: Task-based cortical-cerebellar functional mapping.**
Maedbh King¹, Richard Ivry², Jorn Diedrichsen¹
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- 1658 Brain region segmentation method using SLIC and Normalized Cut**
Keisuke Nakamura¹, Satoru Hiwa¹, Tomoyuki Hiroyasu¹
¹Doshisha University, Kyotanabe-Shi, Kyoto, Japan
- 1659 A Novel Atlas of Human Cerebral Cortex based on Extrinsic Connectivity**
Guillermo Gallardo¹, Rachid Deriche¹, Demian Wassermann¹
¹Université Côte d'Azur, Inria, Sophia Antipolis, France
- 1660* Brainnetome Atlas: A New Map of Human Brain**
Lingzhong Fan¹, Hai Li¹, Zhengyi Yang¹, Tianzi Jiang¹
¹Brainnetome Center, Institute of Automation, Chinese Academy of Sciences, Beijing, China
- 1661 Using a new cytoarchitectonic atlas to predict retinotopic areas in the human ventral visual stream**
Mona Rosenke¹, Kevin Weiner², Michael Barnett³, Karl Zilles⁴, Katrin Amunts⁵, Rainer Goebel⁶, Kalanit Grill-Spector¹
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- 1662 MRI Detection of Neonatal Hypoxic Ischemic Encephalopathy: Machine v.s. Radiologists**
Yangming Ou¹, Randy Gollub², Jing Wang³, Qianqian Fan³, Sara Bates⁴, Joseph Chou⁴, Rebecca Weiss⁴, Kallirroi Retzepis⁴, Steve Pieper⁵, Camilo Jaimes⁴, Shawn Murphy⁴, Lilla Zöllei⁶, P. Ellen Grant⁷
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INFORMATICS

Databasing and Data Sharing

- 1663 Structural Covariance Networks Across Neuropsychiatric Disorders: An ICA Meta-analysis**
Thomas Vanasse^{1,2}, P. Mickle Fox¹, Daniel Barron³, Michaela Robertson¹, Jack Lancaster^{1,2}, Peter Fox^{1,2,4,5}
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- 1664 The EU-AIMS Data Sharing Web Services**
Antoine Grigis¹, David Goyard¹, Will Spooren², Declan Murphy³, Vincent Frouin¹
¹Neurospin, CEA, Université Paris-Saclay, Gif-sur-Yvette, France, ²F. Hoffmann - La Roche Pharmaceuticals, Basel, Switzerland, ³King's College London, London, United Kingdom
- 1665 NIH Funded NITRC's Triad of Services: Software & Data Publishing Services Plus Compute!**
Nina Preuss¹, David Kennedy², Christian Haselgrove², Robert Buccigrossi³
¹TCG, Washington, DC - Washington D.C., ²UMASS, Boston, MA, ³TCG, Washington, DC

- 1666 Update on UK Biobank Brain Imaging: First 10,000 subjects and new Imaging Derived Phenotypes**
Fidel Alfaro-Almagro¹, Ludovica Griffanti¹, Gwenaëlle Douaud¹, Karla Miller¹, Mark Jenkinson¹, Stephen Smith¹
¹FMRIB, Oxford University, Oxford, United Kingdom
- 1667 Neuroimaging workflow in the cloud: standardizing research**
Nikola Lazovski¹, Marc Ramos¹, David Moreno-Dominguez², Takayuki Sato¹, Tim Peeters¹, Vesna Prčkovska¹, Paulo Rodrigues¹
¹Mint Labs, Barcelona, Spain, ²Mint Labs, Barcelona, Barcelona
- 1668 The R-fMRI Maps Project: Towards a Big Data of Brain Connectome across a Wide Variety of Individuals**
Chao-Gan Yan¹, Hui-Xia Zhou¹, Xi-Nian Zuo¹, Yu-Feng Zang²
¹Institute of Psychology, Chinese Academy of Sciences, Beijing, China, ²Institutes of Psychological Sciences, Hangzhou Normal University, Hangzhou, China
- 1669 Coordinate-based meta-analyses as a tool to explore structural Imaging Genetics findings**
Thomas Nickl-Jockschat¹, Simon Eickhoff², Thomas Mühleisen³, Claudia Eickhoff¹, Hildegard Janouschek¹
¹RWTH Aachen University, Aachen, Germany, ²Research Center Jülich, INM-1, Jülich, Germany, ³Institute of Neuroscience and Medicine, Research Centre Jülich, Jülich, Germany
- 1670 Decentralized management, discovery and (re-)publication of scientific datasets with DataLad**
Michael Hanke¹, Benjamin Poldrack², Yaroslav Halchenko³
¹Otto-von-Guericke-Universität, Magdeburg, Germany, ²Otto-von-Guericke-Universität Magdeburg, Magdeburg, Germany, ³Dartmouth College, HANOVER, NH
- 1671 Viewing FSL results with SPM and vice versa**
Thomas Maullin-Sapey¹, Peter Williams¹, Thomas Nichols¹, Guillaume Flandin², Camille MAUMET¹
¹University of Warwick, Coventry, United Kingdom, ²Wellcome Trust Centre for Neuroimaging, London, United Kingdom
- 1672* Open Neuroimaging Lab. An opensource Web framework for collaboration around brain imaging data.**
Katja Heuer¹, Satrajit Ghosh², Amy Robinson Sterling³, Roberto Toro⁴
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²MIT, Cambridge, MA, ³Princeton University, Princeton, NJ, ⁴Institut Pasteur, Paris, France
- 1673 Multi-Modal Data Acquisition: Merging Neuroimaging and Biobanking Data**
Santiago Paiva^{1,2}, John Saigle^{1,2}, Samir Das^{1,2}, Christine Rogers^{1,2}, Rick Hoge^{1,3}, Mouna Safi-Harab^{1,2}, Sylvain Milot^{1,3}, Jordan Stirling^{1,2}, Jason Karamchandani¹, Alan Evans^{1,2}
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- 1674* A quantitative evaluation of Neurosynth's annotation methods**
Taylor Salo¹, Michael Riedel¹, Jessica Bartley¹, Katie Bottenhorn², Tal Yarkoni³, Matthew Turner⁴, Jessica Turner⁵, Matthew Sutherland¹, Angie Laird¹
¹Florida International University, Miami, FL, ²Florida International University, Miami, United States, ³University of Texas at Austin, Austin, United States, ⁴Georgia State University, Atlanta, GA, ⁵Department of Psychology, Georgia State University, Atlanta, GA
- 1675 BrainBox: A co-editing platform for neuroimaging data.**
Katja Heuer¹, Satrajit Ghosh², Amy Robinson Sterling³, Roberto Toro⁴
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²MIT, Cambridge, MA, ³Princeton University, Princeton, NJ, ⁴Institut Pasteur, Paris, France
- 1676 ConJUNGtion: an Extensible Java Tool for Querying, Visualization and Analysis of Brain Connectivity**
Gleb Bezgin¹, Anthony McIntosh², Alan Evans³
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- 1677* OpenNeuro - a free online platform for sharing and analysis of neuroimaging data**
Krzysztof Gorgolewski¹, Oscar Esteban¹, Gunnar Schaefer², Brian Wandell², Russell Poldrack²
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- 1678 Meta-analysis of heterogeneous EEG studies using hierarchical event descriptor (HED) tags**
Nima Bigdely Shamlo¹, Alejandro Ojeda¹, Tim Mullen¹, Kay Robbins²
¹Qusp Labs, San Diego, CA, ²University of Texas at San Antonio, San Antonio, TX
- 1679 CBRAIN as a computational platform for Open Science**
Andrew Doyle¹, Pierre Rioux¹, Natacha Beck¹, Tristan Aumentado-Armstrong¹, Samir Das¹, Marc-Etienne Rousseau¹, Tristan Glatard², Alan Evans¹
¹McGill Centre for Integrative Neuroscience, Montreal Neurological Institute, McGill University, Montreal, Quebec, ²Department of Computer Science and Software Engineering, Concordia University, Montreal, Quebec
- 1680 Diverse datasets offered on open data-sharing platform: openfmri.org**
Suyash Bhogawar¹, Joseph Wexler², Ross Blair², Krzysztof Gorgolewski³, Russell Poldrack⁴
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- 1681 MetaSearch: Phenotypic Search across public MRI data.**
Satrajit Ghosh¹, B. Nolan Nichols², Katja Heuer³, Amy Robinson Sterling⁴, Roberto Toro⁵
¹MIT, Cambridge, MA, ²Informatics Consultant, Menlo Park, CA, ³Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ⁴Princeton University, Princeton, NJ, ⁵Institut Pasteur, Paris, France
- 1682 Scaling Neuroimaging Databasing for the LORIS Multi-modal Integrative Data Platform**
Christine Rogers¹, Samir Das¹, John Saigle¹, Xavier Lecours Boucher¹, Santiago Paiva¹, David MacFarlane¹, Alan Evans¹
¹McGill Centre for Integrative Neuroscience (MCIN), Montreal Neurological Institute (MNI), Montreal, Canada
- 1683 A Browser-Based Tool for Managing, Searching, and Viewing MRI Data from Patients with Brain Lesions**
Dan Lurie¹, Mark D'Esposito¹
¹University of California, Berkeley, Berkeley, CA
- 1684 Advanced Querying for Multi-site and Multi-modal Data in Neuroscience Studies**
Jordan Stirling^{1,2}, Samir Das^{1,2}, Leigh MacIntyre^{1,2}, Cecile Madjar³, Penelope Kostopoulos^{1,2}, David MacFarlane^{1,2}, Dahlia Sniderman^{1,2}, Alan Evans^{1,2}
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- 1685 Construction of the Human Brain Database using DTI-based Probabilistic Tractography**
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INFORMATICS

Informatics Other

- 1686 Constructing an Ontology for Neuroimaging Experiments (NIDM-Experiment)**
Karl Helmer^{1,2}, Tibor Auer³, Satrajit Ghosh⁴, David Keator⁵, Camille MAUMET⁶, B. Nolan Nichols^{7,8}, Thomas Nichols⁶, Jessica Turner⁹, Jean-Baptiste Poline¹⁰
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- 1687 BrainVis: A cloud-connected 3D exploration and visualization tool for multi-modal neuroimaging data.**
Vesna Prckovska¹, Tim Peeters², David Moreno-Dominguez¹, Paulo Rodrigues²
¹Mint Labs, Barcelona, Barcelona, ²Mint Labs, Barcelona, Spain
- 1688 Comparing brain graphs in which nodes are ROIs or ICA components: a simulation study**
QINGBAO YU¹, Yuhui Du², Jiayu Chen³, Hao He¹, Jing Sui³, Godfrey Pearlson⁴, Vince Calhoun²
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- 1689 Mindcontrol: A Web Application for Brain Segmentation Quality Control**
Anisha Keshavan¹, Esha Datta¹, Ian McDonough², Christopher Madan³, Kesshi Jordan¹, Roland Henry¹
¹UCSF, San Francisco, CA, ²The University of Alabama, Tuscaloosa, AL, ³Boston College, Chestnut Hill, MA
- 1690 OpenNF: An open-source Python/Matlab framework for real-time fMRI neurofeedback**
Yury Koush¹, John Ashburner², Evgeny Prilepin³, Peter Zeidman², Sergei Bibikov⁴, Ronald Sladky⁵, Frank Scharnowski⁶, Artem Nikonorov⁴, Dimitri Van De Ville⁷
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- 1691 Comparing fMRI inter-subject correlations between groups using ISC-toolbox**
Jussi Tohka¹, Frank Pollick², Juha Pajula³, Jukka-Pekka Kauppi⁴
¹University of Eastern Finland, Kuopio, Finland, ²University of Glasgow, Glasgow, United Kingdom, ³VTT Technical Research Centre of Finland, Tampere, Finland, ⁴University of Jyväskylä, Jyväskylä, Finland

- 1692 Real-time Head Motion Detection in MRI using Accelerometer and Stereo Camera**
Jih-Rong Chen¹, Yi-Ping Chao^{1,2}, Li-Wei Kuo³
¹Chang Gung University, Taoyuan, Taiwan, ²Chang Gung Memorial Hospital at Linkou, Taoyuan, Taiwan, ³National Health Research Institutes, Miaoli, Taiwan
- 1693 An online training system to enable systematic delivery of study protocols in multisite neuroimaging**
Tara Campbell¹, Samir Das¹, Alan Evans¹
¹McGill Centre for Integrative Neuroscience, Montreal, Canada
- 1694 A cloud-based platform for flexible re-analysis of naturalistic fMRI datasets**
Alejandro de la Vega¹, Quinten McNamara¹, Michael Hanke², Tal Yarkoni³
¹University of Texas at Austin, Austin, TX, ²Otto-von-Guericke-Universität, Magdeburg, Germany, ³University of Texas at Austin, Austin, United States
- 1695 Describing Experiment Metadata with the Neuroimaging Data Model (NIDM)**
David Keator¹, Karl Helmer², Satrajit Ghosh³, Tibor Auer⁴, Camille MAUMET⁵, Samir Das⁶, Guillaume Flandin⁷, Thomas Nichols⁵, Krzysztof Gorgolewski⁸, Jessica Turner⁹, David Kennedy¹⁰, Jean-Baptiste Poline¹¹, B. Nolan Nichols¹²
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- 1696 Reproducible neuroimaging requires a new type of training**
Jean-Baptiste Poline¹, Satrajit Ghosh², Jeffrey Grethe³, Yaroslav Halchenko⁴, Christian Haselgrove⁵, Dorota Jarecka², David Keator⁶, Maryann Martone³, Samuel Nastase⁷, Nina Preuss⁸, Matt Travers⁹, Adam Thomas¹⁰, David Kennedy⁵
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- 1697 Long-Term, Naturalistic ECoG Study Accelerated with Automated Video and Audio Feature Detection**
Xin Ru (Nancy) Wang¹, Ali Farhadi¹, Jeffrey Ojemann¹, Rajesh Rao¹, Bingni Brunton¹
¹University of Washington, Seattle, WA
- 1698 Visualizing Brain Surfaces in Multi-dimensional Space using the INVIZIAN Platform**
Sumiko Abe¹, Andrei Irimia², Xiaoyu Lei², Zachary Jacokes³, Carinna Torgerson⁴, John Van Horn⁴
¹USC Mark And Mary Stevnes Neuroimaging and Informatics Institute, Los Angeles, CA, ²University of Southern California, Los Angeles, CA, ³USC Mark and Mary Stevens Neuroimaging and Informatics Institute, Los Angeles, CA, ⁴USC Mark and Mary Stevens Neuroimaging and Informatics Institute, Los Angeles, CA

INFORMATICS

Workflows

- 1699 NeuroBlender: a Blender add-on for creating neuroscience artwork**
Michiel Kleinnijenhuis¹
¹Oxford Centre for Functional MRI of the Brain, University of Oxford, Oxford, United Kingdom
- 1700 Using QA data to improve statistical power for multisite DTI studies**
Peter Kochunov¹, Erin Dickie², Joseph Viviano², Peter Kingsley³, Jessica Turner⁴, Anil Malhotra³, Robert Buchanan⁵, Meghann Ryan¹, Sofia Chavez², Aristotle Voineskos²
¹Maryland Psychiatric Research Center, Baltimore, MD, ²UToronto, Toronto, Canada, ³zucker hillside, New York, NY, ⁴Georgia Tech, Atlanta, GA, ⁵University of Maryland, Baltimore, MD
- 1701 NPS: Neuroimage Management and Processing System Built on Open Source Software**
Patrick Schiffler¹, Jan-Gerd Tenberge¹
¹University of Münster, Münster, Germany
- 1702 Reproducible Neuroimaging Pipelines with Docker**
Jan-Gerd Tenberge¹, Patrick Schiffler¹
¹University of Münster, Münster, Germany
- 1703* FreeSurfer image processing pipeline for infant clinical MRI images**
Lilla Zöllei¹, Yangming Ou², Juan Iglesias³, P. Ellen Grant⁴, Bruce Fischl⁵
¹Athinoula A Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA, ²Boston Children's Hospital, Boston, United States, ³University College London, London, United Kingdom, ⁴Boston Children's Hospital, Harvard Medical School, Boston, MA, ⁵MGH/HMS, Charlestown, MA
- 1704 BIDS Apps: Improving ease of use and reproducibility of neuroimaging data analysis methods**
Krzysztof Gorgolewski¹, Fidel Alfaro-Almagro², Tibor Auer³, Pierre Bellec⁴, Mihai Capota⁵, Mallar Chakravarty⁶, Nathan Churchill⁷, Cameron Craddock⁸, Gabriel Devenyi⁹, Anders Eklund¹⁰, Oscar Esteban¹, Guillaume Flandin¹¹, Satrajit Ghosh¹², J. Guntupalli¹³, Mark Jenkinson², Anisha Keshavan¹⁴, Gregory Kiar¹⁵, Pradeep Reddy Raamana¹⁶, David Raffelt¹⁷, Christopher Steele¹⁸, Pierre-Olivier Quirion¹⁹, Robert Smith²⁰, Stephen Strother²¹, Gael Varoquaux²², Tal Yarkoni²³, Yida Wang⁵, Russell Poldrack²⁴
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- 1705 GRETA 1.3.0 and BrainNet Viewer 1.53: Toolkits for Brain Network Analysis and Visualization**
Xindi Wang^{1,2}, Mingrui Xia^{1,2}, Jinhui Wang^{1,3,4}, Xuhong Liao^{1,2}, HAO WANG^{3,4}, Alan Evans⁵, Yong He^{1,2}
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- 1706 Capturing and Reusing Computation Details with the Neuroimaging Data Model (NIDM)**
Satrajit Ghosh¹, Tibor Auer², Guillaume Flandin³, Tristan Glatard⁴, Krzysztof Gorgolewski⁵, Yaroslav Halchenko⁶, Dorota Jarecka¹, David Keator⁷, Camille MAUMET⁸, Thomas Nichols⁸, Smruti Padhy⁹, Jean-Baptiste Poline¹⁰
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- 1707 Running neuroimaging applications on Amazon Web Services: How, when, and at what cost?**
Natalie Koh¹, Trevor McAllister-Day², Austin Kelley², Daniel Peterson¹, Sabreena Rajan², Karl Woelfer², Jonathan Wolf², Thomas Grabowski¹, Tara Madhyastha¹
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- 1708 Impact of Analysis Software on Replication of fMRI Studies**
Alexander Bowring¹, Thomas Nichols², Camille MAUMET²
¹University of Warwick, Coventry, United Kingdom, ²University of Warwick, Coventry, United Kingdom
- 1709 The Overfitting Toolbox (TOT): Large-scale search in model space for expected neuroimaging effects**
Joram Soch^{1,2}, Carsten Allefeld^{1,3}, John-Dylan Haynes^{1,3,4,5,6,2}
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- 1710 Automatic Pipeline to Segment Acute White Matter Damage for High Throughput Disconnection Studies**
Kesshi Jordan¹, Anisha Keshavan¹, Eduardo Caverzasi¹, Bagrat Amirbekian¹, Valentina Panara¹, Mitchel Berger¹, Roland Henry¹
¹University of California, San Francisco, CA
- 1711 Radiology on the Cloud: the Challenges and Implications of Setting up an Image Processing Service**
Rudolph Pienaar^{1,2}, Nicolas Rannou¹, Jorge Bernal¹, P. Ellen Grant^{3,2}
¹Boston Children's Hospital, Boston, MA, ²Harvard Medical School, Boston, MA, ³Boston Children's Hospital, Harvard Medical School, Boston, MA
- 1712 A Very Simple Re-Executable Neuroimaging Publication**
David Kennedy¹, David Keator², Jean-Baptiste Poline³, Christian Haselgrove¹, Satrajit Ghosh⁴
¹University of Massachusetts Medical School, Worcester, MA, ²University of California, Irvine, Irvine, CA, ³University of California, Berkeley, Berkeley, CA, ⁴MIT, Cambridge, MA

1713 A reproducible, standardized workflow for the generation of fMRI markers of neurodegeneration

AmanPreet Badhwar¹, Pierre-Olivier Quirion², Yassine Benhajali¹, Tristan Glatard³, Christian Dansereau¹, Pierre Orban¹, Simon Duchesne⁴, Alan Evans⁵, Roger Dixon⁶, Pierre Bellec¹

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1714 Integrating multimodal databases into genomics analysis workflows

Xavier Lecours Boucher¹, Samir Das¹, Christine Rogers¹, David MacFarlane¹, Dahlia Snaiderman¹, Kathleen Klein Oros², Natacha Beck¹, Marie Forest², Lawrence Chen², Nicolas Brossard³, Eva Unternaehrer³, Kieran O'Donnell³, Helene Gaudreau³, Michael Meaney³, Celia Greenwood², Alan Evans¹

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1715 Enhancing Neuro Imaging Genetics through Meta Analysis: collaborations for reproducible neuroscience

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1716 Towards composable specification of complex pipelines in Pyd Piper 2, and an application to asymmetry

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1717 MRIQC: automatic prediction of quality and visual reporting of MRI scans

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1718 LMU Scripts: Ready-Made HPC-Applicable Pipeline for Structural and Functional Data Analyses

Temmuz Karali¹, Valerie Kirsch², Frank Padberg³, Birgit Ertl-Wagner⁴, Daniel Keiser²

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MODELING AND ANALYSIS METHODS

Bayesian Modeling

1719 Beyond Conjunction Analysis: Embracing Heterogeneity in Neuroimaging Meta-Analysis

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1720 An Intensity-marked Spatial Point Process Model for MRI Lesion Data

Bernd Taschler¹, Jian Kang², Kerstin Bendfeldt³, Jens Wuerfel³, Timothy Johnson², Thomas Nichols¹

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1721 The Hierarchical Organisation of Intrinsic Brain Networks

Yuan Zhou^{1,2,3,4}, Karl Friston⁴, Peter Zeidman⁴, Jie Chen⁵, Li Shu^{1,2,3}, Adeel Razi⁴

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1722 Impaired thalamo-cortico-basal ganglia connectivity in patients with Internet-Gaming Disorder

Sunghyon Kyeong¹, Young Hoon Jung², Yu-Bin Shin², Min-Kyeong Kim³, Eunjo Kim³, Jae-Jin Kim^{1,2,3}

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1723* Sharing deep generative representation for perceived image reconstruction from human brain activity

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1724 Group connectivity analysis with Parametric Empirical Bayes: recipe and validation

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1725 Mapping of convolutional neural network activation maps on visual cortex using a Bayesian framework

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1726 Bayesian methods to investigate compensatory relationships between cognitive domains

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- 1727 A Bayesian General Linear Model for Cortical Surface fMRI Data Analysis**
Amanda Mejia¹, Ryan Yue², Martin Lindquist³, David Bolin⁴
¹Indiana University, Bloomington, IN, ²Baruch College, The City University of New York, New York, NY, ³Johns Hopkins University, Baltimore, MD, ⁴Chalmers University of Technology, Gothenburg, Sweden
- 1728 Cross-Validated Bayesian Model Averaging for General Linear Models in fMRI Data Analysis**
Joram Soch^{1,2}, Achim Pascal Meyer¹, John-Dylan Haynes^{1,3,4,5,6,2}, Carsten Allefeld^{1,3}
¹Bernstein Center for Computational Neuroscience, Berlin, Germany, ²Department of Psychology, Humboldt-Universität zu Berlin, Berlin, Germany, ³Berlin Center of Advanced Neuroimaging, Berlin, Germany, ⁴Berlin School of Mind and Brain, Berlin, Germany, ⁵Excellence Cluster NeuroCure, Charité-Universitätsmedizin, Berlin, Germany, ⁶Department of Neurology, Charité-Universitätsmedizin, Berlin, Germany
- 1729 Modeling Time-varying Functional Connectivity in fMRI using Bayesian Switching Factor Analysis**
Jalil Taghia¹, Srikanth Ryali¹, Tianwen Chen¹, Kaustubh Supekar¹, Weidong Cai¹, Vinod Menon¹
¹Stanford University, Palo Alto, CA
- 1731 A Non-parametric Bayesian Model for Connectivity based Parcellation**
Daniel Moyer¹, Boris A. Gutman², Neda Jahanshad³, Paul M. Thompson²
¹University of Southern California, Los Angeles, CA, ²Imaging Genetics Center, University of Southern California, Marina Del Rey, CA, ³Imaging Genetics Center, USC, Marina del Rey, CA

MODELING AND ANALYSIS METHODS

Diffusion MRI Modeling and Analysis

- 1732 A Comprehensive Analytic Solution of Diffusion Orientation Distribution Function**
Qiyuan Tian¹, Grant Yang¹, Christoph W.U. Leuze¹, Ariel Rokem², Brian L. Edlow³, Jennifer A. McNab¹
¹Stanford University, Stanford, CA, ²University of Washington, Seattle, WA, ³Massachusetts General Hospital, Boston, MA
- 1733 Axon diameter mapping using diffusion MRI Monte-Carlo simulations and fingerprint approaches**
Delphine Estournet¹, Justine Beaujoin¹, Fabrice Poupon², Achille Teillac¹, Jean-François Mangin², Cyril Poupon¹
¹CEA/I2BM/NeuroSpin/UNIRS, Gif-sur-Yvette, France, ²CEA/I2BM/NeuroSpin/UNATI, Gif-sur-Yvette, France
- 1734 Non-rigid Diffeomorphic Registration of dMRI Data using Mean Apparent Propagator Images.**
Kevin GINSBURGER¹, Fabrice Poupon¹, Jean-François Mangin¹, Cyril Poupon¹
¹CEA/I2BM/NeuroSpin, Gif sur Yvette, France
- 1735 A 3D electron microscopy segmentation pipeline for hyper-realistic diffusion simulations**
Michiel Kleinnijenhuis¹, Errin Johnson², Jeroen Mollink^{1,3}, Saad Jbabdi¹, Karla Miller¹
¹Oxford Centre for Functional MRI of the Brain, University of Oxford, Oxford, United Kingdom, ²Sir William Dunn School of Pathology, University of Oxford, Oxford, United Kingdom, ³Department of Anatomy, Donders Institute for Brain, Cognition & Behaviour, Radboud University Medical Center, Nijmegen, Netherlands

- 1736 In utero SSRI Antidepressant Exposure affects Corpus Callosum Microstructure in Term-Born Neonates**
Kayleigh Campbell^{1,2}, Lynne Williams², Daniel Kim², Ursula Brain¹, Bruce Bjornson², Ruth Grunau^{1,2}, Dan Rurak^{1,2}, Steven Miller³, Tim Oberlander^{1,2}
¹University of British Columbia, Vancouver, Canada, ²BC Children's Hospital Research Institute, Vancouver, Canada, ³Hospital for Sick Children, University of Toronto, Toronto, Canada
- 1737 BEDPOSTX Output Distribution Comparison Between CPU and GPU**
Danny Kim^{1,2}, Lynne Williams², Bruce Bjornson^{3,1}
¹Brain Mapping and Neurotechnology Laboratory, BC Children's Hospital, Vancouver, Canada, ²Child & Family Research Imaging Facility, BC Children's Hospital Research Institute, Vancouver, Canada, ³Division of Neurology, Department of Pediatrics, University of British Columbia, Vancouver, Canada
- 1738 Comparison of Diffusion Kurtosis Imaging to Diffusion Basis Spectrum Imaging in Healthy Young Adults**
Daniel Peterson¹, Sijia Wang², Yong Wang³, Thomas Grabowski¹, Wenbin Li⁴, Tara Madhyastha¹
¹University of Washington, Seattle, WA, ²Shanghai Jiao Tong University Affiliated Sixth People's Hospital, Shanghai, China, ³Department of Radiology, Washington University, St. Louis, St Louis, MO, ⁴West China Hospital, Sichuan University, Chengdu, Sichuan
- 1739 Visual Computing for Fusion of Structural and Functional Brain Networks**
Saeed Bakhshmand¹, Daiana Pur¹, Sandrine de Ribaupierre¹, Roy Eagleson¹
¹Western University, London, ON
- 1740 The Maastricht Diffusion Toolbox (MDT): Modular, GPU accelerated, dMRI microstructure modeling**
Robbert Harms¹, Alard Roebroeck¹
¹Maastricht University, Maastricht, Netherlands
- 1741* Fingerprinting Orientation Diffusion Functions in Diffusion MRI detects smaller crossing angles**
Steven Baete^{1,2}, Ying-Chia Lin^{1,2}, Martijn Cloos^{1,2}, Fernando Boada^{1,2}
¹Center for Advanced Imaging Innovation and Research (CAI2R), NYU School Of Medicine, New York, United States, ²Center for Biomedical Imaging, Dept of Radiology, NYU School Of Medicine, New York, United States
- 1742 Heat kernel signatures in the structural connectome are altered in comatose cardiac arrest patients**
Markus Schirmer¹, Eric Rosenthal¹, Ai Wern Chung², Gaston Cudemus-Deseda³, Brittany Mills¹, M Villien⁴, Brian Edlow¹, Joseph Giacino⁵, James Januzzi⁶, Ming Ming Ning¹, William Kimberly¹, William Copen⁷, Pamela Schaefer⁷, Natalia Rost¹, David Greer⁸, Ona Wu⁴
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- 1743 Model-based Interpolation of Orientation Dispersion Improves Atlas-based Quantitation in Development**
Ryan Cabeen¹, Kirsten Lynch¹, Yonggang Shi¹, Kristi Clark¹, Arthur Toga¹
¹Laboratory of Neuro Imaging, USC Stevens Neuroimaging and Informatics Institute, Los Angeles, CA, USA
- 1744 The Contribution of Crossing Fiber Geometry to FA**
Qiuyun Fan¹, Van Wedeen¹, Lawrence Wald¹, Bruce Rosen¹
¹Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Boston, MA
- 1745 Functional profiles of amygdala sub-networks are disrupted in disorders of emotion regulation**
Dorothy Bourdet¹, Sean DeBusschere², Asadur Chowdury³, Paul Soloff⁴, Vaibhav Diwadkar⁵
¹Wayne State University School of Medicine, Detroit, MI, ²Psychiatry and Behavioral Neuroscience, Wayne State University School of Medicine, Detroit, MI, ³Wayne State University, Detroit, MI, ⁴University of Pittsburgh, Pittsburgh, PA, ⁵Wayne State University, Detroit, United States
- 1746 The Effect of Parcellation, Tract Number and Network Characteristic for Brain Network Analysis**
Yun-Ting Ciou¹, Yi-Ping Chao^{1,2}, Greg Parker³, Claudia Metzler-Baddeley³, Derek Jones³
¹Chang Gung University, Taoyuan, Taiwan, ²Chang Gung Memorial Hospital at Linkou, Taoyuan, Taiwan, ³Cardiff University, Cardiff, United Kingdom
- 1747 Theoretical characterization of angular resolution for linear ODF estimation**
Divya Varadarajan¹, Justin Haldar¹
¹University of Southern California, Los Angeles, USA
- 1748 The developing Human Connectome: automated processing pipeline and quality control for neonatal dMRI**
Matteo Bastiani¹, Jesper Andersson¹, Lucilio Cordero-Grande², Maria Murgasova², Jana Hutter², Anthony Price², Antonios Makropoulos³, Sean Fitzgibbon¹, Eugene Duff¹, Emer Hughes², Ana Gomes², Joanna Allsop², Johannes Steinweg², Nora Tusor², Julia Wurie², Jose Bueno-Conde², Daniel Rueckert³, David Edwards², Stephen Smith¹, Donald Tournier², Joseph Hajnal², Saad Jbabdi¹, Stamatios Sotiropoulos¹
¹University of Oxford, Oxford, United Kingdom, ²Centre for the Developing Brain, King's College London, London, United Kingdom, ³Department of Computing, Imperial College London, London, United Kingdom
- 1749 White matter structure modelled as a continuous vector field**
Michiel Cottaar¹, Matteo Bastiani¹, Timothy Behrens¹, Stamatios Sotiropoulos¹, Saad Jbabdi¹
¹FMRIB, University of Oxford, Oxford, United Kingdom
- 1750 A closed-form solution for calculating local white matter connectivity with diffusion MRI**
Matthew Cieslak¹, Tegan Brennan¹, Lukas Volz¹, Alex Asturias¹, Wendy Meiring¹, Subhash Suri¹, Scott Grafton¹
¹University of California, Santa Barbara, Santa Barbara, CA
- 1751 A Graph Based Representation and Similarity Measure for Multi-feature Brain Networks**
Yusuf Osmanlioglu¹, Birkan Tunc¹, Drew Parker¹, Junghoon Kim², Ali Shokoufandeh³, Ragini Verma¹
¹University of Pennsylvania, Philadelphia, United States, ²Moss Rehabilitation Research Institute, Philadelphia, United States, ³Drexel University, Philadelphia, PA, United States
- 1752 Region of Interest Free Analysis of the Diffusion MRI Tractography Connectome**
Lei Wu¹, Arvind Caprihan¹, Vince Calhoun²
¹The Mind Research Network, Albuquerque, NM, ²The Mind Research Network & LBERI, Department of Electrical and Computer Engineering, UNM, Albuquerque, NM

MODELING AND ANALYSIS METHODS

EEG/MEG Modeling and Analysis

- 1753 Mapping of distinct oscillatory sources in MEG despite imbalances in source power**
Peter Donhauser¹, Esther Florin², Sylvain Baillet¹
¹McGill University, Montreal, Canada, ²Heinrich Heine University, Düsseldorf, Germany
- 1754 Influence of Uncertainties in the Head Tissue Conductivities on EEG Source Analysis**
Johannes Vorwerk¹, Carsten Wolters², Christopher Butson¹
¹Scientific Computing and Imaging (SCI) Institute, University of Utah, Salt Lake City, UT, ²Institute for Biomagnetism and Biosignalanalysis, University of Münster, Münster, Germany
- 1755 Using Multi-source Minimum Variance Beamformers can improve source imaging of EEG**
Anthony Herdman¹, Urs Ribary², Alex Moiseev²
¹University of British Columbia, Vancouver, Canada, ²Simon Fraser University, Burnaby, Canada
- 1756 MEG Source Space Analysis as a Basis for Functional Network Connectivity Analysis in Schizophrenia**
Lori Sanfratello¹, Julia Stephen¹, Vince Calhoun¹
¹The Mind Research Network, Albuquerque, NM
- 1757 Signatures of neural feedback effects in power spectra of large-scale brain activity**
Nipa Roy¹, Paula Sanz-Leon², Peter Robinson³
¹The University of Sydney, Sydney, Australia, ²University of Sydney, Sydney, Australia, ³University of Sydney, Camperdown, NSW
- 1758 Biophysical modeling of transient neural activity and inhibitory synaptic plasticity**
Romesh Abeysuriya¹, Jonathan Hadida^{1,2}, Stamatios Sotiropoulos², Saad Jbabdi², Mark Woolrich^{1,2}
¹Oxford Centre for Human Brain Activity, Oxford, United Kingdom, ²Oxford Centre for Functional MRI of the Brain, Oxford, United Kingdom
- 1759 Parametric Models of Phase-Amplitude Coupling**
Tom Dupré la Tour¹, Lucille Tallot², Valérie Doyère², Virginie van Wassenhove³, Yves Grenier¹, Alexandre Gramfort¹
¹Télécom ParisTech, Paris, France, ²Institut des Neurosciences Paris-Saclay, Université Paris Sud, CNRS, Université Paris Saclay, Orsay, France, ³Cognitive Neuroimaging Unit, CEA DRF/I2BM, INSERM, Université Paris-Sud, Université Paris-Saclay, Gif/Yvette, France
- 1760 Beyond stochastic gradient for maximum likelihood based ICA on EEG and MEG**
Jair Montoya-Martinez¹, Pierre Ablin¹, Jean-François Cardoso², Alexandre Gramfort³
¹LTCI, Telecom ParisTech, Université Paris-Saclay, Paris, France, ²CNRS, Paris, France, ³INRIA, Telecom ParisTech, Université Paris-Saclay, Paris, France, Paris, France
- 1761 The Decision Decoding ToolBOX (DDTBOX) – a novel multivariate pattern analysis toolbox for ERPs**
Stefan Bode¹, Daniel Bennett¹, Daniel Feuerriegel², Phillip Alday²
¹The University of Melbourne, Melbourne, Victoria, ²University of South Australia, Adelaide, South Australia

- 1762 Who are the best candidates for electrical source imaging analysis?**
Chifaou ABDALLAH¹, Louis MAILLARD², Estelle RIKIR³, Jacques JONAS¹, Anne THIRIAUX⁴, Martine GAVARET⁵, Fabrice BARTOLOMEI⁶, Sophie COLNAT-COULBOIS⁶, Jean-Pierre VIGNAL⁷, Laurent KOESSLER⁸
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- 1763 Relationships between neuronal oscillatory amplitude and dynamic functional connectivity**
Prejaas Tewarie¹, Benjamin Hunt², George O'Neill¹, Aine Byrne³, Kevin Aquino¹, Markus Bauer⁴, Karen Mullinger¹, Stephen Coombes⁵, Matthew Brookes¹
¹Sir Peter Mansfield Imaging Centre, School of Physics, University of Nottingham, Nottingham, United Kingdom, ²Sir Peter Mansfield Imaging Centre, School of Physics, University of Nottingham, Nottingham, ³School of Mathematical Sciences, University of Nottingham, Nottingham, ⁴School of Psychology, University of Nottingham, Nottingham, ⁵School of Mathematical Sciences, University of Nottingham, Nottingham, United Kingdom
- 1764 Comparing time-varying connectivity methods using simulated data of a visuospatial attention network**
Eshwar Gorakhnath Ghumare¹, Maarten Schrooten¹, Rik Vandenberghe¹, Patrick DUPONT²
¹Laboratory for cognitive neurology, KU Leuven, Leuven, Belgium, ²KU Leuven, Leuven, Belgium
- 1765 Performance comparison of functional and effective brain connectivity methods**
Robert Spangler^{1,2}, Harald Bornfleth², Joachim Gross¹
¹University of Glasgow, Glasgow, United Kingdom, ²BESA GmbH, Munich, Germany
- 1766 Critical comments on EEG sensor space dynamical connectivity analysis**
Frederik Van de Steen¹, Luca Faes², Esin Karahan³, Jitkomut Songsiri⁴, Pedro Valdés-Sosa⁵, Daniele Marinazzo⁶
¹Universiteit Gent, Ghent, Belgium, ²University of Trento, Trento, Italy, ³Ministry of Education, Chengdu, China, ⁴Chulalongkorn University, Bangkok, Thailand, ⁵University of Electronic Science and Technology of China, Chengdu, China, ⁶University of Ghent, Ghent, -- only for US citizens
- 1767 BrainWave: A MATLAB Toolbox for MEG Source Analysis**
Cecilia Jobst¹, Paul Ferrari², Sabah Master¹, Rita Al-Loos¹, Pascal Van Lieshout³, Douglas Cheyne¹
¹The Hospital for Sick Children, Toronto, Canada, ²Dell Children's Medical Centre of Central Texas, Austin, TX, ³University of Toronto, Toronto, Canada
- 1768 Exploring Resting State Functional Connectivity in Mild Cognitive Impairment: from EEG to 3D Imaging**
Andrei Medvedev¹, Gabriela McDonald¹, Cameron McKay¹, Raymond Turner¹
¹Georgetown University Medical Center, Washington DC, United States
- 1769 Investigating brain mechanisms underlying natural reading by combining eye tracking, EEG and MEG**
Béla Weiss^{1,2}, Felix Dreyer^{1,3}, Maarten van Casteren¹, Olaf Hauk¹
¹Cognition and Brain Sciences Unit, Medical Research Council, Cambridge, United Kingdom, ²Brain Imaging Centre, Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary, ³Brain Language Laboratory, Free University of Berlin, Berlin, Germany
- 1770 Structural and functional basis of inter-subject EEG alpha/beta and gamma power variability**
Russell Butler¹, Greg Mierzwinski¹, Pierre-Michel Bernier¹, Maxime Descoteaux¹, Guillaume Gilbert², Kevin Whittingstall³
¹University of Sherbrooke, Sherbrooke, Quebec, ²Philips Healthcare, Montreal, Quebec, ³University of Sherbrooke, Sherbrooke, Canada
- 1771 Validation of forward solvers accuracy in EEG, EIT and TES**
Mariano Fernández-Corazza¹, Sergei Turovets², Nick Price², Phan Luu², Don Tucker², Carlos Muravchik¹, Allen Malony³
¹LEICI, Facultad de Ingeniería, Universidad Nacional de La Plata (UNLP), CONICET, La Plata, Argentina, ²Electrical Geodesics, Inc, Eugene, OR, ³Department of Computer and Information Science, University of Oregon, Eugene, OR
- 1772 Spatiotemporal scaffold supporting metastable wave patterns in large-scale brain dynamics**
James Roberts¹, Leonardo Gollo¹, Michael Breakspear¹
¹QIMR Berghofer Medical Research Institute, Brisbane, Australia
- 1773 Estimating signal flow chains from a network dynamics model of the human brain**
Yusuke Takeda¹, Nobuo Hiroe¹, Makoto Fukushima², Masa-aki Sato¹, Okito Yamashita¹
¹ATR Neural Information Analysis Laboratories, Kyoto, Japan, ²Indiana University, Indiana, USA
- 1774 EEG Microstates Analysis is Affected by the Referencing Technique**
Shiang Hu¹, Esin Karahan¹, Pedro Valdés-Sosa^{1,2}
¹University of Electronic Science and Technology of China, Chengdu, China, ²Cuban Neuroscience Center, Havana, Cuba
- 1775 Assessing directed connectivity in MEG with a multivariate approach robust to source leakage**
Alessio Basti^{1,2}, Federico Chella^{1,2}, Vittorio Pizzella^{1,2}, Guido Nolte³, Laura Marzetti^{1,2}
¹Department of Neuroscience, Imaging and Clinical Sciences, University of Chieti-Pescara, Chieti, Italy, ²Institute for Advanced Biomedical Technologies, Chieti, Italy, ³Department of Neurophysiology and Pathophysiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany
- 1776 Projecting MEG data into an source-eigenspace yields brain activity and accounts for head movements**
Hermann Sonntag¹, Burkhard Maess¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
- 1777 Effects of implicit learning on cognitive load using pupillometry and MEG cortical oscillations**
Silvia Isabella¹, Charline Urbain², J. Allan Cheyne³, Douglas Cheyne⁴
¹University of Toronto & Hospital for Sick Children, Toronto, Ontario, ²Université Libre de Bruxelles, Bruxelles, Belgium, ³University of Waterloo, Waterloo, Canada, ⁴Hospital for Sick Children, Toronto, ON
- 1778 EEG functional brain connectivity in different respiration phases in Cheyne-Stokes Respiration**
alejandro luis callara¹, Maria Sole Morelli², Alberto Giannoni³, Luigi Landini⁴, Michele Emdin⁵, Nicola Vanello¹
¹University of Pisa, Pisa, Italy, ²Centro di Ricerca E. Piaggio, Pisa, Italy, ³Fondazione Toscana Gabriele Monasterio, Pisa, Italy, ⁴Department of Information Engineering, Pisa, Italy, ⁵Scuola Superiore Sant'Anna, Pisa, Italy
- 1779 Reducing Noise in Electromagnetic Sensor Arrays Using Oversampled Temporal Projection**
Eric Larson¹, Samu Taulu¹
¹University of Washington, Seattle, WA

- 1780 Integration and segregation of phase-amplitude coupling networks during spontaneous activity**
Mehdy Dousty¹, Roberto C. Sotero¹
¹Hotchkiss Brain Institute, and Department of Radiology, University of Calgary, Calgary, Canada
- 1781 Impact of bone marrow and skull holes in atlas head models on tissue conductivity estimates with EIT**
Mariano Fernández-Corazza¹, Sergei Turovets², Nick Price², Phan Luu², Carlos Muravchik¹, Don Tucker²
¹LEICI, Facultad de Ingeniería, Universidad Nacional de La Plata (UNLP), CONICET, La Plata, Argentina, ²Electrical Geodesics, Inc, Eugene, OR
- 1782 Temporal alignment of trials improves the sensitivity of decoding approaches to MEG data**
Nicole Rafidi¹, Tom Mitchell¹
¹Carnegie Mellon University, Pittsburgh, PA
- 1783 Spatially Resolved Pediatric Skull Conductivities for Inhomogeneous Electrical Forward Modeling**
Jidong Hou¹, Sergei Turovets¹, Kai Li¹, Phan Luu¹, Linda Larson-Prior², Don Tucker¹
¹Electrical Geodesics, Inc, Eugene, OR, ²University of Arkansas for Medical Sciences, Little Rock, AR
- 1784 Reliability of Transcranial Magnetic Stimulation EEG Evoked Potentials**
Lewis Kerwin¹, Corey Keller², Wei Wu³, Manjari Narayan⁴, Amit Etkin⁵
¹Stanford University, Menlo Park, CA, ²Stanford, Mountain View, CA, ³Stanford University, Palo Alto, CA, ⁴Stanford University, Burlingame, United States, ⁵Stanford University, Stanford, CA
- 1785 Electrical Source Imaging of Visual Evoked Responses Inside the MR scanner**
Tanguy Hedrich¹, Ümit Aydın², Stephan Grimault³, Habib Benali⁴, Christophe Grova⁵
¹Multifunkim laboratory - McGill university, Montreal, Canada, ²Department of physics, Concordia University, Montreal, Cape Verde, ³PERFORM Centre, Concordia University, Montreal, Canada, ⁴Sorbonne Universités, UPMC Univ Paris 06, CNRS, INSERM, Laboratoire d'Imagerie Biomédicale, Paris, France, ⁵Concordia University, Montreal, Quebec
- 1786 The spherical harmonic structure of MEG functional connectivity networks**
John Griffiths¹, Kevin Aquino², Peter Robinson³, Anthony McIntosh^{1,4}
¹Rotman Research Institute, Baycrest, Toronto, Canada, ²Sir Peter Mansfield Imaging Centre, School of Physics, University of Nottingham, Nottingham, United Kingdom, ³Centre for Complex Systems, School of Physics, University of Sydney, Sydney, Australia, ⁴University of Toronto, Toronto, Canada
- 1787 Real Time Retinotopic Mapping of Primary Visual Cortex in MEG**
Nicholas Peatfield¹, Alex Moiseev¹, Urs Ribary¹, Sam Doesburg¹, Teresa Cheung¹
¹Simon Fraser University, Burnaby, Canada
- 1788 Predicting stimulus and response category in a simulated real world situation with fMRI and EEG**
Alexander Asturias^{1,2}, James Elliot^{1,2}, Allison Shapiro¹, Viktoriya Babenko¹, Patrick Connolly³, Scott Grafton^{1,4}
¹University of California, Santa Barbara, Santa Barbara, CA, ²Inst. for Collaborative Biotechnologies, Santa Barbara, CA, ³Teledyne, Durham, NC, ⁴Inst. for Collaborative Biotechnologies, Santa Barbara, CO
- 1789 The effect of skill learning on the unpredictability of EEG signal fluctuations**
Erin Gibson^{1,2}, Randy McIntosh¹
¹Rotman Research Institute - Baycrest Hospital, Toronto, Canada, ²University of Toronto, Toronto, Canada

- 1790* Adaptive Cortical Parcellations for Source Reconstructed EEG/MEG Connectomes**
Seyedehrezvan Farahibozorg^{1,2}, Richard Henson², Olaf Hauk²
¹University of Cambridge, Cambridge, United Kingdom, ²MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom
- 1791 Evaluation of numerical techniques for the modeling of volume conduction in the human head**
Damon Hyde¹, Moritz Dannhauer², Simon Warfield³, Rob MacLeod², Dana Brooks⁴
¹Boston Children's Hospital and Harvard Medical School, Boston, MA, ²Scientific Computing and Imaging Institute, University of Utah, Salt Lake City, UT, ³Department of Radiology, Children's Hospital, Harvard Medical School, Boston, MA, ⁴Electrical and Computer Engineering, Northeastern University, Boston, MA
- 1792 Exploring Connectivity Dynamics using Deep Neural Network Models from Magnetoencephalographic Data**
Zachary Harper¹, Roseric Azondekon¹, Charles Welzig¹
¹Medical College of Wisconsin, Milwaukee, WI
- 1793 Auditory Steady-State Response as a Predictor of rTMS treatment in Major Depressive Disorder**
Reza Shalbah¹, Fidel Vila-Rodriguez¹
¹University of British Columbia, Vancouver, Canada
- 1794 Automatic co-registration of MEG-MRI data using multiple RGB-D cameras**
Yong-Sheng Chen¹, Chin-Han Cheng², Shih-Yen Lin¹, Li-Fen Chen²
¹National Chiao Tung University, Hsinchu, Taiwan, ²National Yang-Ming University, Taipei, Taiwan
- 1795 EEG attractor landscape in the resting human brain**
Takumi Sase¹, Keiichi Kitajo¹
¹RIKEN Brain Science Institute, Wako, Saitama

MODELING AND ANALYSIS METHODS

Exploratory Modeling and Artifact Removal

- 1796 Relationship between Heart Rate and the Shape of the Cardiac Response Function**
Feliberto De la Cruz¹, Andy Schumann¹, Stefanie Köhler¹, Karl-Jürgen Bär¹, Gerd Wagner¹
¹Jena University Hospital, Jena, Germany
- 1797 Brain Size Effects upon Cortical Structural Measures: Perspective from Gender Decoding**
Linlin Wang¹, Lixia Tian¹
¹Beijing Jiaotong University, Beijing, China
- 1798 Controlling for White Matter Hyperintensities in Diffusion Studies of Aging**
Shen Guo¹, Arnold Evia¹, David Bennett^{2,3}, Konstantinos Arfanakis^{1,2,4}
¹Department of Biomedical Engineering, Illinois Institute of Technology, Chicago, IL, ²Rush Alzheimer's Disease Center, Rush University Medical Center, Chicago, IL, ³Department of Neurological Sciences, Rush University Medical Center, Chicago, IL, ⁴Department of Diagnostic Radiology, Rush University Medical Center, Chicago, IL

- 1799 Investigating Preprocessing Strategy Effect on the Graph Properties of Human Resting-State fMRI Data**
Lejian Huang¹, Lili Yang², Marwan Baliki¹, Alex Baria¹, Bo Wu², Vania Akparian^{1,2}
¹Northwestern University, Chicago, IL, ²China-USA Neuroimaging Research Institute of Wenzhou Medical University, Wenzhou, China
- 1800 Optimized independent component selection for automated EEG artifact removal**
Nicholas Ketz¹, Matthew Phillips¹, Shane Roach¹, Praveen Pilly¹
¹HRL Laboratories, Malibu, CA
- 1801 Cardiac Noise Removal from BOLD fMRI based on a Dynamic Linear Model**
Michalis Kassinosopoulos¹, Arna Ghosh², Elvisha Dhamala², Marie-Hélène Boudrias², Georgios Mitsis³
¹Graduate Program in Biological and Biomedical Engineering, McGill University, Montreal, Canada, ²School of Physical and Occupational Therapy, McGill University, Montreal, Canada, ³Department of Bioengineering, McGill University, Montreal, Canada
- 1802 Scalable Probabilistic Brain-Behavior Cross Correlational Analysis**
Rajiv Khanna¹, Joydeep Ghosh¹, Russell Poldrack², Oluwasanmi Koyejo³
¹University of Texas at Austin, Austin, TX, ²Stanford University, Stanford, United States, ³University of Illinois at Urbana-Champaign, Urbana, IL
- 1803 Classification of independent components in resting state fMRI with sparse paradigm free mapping**
Cesar Caballero Gaudes¹, Manuel Delgado-Alvarado^{2,3}, Maria Cruz Rodriguez-Oroz^{2,4,5}
¹Basque Center of Cognition, Brain and Language, San Sebastian, Spain, ²Neuroscience Area, Biodonostia Health Research Institute, San Sebastian, Spain, ³Neurology Department, University Hospital Marqués de Valdecilla, Santander, Spain, ⁴Centro de Investigacion Biomedicas en Red Enfermedades Neurodegenerativas (CIBERNED), Institute Carlos III, Spain, ⁵Ikerbasque. Basque Foundation for Science, Bilbao, Spain

MODELING AND ANALYSIS METHODS

Motion Correction and Preprocessing

- 1804 Advanced Spatial Smoothing Improves Detection of Cervical Spinal Cord Activity with fMRI**
Kenneth Weber¹, Olivia Bernadel-Huey¹, Yufen Chen², Xue Wang², Todd Parrish², Sean Mackey¹
¹Stanford University, Palo Alto, CA, ²Northwestern University, Chicago, IL
- 1805 Robust EEG-fMRI using optical motion tracking: Retrospective EEG Motion Educated GA Suppression.**
Danilo Maziero¹, David Carmichael²
¹John A. Burns School of Medicine, University of Hawaii, Honolulu, HI, ²Great Ormond Street ICH, UCL, London, United Kingdom
- 1806 Global signal regression strengthens associations between behavior and resting-state fMRI**
Jingwei Li¹, Ru Kong¹, Nanbo Sun¹, Avram Holmes², Mert Sabuncu³, B.T. Thomas Yeo¹
¹National University of Singapore, Singapore, Singapore, ²Yale University, New Haven, United States, ³Massachusetts General Hospital, Charlestown, MA
- 1807 Validation of Motion Correction with Multiband SLOMOCO using Multiband SimPACE**
Xiaopeng Zhou¹, Wanyong Shin¹, Erik Beall¹, Katherine Koenig¹, Mark Lowe¹
¹The Cleveland Clinic, Cleveland, OH

- 1808 Motion parameter regression decreases accuracy of estimated activation**
Oktay Agcaoglu¹, Eswar Damaraju¹, Vince Calhoun²
¹Mind Research Network, Albuquerque, NM, ²The Mind Research Network & LBERI; Department of Electrical and Computer Engineering, UNM, Albuquerque, NM
- 1809 Both data denoising (FIX) and lower flip angle improves the quality of resting state data in MREG**
Vesa Korhonen¹, Aleksi Rasila¹, Timo Tuovinen², Ville Raatikainen², Janne Kananen², Lauri Raitamaa², Niko Huotari², Heta Helakari², Tuija Keinänen¹, Tuomo Starck¹, Teemu Myllylä², Vesa Kiviniemi²
¹Oulu University Hospital, Oulu, Finland, ²University of Oulu, Oulu, Finland
- 1810 The importance of preprocessing for (f)ALFF mapping**
Michael Woletz¹, André Hoffmann¹, Martin Tik¹, Ronald Sladky^{2,1}, Simon Robinson¹, Christian Windischberger¹
¹Medical University of Vienna, Vienna, Austria, ²University of Zurich, Zurich, Switzerland
- 1811 Accuracy and Precession of Diffusion MRI Parameters Depends on Post Processing Framework**
Benjamin Ades-Aron¹, Jelle Veraart¹, Peter Kochunov², Elias Kellner³, Dmitry Novikov⁴, Els Fieremans¹
¹Center for Biomedical Imaging, New York, NY, ²Maryland Psychiatric Research Center, Baltimore, MD, ³University Medical Center Freiburg, Freiburg, Germany, ⁴Center for Biomedical Imaging, New York, United States
- 1812 Impact of Spatially Varying Colored Noise on the Topological Summaries of Functional Connectome**
Soroosh Afyouni¹, Thomas Nichols¹
¹University of Warwick, Coventry, United Kingdom
- 1813 Physical and contextual factors but not psychological states or traits predict motion during rsfMRI**
Hamed Ekhtiari¹, Rayus Kuplicki¹, Hung-wen Yeh¹, Martin Paulus¹
¹Laureate Institute for Brain Research, Tulsa, OK
- 1814 An Investigation of Motion Correction Techniques for Task Connectivity**
Andrew Poppe¹, Michael Stevens^{1,2}
¹Olin Neuropsychiatry Research Center, The Institute of Living/Hartford Hospital, Hartford, CT, ²Department of Psychiatry, Yale University School of Medicine, New Haven, CT
- 1815 Head motion strongly affects regional measures of resting state fMRI**
Rayus Kuplicki¹, Hamed Ekhtiari¹, Martin Paulus¹
¹Laureate Institute for Brain Research, Tulsa, OK
- 1816 Insight and Inference for DVARS: A variance decomposition for resting fMRI data**
Soroosh Afyouni¹, Thomas Nichols¹
¹University of Warwick, Coventry, United Kingdom
- 1817 Improved Volume Censoring Methods for Removal of Motion Artifact from Multiband fc-MRI Data**
Jared Van Snellenberg¹
¹Stony Brook University, Stony Brook, NY

- 1818 Effect of visual feedback of hand on head motion and physiological noise during fMRI of handwriting**
Mahta Karimpoor¹, Nathan Churchill², Fred Tam³, Corinne Fischer², Tom Schweizer², Simon Graham¹
¹Sunnybrook Research Institute, University of Toronto, Toronto, Canada, ²St. Michael's Hospital, Toronto, Canada, ³Sunnybrook Research Institute, Toronto, Canada
- 1819 Prospective motion correction of fMRI: Improvement on Working Memory tasks affected by motion**
Danilo Maziero¹, Linda Chang², Thomas Ernst³
¹John A. Burns School of Medicine, University of Hawaii, HONOLULU, HI, ²University of Hawaii, Honolulu, HI, ³University of Hawaii, John A. Burns School of Medicine, Honolulu, HI
- 1820 FMRIprep: a robust preprocessing pipeline for task-based and resting-state fMRI data**
Oscar Esteban¹, Krzysztof Gorgolewski¹, Ross Blair¹, Shoshana Berleant¹, Craig Moodie¹, Russell Poldrack¹
¹Stanford University, Stanford, United States
- 1821 Benchmarking strategies for the control of motion artefact in studies of functional connectivity**
Rastko Ciric¹, Daniel Wolf¹, Jonathan Power², David Roalf¹, Graham Baum¹, Kosha Ruparel³, Russell Shinohara¹, Mark Elliott¹, Simon Eickhoff⁴, Christos Davatzikos⁵, Ruben Gur¹, Raquel Gur¹, Danielle Bassett⁶, Theodore Satterthwaite¹
¹University of Pennsylvania, Philadelphia, PA, ²New York Presbyterian Hospital, New York, NY, ³Department of Psychiatry, University of Pennsylvania, Philadelphia, PA, ⁴Institute of Neuroscience and Medicine, INM-1, Research Centre Jülich, Jülich, Germany, ⁵University of Pennsylvania, Philadelphia, PA, ⁶Department of Bioengineering, University of Pennsylvania, Philadelphia, PA

MODELING AND ANALYSIS METHODS

Multivariate Modeling

- 1822 Brain-behaviour signatures in healthy and depressed adolescents**
Maria Rosa^{1,2}, Joao Monteiro^{1,2}, Michael Moutoussis^{3,1}, Gita Prabhu³, Gabriel Ziegler^{4,5}, NSPN Consortium⁶, Ray Dolan^{1,3}, Janaina Mourao-Miranda^{1,2}
¹Max Planck UCL Centre for Computational Psychiatry and Ageing Research, University College London, London, United Kingdom, ²Department of Computer Science, University College London, London, United Kingdom, ³Wellcome Trust Centre for Neuroimaging, University College London, London, United Kingdom, ⁴Institute of Cognitive Neurology and Dementia Research, Otto-von-Guericke-University Magdeburg, Magdeburg, Germany, ⁵German Center for Neurodegenerative Diseases (DZNE), Magdeburg, Germany, ⁶-, -
- 1823 Relations between local cortical geometry and functional homogeneity: a replication study**
Nicolas Honnorat¹, Theodore Satterthwaite², Ruben Gur², Raquel Gur², Christos Davatzikos³
¹University of Pennsylvania, Philadelphia, United States, ²University of Pennsylvania, Philadelphia, PA, ³University of Pennsylvania, Philadelphia, PA
- 1824 Subcortical shape analysis using a temporal model reveals nonlinear development of atrophy with age**
Eelke Visser¹, Fidel Alfaro-Almagro¹, Mark Jenkinson¹
¹FMRIB Centre, University of Oxford, Oxford, United Kingdom

- 1825 Examining Functional Patterns of Self-similarity using Univariate and Multivariate Approaches.**
Florian Ph.S Fischmeister^{1,2}, Georg Langs³, Mauricio Martins^{4,5,6}, W. Tecumseh Fitch⁵, Roland Beisteiner^{1,2}
¹Department of Neurology, Medical University of Vienna, Vienna, Austria, ²High-Field Magnetic Resonance Center, Medical University of Vienna, Vienna, Austria, ³Computational Imaging Research Lab, Medical University of Vienna, Vienna, Austria, ⁴Berlin School of Mind and Brain, Humboldt Universität zu Berlin, Berlin, Germany, ⁵Department of Cognitive Biology, University of Vienna, Vienna, Austria, ⁶Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
- 1826 Cortico-cortical and corticomuscular coherence using time-varying multivariate autoregressive models**
Alba Xifra-Porxas¹, Sara Larivière^{2,3}, Kyriaki Kostoglou⁴, Michalis Kassinos¹, Guiomar Niso⁵, Marie-Hélène Boudrias^{6,3}, Georgios Mitsis⁷
¹Graduate Program in Biological and Biomedical Engineering, McGill University, Montreal, Canada, ²Department of Neurology and Neurosurgery, McGill University, Montreal, Canada, ³Center for Interdisciplinary Research in Rehabilitation of Greater Montreal (CRIR), Montreal, Canada, ⁴Department of Electrical and Computer Engineering, McGill University, Montreal, Canada, ⁵McConnell Brain Imaging Centre, Montreal Neurological Institute, McGill University, Montreal, Canada, ⁶School of Physical & Occupational Therapy, McGill University, Montreal, Canada, ⁷Department of Bioengineering, McGill University, Montreal, Canada
- 1827 GPU accelerated extraction of sparse Granger causality patterns**
Dushyant Sahoo¹, Nicolas Honnorat², Christos Davatzikos³
¹University of Pennsylvania, Philadelphia, PA, ²University of Pennsylvania, Philadelphia, United States, ³University of Pennsylvania, Philadelphia, PA
- 1828 A permutation-like exact test for fMRI timeseries using orthogonal transformations**
Carsten Alfeld^{1,2}, John-Dylan Haynes^{1,2}
¹Bernstein Center for Computational Neuroscience, Charité, Berlin, Germany, ²Berlin Center of Advanced Neuroimaging, Charité, Berlin, Germany
- 1829 Culture Clash in Imaging Neuroscience: Classical Statistics versus Statistical Learning**
Danilo Bzdok¹, Denis Engemann², Gael Varoquaux³, Alexandre Gramfort⁴, Bertrand Thirion⁵, Sanmi Koyejo⁶, Thomas Yeo⁷
¹RWTH Aachen University, Aachen, Germany, ²Parietal team, INRIA, Paris, France, ³INRIA, Palaiseau, France, ⁴INRIA, Télécom ParisTech, Paris, France, ⁵Inria, Saclay, France, ⁶Department of Computer Science, Urbana, United States, ⁷National University of Singapore, Singapore, Singapore
- 1830 Mechanisms of Decoding Oriented Grating Stimuli Investigated by Optical Imaging of Cat Area 18**
ZeShan Yao¹, Martin Villeneuve¹, Pascal Kropf¹, Javeed Shaikh¹, Denis Chaimow², Amir Shmuel¹
¹MNI, McGill University, Montreal, Canada, ²University of Tübingen, Berlin, Germany
- 1831 A watershed model of individual differences in fluid intelligence**
Rogier Kievit¹, Simon Davis², John Griffiths³, Marta Correia¹, . Cam-CAN⁴, Richard Henson⁵
¹MRC CBSU, Cambridge, United Kingdom, ²Duke University, Durham, United States, ³Rotman Research Institute at Baycrest, Toronto, Canada, ⁴Cambridge Centre for Ageing and Neuroscience (Cam-CAN), University of Cambridge, MRC CBU, Cambridge, United Kingdom, ⁵MRC Cognition & Brain Sciences Unit, Cambridge, United Kingdom

1832 Finding multivariate effects between neuroimaging and behaviour in adolescents using Sparse PLS
Joao Monteiro^{1,2}, Michael Moutoussis^{2,3}, Maria Rosa^{1,2}, Gabriel Ziegler^{4,5}, Anil Rao^{1,2}, Gita Prabhu³, NSPN Consortium⁶, John Shawe-Taylor¹, Ray Dolan^{2,3}, Janaina Mourao-Miranda^{1,2}
¹Department of Computer Science, University College London, London, United Kingdom, ²Max Planck University College London Centre for Computational Psychiatry and Ageing Research, London, United Kingdom, ³Wellcome Trust Centre for Neuroimaging, University College London, London, United Kingdom, ⁴Institute of Cognitive Neurology and Dementia Research, Otto-von-Guericke-University Magdeburg, Magdeburg, Germany, ⁵German Center for Neurodegenerative Diseases (DZNE), Magdeburg, Germany, ⁶-, -, -

1833 Gradients of functional connectivity predict task condition and working memory performance
Marcel Falkiewicz¹, Elizabeth Jefferies², Satrajit Ghosh³, Georg Langs⁴, Blazej Baczowski⁵, Danilo Bzdok⁶, Jonathan Smallwood², Daniel Margulies¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²The University of York, York, United Kingdom, ³MIT, Cambridge, MA, ⁴Medical University of Vienna, Vienna, Austria, ⁵MPI-CBS, Leipzig, Germany, ⁶RWTH Aachen University, Aachen, Germany

1834 Cognitive Reserve and the brain: investigating the relation between education and Grey Matter volume
Andrea Zangrossi¹, Sara Mondini¹, Giuseppe Sartori¹
¹Department of General Psychology, University of Padua, Padua, Italy

1835 Multivariate BOLD signal variability alterations in psychosis in 22q11.2 deletion syndrome.
Daniela Zöller¹, Marie Schaar², Maria Carmela Padula², Elisa Scariati², Naghme Ghazaleh¹, Stephan Eliez², Dimitri Van De Ville³
¹Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, ²University of Geneva, Geneva, Switzerland, ³Ecole Polytechnique Fédérale de Lausanne, Lausanne, Vaud

1836 Interactions of Default Mode Network with Language Regions Using Full Brain Autoregressive Modelling
Dushyant Sahoo¹, Ishaan Batta², Rahul Garg²
¹University of Pennsylvania, Philadelphia, PA, ²Indian Institute of Technology, Delhi, New Delhi, India

1837 Brain mapping through regional multivariate pattern analysis and discriminative adaptive smoothing
Erdem Varol¹, Aristeidis Sotiras², Christos Davatzikos³
¹University of Pennsylvania, PHILADELPHIA, PA, ²University of Pennsylvania, Philadelphia, United States, ³University of Pennsylvania, Philadelphia, PA

1838* Automated simulation of fMRI experiments
Leila Wehbe¹, Alexander Huth¹, Fatma Deniz¹, Marie-Luise Kieseler¹, Jack L Gallant¹
¹University of California, Berkeley, Berkeley, CA

1839 Accurate Discrimination of Alcoholic Patients Using a Multivariate SVM Approach of mGluR5 PET
Jenny Ceccarini¹, Martijn Devrome¹, Gil Leurquin-Sterk¹, Michel Koole¹, Koen Van Laere¹
¹Department of Nuclear Medicine and Molecular Imaging, University Hospitals Leuven, KU Leuven, Leuven, Belgium

1840 Adjusting permutation tests for multivariate analysis of neuroimaging data with subclasses
Steffen Gais¹, Hamidreza Jamalabadi¹, Sarah Alizadeh¹, Monika Schöner¹
¹University of Tübingen, Tübingen, Germany

1841 Model Order Prediction in the ICA
Srinivas Rachakonda¹, Yuhui Du¹, Vince Calhoun²
¹The Mind Research Network & LBERI, Albuquerque, NM, ²The Mind Research Network & LBERI; Department of Electrical and Computer Engineering, UNM, Albuquerque, NM

1842 To predict or not to predict – What is signal and what is noise in multivariate decoding
Martin Hebart¹, Carsten Allefeld², Chris Baker³
¹National Institute of Mental Health, Bethesda, MD, ²Charité – Universitätsmedizin Berlin, Berlin, Germany, ³National Institute of Mental Health, Bethesda, United States

1843 Rest vs Task fMRI: the simultaneous covariance diagonalization approach.
Alberto Llera¹, Roselyne Chauvin¹, Maarten Mennes¹, Christian Beckmann^{1,2}
¹Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands, ²Radboud University Medical Center, Nijmegen, Netherlands

1844 Multimodal components of neurodegeneration; linking brain structure and function
Raimon Pruim¹, Hazel Zonneveld¹, Marius de Groot¹, Henri Vrooman¹, Arfan Ikram¹, Meike Vernooij¹, Frans Vos^{2,3}, Wiro Niessen^{1,2}
¹Erasmus MC, Rotterdam, Netherlands, ²Delft University of Technology, Delft, Netherlands, ³University of Amsterdam, Amsterdam, Netherlands

1845 Dynamic model of normal neurodevelopment across the lifespan: validation in 200 healthy subjects
Joshua Morse^{1,2,3}, Yasser Iturria-Medina^{1,2,3}, Jose Maria Mateos^{1,2,3}, Alan Evans^{1,2,3}
¹Montreal Neurological Institute, Montreal, QC, Canada, ²McGill University, Montreal, QC, Canada, ³Ludmer Centre, Montreal, QC, Canada

1846 Whole-brain oscillatory modes in MEG source-space.
Andrew Quinn¹, Mark Hymers², Sam Johnson², Gary Green²
¹University of Oxford, Oxford, United Kingdom, ²University of York, York, United Kingdom

1847 A multivariate approach to identify potential markers for early diagnosis of AD using proteomics
Paule Toussaint¹, Yasser Iturria-Medina², Alan Evans³
¹McGill University, Montreal Neurological Institute and Hospital, McConnell Brain Imaging Centre, Montreal, Que., ²Montreal Neurological Institute, Montreal, QC, ³McGill University, Montreal, Canada

MODELING AND ANALYSIS METHODS

Other Methods

1848 Brain Masculinity and its relation with Autism Spectrum Traits

Liza van Eijk¹, Lachlan Strike², Katie McMahon³, Paul Thompson⁴, Greig de Zubicaray⁵, Margaret Wright^{2,3}, Brendan Zietsch¹

¹School of Psychology, The University of Queensland, Brisbane, Australia, ²Queensland Brain Institute, The University of Queensland, Brisbane, Australia, ³Centre for Advanced Imaging, The University of Queensland, Brisbane, Australia, ⁴Keck School of Medicine, The University of Southern California, Los Angeles, United States, ⁵Institute of Health and Biomedical Innovation, Queensland University of Technology, Brisbane, Australia

1849 Estimating the File Drawer effect in Neuroimaging

Pantelis Samartidis¹, Peter Fox², Angie Laird³, Timothy Johnson⁴, Thomas Nichols⁵

¹MRC Biostatistics Unit, Cambridge, United Kingdom, ²University of Texas Health Science Center at San Antonio, San Antonio, TX, ³Florida International University, Miami, FL, ⁴University of Michigan, Ann Arbor, MI, ⁵University of Warwick, Coventry, United Kingdom

1850 Unstated assumptions in representational similarity analysis

Anwar Nunez-Elizalde¹, Alexander Huth¹, Michael Oliver¹, Jack L Gallant¹

¹UC Berkeley, Berkeley, CA

1851 Modeling serial correlations of fMRI time series collected by faster TRs

Jingyuan Chen¹, Gary Glover²

¹Stanford University, Stanford, CA, ²Stanford University, Palo Alto, CA

1852 The development trend of educational neuroscience: A bird's eye view of the literature over 50 years

Isaac Ip¹, Fiona Ching¹, Savio Wong¹

¹The Education University of Hong Kong, Tai Po, Hong Kong

MODELING AND ANALYSIS METHODS

PET Modeling and Analysis

1853 Altered Serotonergic Network Connectivity in Parkinson's Disease and LRRK2 Mutation Carriers

Jessie Fu¹, Ivan Klyuzhin¹, Shuying Liu², Elham Shahinfard³, Nasim Vasai³, Jess McKenzie³, Nicole Neilson³, Matthew Sacheli¹, Hans Wehr⁴, Martin McKeown¹, Jon Stoessl³, Vesna Sossi¹

¹University of British Columbia, Vancouver, British Columbia, ²Xuanwu Hospital Capital Medical University, Beijing, China, ³Pacific Parkinson's Research Centre, University of British Columbia, Vancouver, British Columbia, ⁴Werner Siemens Imaging Center and Werner Reichardt Centre for Integrative Neuroscience, Tübingen, Germany

1854 Learning metabolic connectivity in amyotrophic lateral sclerosis with [18F]FDG PET

Martijn Devrome¹, Jenny Ceccarini², Donatienne Van Weehaeghe¹, Koen Van Laere², Michel Koole²

¹KU Leuven, Leuven, Belgium, ²Department of Nuclear Medicine University Hospital Leuven, Leuven, Belgium

1855 Homological changes of metabolic connectivity during the transition to Alzheimer's disease

Hyekyoung Lee¹, Moo Chung², Hyejin Kang¹, Hongyoon Choi³, Yu Kyeong Kim⁴, Dong Soo Lee⁴

¹Seoul National University, Seoul, Korea, Republic of, ²University of Wisconsin, Madison, WI, ³Cheonan Public Health Center, Chungnam, Korea, Republic of, ⁴Seoul National University College of Medicine, Seoul, Korea, Republic of

MODELING AND ANALYSIS METHODS

Segmentation and Parcellation

1857 Fasciculus retroflexus and stria medullaris bias human habenula segmentation

Joo-won Kim¹, Thomas Naidich¹, Rafael O'Halloran¹, Gaelle Doucet¹, Won Hee Lee¹, Hannah Krinsky¹, Alejandro Paulino¹, Sophia Frangou¹, Junqian Xu¹

¹Icahn School of Medicine at Mount Sinai, New York, NY, United States

1858 Asymmetric N-point Neighbourhood Adjacency (ANNA) metrics: new approach to tractography segmentation

Pedro Luque Laguna¹, Francisco De Santiago Requejo¹, Ahmad Beyh¹, Steven Williams², Marco Catani¹, Flavio Dell'Acqua¹

¹NatBrainLab, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, United Kingdom, ²Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, United Kingdom

1859 A hierarchical probabilistic model for subject-specific parcellations from resting-state fMRI data

Samuel Harrison¹, Janine Bijsterbosch¹, Mark Woolrich², Stephen Smith¹

¹FMRIB, Oxford University, Oxford, United Kingdom, ²OHBA, Oxford University, Oxford, United Kingdom

1860 Unifying lesion masking and tissue probability maps for improved segmentation and normalization.

Christophe Phillips¹, Cyril Pernet²

¹University of Liège, Liège, Belgium, ²The university of Edinburgh, Edinburgh, United Kingdom

1861 Iterative patch based segmentation for brain MRI using sparse representation

Jinwoo Hong¹, Uicheul Yoon², Jong-Min Lee³

¹Dept. of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of, ²Dept. of Biomedical Engineering, College of Health and Medical Science, Catholic University of Daegu, Gyeongsan-si, Korea, Republic of, ³Hanyang University, Seoul, Korea, Republic of

1862 BigBrain: Automated identification of cortical layers in the primary visual cortex

Konrad Wagstyl¹, Claude Lepage², Sebastian Bludau³, Karl Zilles⁴, Paul Fletcher⁵, Katrin Amunts⁶, Alan Evans⁷

¹Montreal Neurological Institute, Montreal, Quebec, ²McGill University, Montreal, Quebec, ³Forschungszentrum Juelich GmbH, Juelich, Germany, ⁴Research Centre Juelich, Juelich, Germany, ⁵University of Cambridge, Cambridge, United Kingdom, ⁶Jülich centre, Jülich, Germany, ⁷Montreal Neurological Institute, McGill University, Montreal, Quebec

1863 Disassociation of value- and salience coding in Human Substantia Nigra

Yu Zhang¹, Kevin Larcher¹, Bratislav Misic², Alain Dagher³

¹Montreal Neurological Institute, McGill University, Montreal, QC, ²Montreal Neurological Institute, McGill University, Montreal, Canada, ³McGill University, Montreal, Quebec

- 1864 Impact of Traditional Neuroimaging Methods on the Spatial Localization of Cortical Areas**
Timothy Coalson¹, David Van Essen¹, Matthew Glasser¹
¹Washington University in St. Louis, St. Louis, MO

- 1865 Effects of different skull stripping methods on gray matter segmentation**
Aleix Solanes¹, Anton Albajes-Eizaguirre¹, Erick Canales-Rodríguez¹, Raymond Salvador¹, Edith Pomarol-Clotet¹, Joaquim Radua²
¹FIDMAG Germanes Hospitalaries, Barcelona, ²FIDMAG Germanes Hospitalaries / Karolinska Institutet / King's College London, Barcelona / Stockholm / London

- 1866 End-to-end learning of brain tissue segmentation from imperfect labeling**
Alex Fedorov¹, Jeremy Johnson², Eswar Damaraju¹, Alexei Ozerin³, Vince Calhoun¹, Sergey Plis¹
¹The Mind Research Network, ECE Dept. University of New Mexico, Albuquerque, NM, ²New College of Florida, Sarasota, FL, ³Moscow Institute of Physics and Technology, Dolgoprudnyy, Russian Federation

- 1867 Cortex surface parcellation based on short association white matter bundles**
Miguel Guevara¹, Claudio Román¹, Pablo Silva¹, Denis Rivière², Cyril Poupon³, Jean-François Mangin³, Pamela Guevara¹
¹University of Concepcion, Concepcion, Chile, ²CEA/I2BM/NeuroSpin, Gif-sur-Yvette, France, ³CEA/I2BM/NeuroSpin, Gif sur Yvette, France

- 1868 Global PDF-Based Non-Local Means Filtering of Resting fMRI Data**
Jian Li¹, Soyoung Choi¹, Richard Leahy¹
¹University of Southern California, Los Angeles, CA

- 1869 Application of Deep Learning for Human Visual Cortex Parcellation in Histological Sections**
Hannah Spitzer¹, Katrin Amunts^{1,2}, Timo Dickscheid¹
¹Institute of Neuroscience and Medicine (INM-1), Forschungszentrum Jülich, Jülich, Germany, ²C. and O. Vogt Institute for Brain Research, Heinrich-Heine University Düsseldorf, Düsseldorf, Germany

- 1870 Classification of periventricular and deep white matter hyperintensities: does definition matter?**
Ludovica Griffanti¹, Mark Jenkinson¹, Sana Suri², Enikő Zsoldos², Abda Mahmood², Nicola Filippini², Claire Sexton¹, Anya Topiwala², Charlotte Allan², Mika Kivimäki³, Archana Singh-Manoux³, Klaus Ebmeier², Clare Mackay², Giovanna Zamboni¹
¹FMRIB centre, University of Oxford, Oxford, United Kingdom, ²University of Oxford/Department of Psychiatry, Oxford, United Kingdom, ³University College London, London, United Kingdom

- 1871 A Parcellation Guideline for 5 Cortical Regions of Interest to Ageing and Dementia**
Shadia Mikhael¹, Grant Mair¹, Cyril Pernet²
¹Neuroimaging Sciences, Centre for Clinical Brain Sciences, University of Edinburgh, Edinburgh, United Kingdom, ²The university of Edinburgh, Edinburgh, United Kingdom

- 1872 Voxel-based Preprocessing in CAT**
Robert Dahnke¹, Christian Gaser¹
¹Jena Universital Hospital, Jena, Germany

- 1873 Multiple Sclerosis Lesion Detection Software Comparison on T2 FLAIR MRI**
Jian Lin¹, Kunio Nakamura¹, Katherine Koenig¹, Mingyi Li¹, Daniel Ontaneda¹, Stephen Jones¹, Mark Lowe¹
¹The Cleveland Clinic, Cleveland, OH

- 1874 Subject specific whole-brain parcellation using atlas based a-priori parcellations and fMRI data**
Patrick Dupont¹, Yu Wang¹, Rik Vandenberghe^{1,2}
¹Laboratory for cognitive neurology, KU Leuven, Leuven, Belgium, ²Department of neurology, UZ Leuven, Leuven, Belgium

- 1875 An automated multi-atlas based method for brain extraction in neonatal MR images**
Negar Noorizadeh^{1,2}, Kamran Kazemi¹, Ardalan Aarabi^{3,4}, Habib Alah Danyali¹, Abbas Babajani-feremi^{5,6,7}
¹Department of Electrical and Electronics Engineering, Shiraz University of Technology, Shiraz, Iran, ²Department of Pediatrics, University of Tennessee Health Science Center, Memphis, TN, USA, ³Faculty of Medicine, University of Picardie-Jules Verne, Amiens, France, ⁴GRAMFC-INSERM U1105, University Research Center, University Hospital, Amiens, France, ⁵Department of Pediatrics, University of Tennessee Health Science Center, Memphis, TN, USA, ⁶Department of Anatomy and Neurobiology, University of Tennessee Health Science Center, Memphis, TN, USA, ⁷Neuroscience Institute, Le Bonheur Children's Hospital, Memphis, TN, USA

- 1876 Parcellation of the human hippocampus based on gray matter volume covariance**
Ruiyang Ge¹, William Honer¹, Donna Lang², Alasdair Barr³, Colleen Northcott¹, Fidel Vila-Rodriguez¹
¹Department of Psychiatry, University of British Columbia, Vancouver, Canada, ²Department of Radiology, University of British Columbia, Vancouver, Canada, ³Anesthesiology, Pharmacology & Therapeutics, University of British Columbia, Vancouver, Canada

- 1877 Gray and white matter spinal cord correlates of clinical disability in Progressive MS Patients**
Kornelius Podranski¹, Joo-won Kim², Sirio Coccozza¹, Maria Petracca¹, Fred Lublin¹, Junqian Xu², Matilde Inglese¹
¹Icahn School of Medicine at Mount Sinai, Department of Neurology, New York City, NY, ²Icahn School of Medicine at Mount Sinai, New York City, NY

- 1878 Inter-method Reliability of Brainstem Volume Segmentation Algorithms in Preschoolers with ASD**
Paolo Bosco¹, Alessia Giuliano¹, Jonathan Delafeld-Butt², Filippo Muratori³, Sara Calderoni⁴, Alessandra Retico¹
¹National Institute for Nuclear Physics, Pisa, Italy, ²University of Strathclyde, Glasgow, United Kingdom, ³IRCCS Stella Maris and University of Pisa, Pisa, Italy, ⁴IRCCS Stella Maris, Pisa, Italy

- 1879 Connectivity-based Parcellation of the Macaque Frontal Pole**
Chuyang Ye¹, Bin He², Tianzi Jiang¹
¹Institute of Automation, Chinese Academy of Sciences, Beijing, China, ²Harbin University of Science and Technology, Harbin, China

- 1880 Corpus callosum in midsagittal segmentation using Convolutional Neural Networks**
Gilsoon Park¹, Yeong-Hun Park¹, Jong-Min Lee¹
¹Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of

- 1881 Crowdsourcing Manual Validation of Algorithmically Segmented Brain Volumes through Virtual Reality**
Dominique Duncan¹, Bradley Newman², Adam Saslow², Emily Wanserski², Tyler Ard¹, Ryan Essex¹, Arthur Toga¹
¹University of Southern California, Los Angeles, CA, ²RareFaction Interactive, Los Angeles, CA

- 1882* Unravelling the intrinsic functional boundaries of the macaque monkey cortex**
Ting Xu¹, Alexander Opitz², Arnaud Falchier², Gary Linn², Deborah Ross², Julian Ramirez³, Darrick Sturgeon³, Eric Feczko³, Elinor Sullivan³, Jennifer Bagley³, Stan Colcombe², Damien Fair³, Charles Schroeder⁴, Michael Milham¹
¹Child Mind Institute, New York, NY, ²Nathan Kline Institute for Psychiatric Research, Orangeburg, NY, ³Oregon Health and Science University, Oregon, United States, ⁴Columbia University College of Physicians and Surgeons & Nathan Kline Institute, New York; Orangeburg, NY
- 1883 The face matters: The influence of á priori skull-stripping on segmentation results**
Peter Kirsch¹, Pia Reichel¹, Martin Fungisai Gerchen¹
¹Central Institute of Mental Health, University of Heidelberg, Mannheim, Germany
- 1884 Meta-Analytic Segmentation Reveals Functional Specialization in the Anterior Cingulate Cortex (ACC)**
Julio Yanes¹, Jessica Busler¹, Meredith Reid², Jennifer Robinson²
¹Auburn University, Auburn, AL, ²Auburn University, Auburn, United States
- 1885 Parcellation and functional alignment from resting state data using correlation similarity**
Eric Wong¹
¹UC San Diego, La Jolla, CA
- 1886 BigBrain: Linear combination of distance metrics for automated cortical parcellation**
Marc Fournier¹, Claude Lepage¹, Lindsay Lewis¹, Karl Zilles², Katrin Amunts², Alan Evans¹
¹McGill University, Montreal, Canada, ²Jülich Research Centre, Jülich, Germany

MODELING AND ANALYSIS METHODS

Task-Independent and Resting-State Analysis

- 1887 Evidence for functional networks within the human white matter**
Michael Peer¹, Mor Nitzan¹, Atira Bick¹, Netta Levin¹, Shahar Arzy¹
¹Hadassah Hebrew University Medical Center, Jerusalem, Israel
- 1888 Global Signal Regression acts as a Temporal Downweighting Process in Resting-State fMRI**
Alican Nalci¹, Thomas Liu¹
¹UCSD Center for Functional MRI, La Jolla, CA
- 1889* Resting-state connectivity predicts task activation in pre-surgical populations**
Oiwi Parker Jones¹, Natalie Voets¹, Jane Adcock¹, Richard Stacey¹, Saad Jbabdi¹
¹University of Oxford, Oxford, United Kingdom
- 1890 PROFUMO - Improved inference of Probabilistic Functional Modes from resting-state fMRI data**
Samuel Harrison¹, Janine Bijsterbosch¹, Stephen Smith¹, Mark Woolrich²
¹FMRIB, Oxford University, Oxford, United Kingdom, ²OHBA, Oxford University, Oxford, United Kingdom
- 1891 Body posture shapes neuroimaging data**
Robert Thibault¹, Michael Lifshitz¹, Raquel Roth¹, Amir Raz^{1,2}
¹McGill University, Montreal, Canada, ²Lady Davis Institute for Medical Research, Montreal, Canada

- 1892 Fast transient dynamic brain networks of oscillatory phase locking**
Diego Vidaurre¹, Andrew Quinn¹, Benjamin Hunt², Matthew Brookes³, Stephen Smith⁴, Mark Woolrich⁵
¹University of Oxford, Oxford, Oxfordshire, ²Sir Peter Mansfield Imaging Centre, School of Physics, University of Nottingham, Nottingham, - -, ³Sir Peter Mansfield Imaging Centre, School of Physics, University of Nottingham, Nottingham, United Kingdom, ⁴FMRIB, Oxford University, Oxford, United Kingdom, ⁵OHBA, University of Oxford, Oxford, United Kingdom
- 1893 Revisit the resting state functional connectivity between thalamus and visual cortices**
Shu-Fang Qian¹, Pei-Wen Zhang¹, Dongqiang Liu²
¹Research Center of Brain and Cognitive Neuroscience, Liaoning Normal University, Dalian, China, ²Liaoning Normal University, Dalian, China
- 1894 Window-less estimation of dynamic functional connectivity using sparse dictionary decomposition**
Maziar Yaesoubi¹, Vince Calhoun²
¹Mind Research Institute, Albuquerque, NM, ²The Mind Research Network, Albuquerque, NM
- 1895 Laterality of Spinal Cord Segmental Functional Connectivity: A Resting State Spinal Cord fMRI Study**
Kenneth Weber¹, Amy Sentis¹, Yufen Chen², Xue Wang², Todd Parrish², Sean Mackey¹
¹Stanford University, Palo Alto, CA, ²Northwestern University, Chicago, IL
- 1896 Resting state connectivity correlates of impulsivity and weight with striatum and midbrain nuclei**
Rachel Sharkey¹, Josiane Bourque², Kevin Larcher¹, Yu Zhang¹, Ayca Altinkaya¹, Abbas Sadikot¹, Patricia Conrod², Alan Evans³, Hugh Garavan⁴, Marco Leyton¹, Jean Seguin², Robert Pihl¹, Alain Dagher¹
¹McGill University, Montreal, Quebec, ²University of Montreal, Montreal, Quebec, ³McGill University, Montreal, Canada, ⁴University of Vermont, Burlington, VT
- 1897 Decoding Conversational Compatibility from Inter-Subject Correlation of Resting-State Networks**
Shige-yuki Ikeda¹, Hyeonjeong Jeong¹, Yukako Sasaki¹, Kohei Sakaki¹, Shohei Yamazaki¹, Takayuki Nozawa¹, Ryuta Kawashima¹
¹Institute of Development, Aging and Cancer, Sendai, Japan
- 1898 Default Mode Network (DMN) Exists at Frequencies Only up to 0.16 Hz**
Muhammad Kaleem¹, Dietmar Cordes²
¹University of Management and Technology, Lahore, Pakistan, ²Cleveland Clinic Lou Ruvo Center, Las Vegas, NV
- 1899 Amplitude of Low Frequency Fluctuations and Brain Network Properties Coevolve during Resting-State**
Zening Fu^{1,2}, Xin Di³, Shing Chow Chan², Bharat Biswal³, Zhiguo Zhang¹
¹Shenzhen University, Shenzhen, China, ²The University of Hong Kong, Hong Kong, Hong Kong, ³New Jersey Institute of Technology, Newark, United States

- 1900 Reduced intrinsic connectivity in the dorsal attention and visual networks in HIV-infected children**
Werner Stoltz¹, Lindie Du Plessis¹, Mark Cotton², Barbara Laughton², Andre van der Kouwe³, Francesca Little⁴, Ernesta Meintjes¹
¹Division of Biomedical Engineering, Faculty of Health Sciences, University of Cape Town, Cape Town, Western Province, ²Children's Infectious Diseases Clinical Research Unit, Stellenbosch University, Cape Town, Western Province, ³Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA, ⁴Department of Statistical Sciences, University of Cape Town, Cape Town, Western Province
- 1901 Altered Ventral-Striatal Resting-State Functional Connectivity is Associated with Treatment Outcome**
Laura Dennis¹, Milky Kohno¹, Holly McCready², William Hoffman³
¹Oregon Health & Science University, Portland, OR, ²Oregon Health & Science university, Portland, OR, ³Veterans Affairs Portland Health Care System, Portland, OR
- 1902 Resting state fMRI changes in a single season of youth football distinguish impact exposure levels**
Gowtham Krishnan Murugesan¹, Afarin Famili¹, Elizabeth Davenport¹, Ben Wagner¹, Jillian Urban², Mireille Kelley², Derek Jones², Christopher Whitlow², Joel Stitzel², Joseph Maldjian¹, Albert Montillo¹
¹UT Southwestern Medical Center, Dallas, United States, ²Wake Forest School of Medicine, Winston-Salem, NC
- 1903 Mild Cognitive Impairment is the Functional Criticality during Alzheimer's Disease Progression**
Lili Jiang¹, Guanqun Chen², Danyang Sui¹, Luonan Chen³, Xi-Nian Zuo¹, Ying Han²
¹Institute of Psychology CAS, Beijing, China, ²Xuanwu Hospital, Capital Medical University, Beijing, China, ³Shanghai Institute for Biological Sciences CAS, Shanghai, China
- 1904 BOLD signal correlates of electrophysiological changes in vigilance during resting state**
Juan Wang¹, Kwun Kei Ng¹, Chenhao Wang¹, Joanna Su Xian Chong¹, Siwei Liu¹, Yng Miin Loke¹, Lingjie Zhu¹, Boon Linn Choo¹, Beatrice Rui Yi Loo¹, Joseph Kai Wei Lim¹, Juan Zhou¹
¹Duke-National University of Singapore Medical School, Singapore, Singapore
- 1905 Developmental of Functional Brain Networks in the Early Children and Adolescents**
Lin Cai^{1,2}, Haijing Niu^{1,2}
¹State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China, ²Center for Collaboration and Innovation in Brain and Learning Sciences, Beijing Normal University, Beijing, China
- 1906 Resting-state EEG as a tool to identify source-space functional networks**
Cameron McKay¹, Andrei Medvedev¹
¹Georgetown University Medical Center, Washington DC, United States
- 1907 Resting-state functional connectivity predicts brain atrophy after stroke**
Ali Jannati¹, Aaron Boes², Andreas Horn¹, Alvaro Pascual-Leone¹, Amy Kuceyeski³, Michael Fox¹
¹BIDMC, Harvard Medical School, Boston, MA, ²University of Iowa Hospitals and Clinics, Iowa City, IA, ³Weill Cornell Medical College, New York, NY
- 1908 Are Resting-State Networks Invariant to Posture?**
Hadi Hosseini¹, Grace Tam², Allan Reiss²
¹Stanford University, Stanford, United States, ²Stanford University, Stanford, CA
- 1909 Intrinsic brain connectivity after partial sleep deprivation in young and older adults**
Gustav Nilsson¹, Sandra Tamm¹, Johanna Schwarz², Rita Almeida¹, Håkan Fischer², Göran Kecklund², Mats Lekander², Peter Fransson¹, Torbjörn Åkerstedt¹
¹Karolinska Institutet, Stockholm, Sverige, ²Stockholm University, Stockholm, Sverige
- 1910 Low Frequency fluctuations are associated with positive but not negative functional connectivity**
Parul Chachra¹, Radhika Madhavan¹, Suresh Joel¹
¹General Electric Global Research, Bangalore, India
- 1911 Resting-state amplitude: within- and between-subject variations**
Janine Bijsterbosch¹, Samuel Harrison¹, Eugene Duff¹, Fidel Alfaro-Almagro¹, Mark Woolrich², Stephen Smith¹
¹FMRIB, Oxford University, Oxford, United Kingdom, ²OHBA, Oxford University, Oxford, United Kingdom
- 1912 The left hippocampal connectivity gradient predicts emotion recognition behaviour in humans.**
Izabela Przezdziak^{1,2}, Koen Haak¹, Andre Marquand^{1,2,3}, Guillén Fernández^{1,2}, Christian Beckmann^{1,2,4}
¹Donders Institute for Brain, Cognition and Behaviour, Radboud University, Nijmegen, Netherlands, ²Radboud University Medical Centre, Department of Cognitive Neuroscience, Nijmegen, Netherlands, ³Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, United Kingdom, ⁴Oxford Centre for Functional Magnetic Resonance Imaging of the Brain (FMRIB), University of Oxford, Oxford, United Kingdom
- 1913 Disturbed default-mode network dynamics in cognitively impaired multiple sclerosis patients**
Anand Eijlers¹, Alle Meije Wink¹, Kim Meijer¹, Menno Schoonheim¹, Jeroen Geurts¹
¹VU University Medical Center, Amsterdam, Netherlands
- 1914 Parkinsonism in dementia with Lewy bodies is related to functional connectivity in motor networks**
Julia Schumacher¹, Luis Peraza¹, Michael Firbank¹, Alan Thomas¹, Marcus Kaiser², Peter Gallagher¹, John O'Brien³, Andrew Blamire⁴, John-Paul Taylor¹
¹Institute of Neuroscience, Newcastle University, Newcastle upon Tyne, United Kingdom, ²Interdisciplinary Computing and Complex BioSystems (ICOS) research group, Newcastle University, Newcastle upon Tyne, United Kingdom, ³Department of Psychiatry, University of Cambridge School of Medicine, Cambridge, United Kingdom, ⁴Institute of Cellular Medicine & Newcastle Magnetic Resonance Centre, Newcastle upon Tyne, United Kingdom
- 1915 The effects of high vs low fat and fat information in Functional Dyspepsia patients: a rs-fMRI study**
Inseon Lee¹, Hubert Preissl², Sabine Frank-Podlech³, Ralf Veit⁴, Paul Enck⁵
¹Tübingen University, Tübingen, Germany, ²Helmholtz Center Munich, Tübingen, Germany, ³University of Tübingen, Tübingen, Germany, ⁴Medical Psychology, Tübingen, Germany, ⁵Psychosomatic Medicine and Psychotherapy Department, University of Tübingen, Tübingen, Germany, Tübingen, Germany
- 1916 Task-dependent Cognitive States Modulate Resting-state Global Dynamics.**
Renan de Paula¹, Julia Rodrigues¹, Laura Amaral¹, Claudinei Biazoli Jr¹
¹Federal University of ABC, Sao Bernardo do Campo, Brazil
- 1917 A comparison of true and pseudo resting-state functional connectivity data in children**
Ted Turesky¹, Diana Alkire¹, Diana Andriola², Megan Luetje¹, Guinevere Eden³
¹Georgetown University, Washington, DC, ²Gallaudet University, Washington, DC, ³Georgetown University, Washington, DC

1918 Functional and structural neuroimaging predictors of normative variance in cognitionAndrew James¹, Bradford Martins¹, Xiawei Ou¹, Clint Kilts¹¹University of Arkansas for Medical Sciences, Little Rock, AR**1919 On Dynamic Functional Connectivity and Global Signal Regression**Alican Nalci¹, Maryam Falahpour¹, Thomas Liu¹¹UCSD Center for Functional MRI, La Jolla, CA**1920 Resting State fMRI Networks in Children with Tuberous Sclerosis Complex**Banu Ahtam¹, Mathieu Dehaes², Danielle Sliva³, Mustafa Sahin⁴, P. Ellen Grant^{1,5}¹Department of Medicine, Boston Children's Hospital, Harvard Medical School, Boston, MA,²Department of Radiology and Institute of Biomedical Engineering, University of Montreal, Montreal, Canada, ³Department of Neuroscience, Brown University, Providence, RI, ⁴Department of Neurology, Boston Children's Hospital, Harvard Medical School, Boston, MA, ⁵Department of Radiology, Boston Children's Hospital, Harvard Medical School, Boston, MA**1921 Predicting cross-subject variability of spectral dynamics in MEG task data using resting state data**Robert Becker¹, Diego Vidaurre¹, Mark Woolrich¹¹OHBA, University of Oxford, Oxford, United Kingdom**1922 Test-retest Reliability of Resting-state fMRI for Language Mapping in Brain Tumor Patients**Yanmei Tie¹, Olutayo Olubiyi¹, Laura Rigolo¹, Prashin Unadkat¹, Alexandra Golby¹¹Brigham and Women's Hospital, Harvard Medical School, Boston, MA**1923 Spontaneous low frequency EEG fluctuations are abnormal in chronic stroke**Rick Saha¹, Shella Keilholz², Anzar Abbas³, Michael Borich³¹Georgia Institute of Technology, Atlanta, GA, ²Emory/Georgia Tech, Atlanta, GA, ³Emory University, Atlanta, GA**1924 Functional connectivity deficits in ASD following personalized intrinsic network topography**Erin Dickie¹, Joseph Viviano², Saba Shahab³, Dawn Smith⁴, Navona Calarco⁴, Stephanie Ameis⁴, Aristotle Voineskos²¹Center for Addiction and Mental Health, Toronto, Ontario, ²UToronto, Toronto, Canada, ³University of Toronto, Toronto, Canada, ⁴Centre for Addiction and Mental Health, Toronto, Canada**1925 Cerebral lobes have different numbers of local resting-state networks**Tawfik Moher Alsady¹, Patrick Stahl¹, Florian Beissner¹¹Hannover Medical School, Hannover, Germany**1926 Alterations in salience network functional connectivity in depression and schizophrenia patients**Aditya Singh¹, Tracy Erwin-Grabner¹, Katja Brodmann¹, Lisa Genzel², Roberto Goya-Maldonado¹¹Systems Neuroscience and Imaging in Psychiatry, University Medical Centre- Göttingen, Göttingen, Germany, ²Centre for Cognitive and Neural Systems, University of Edinburgh, Edinburgh, United Kingdom**1928 Relationships between MEG and BOLD resting-state connectivity: Insights from computational modeling**Markus Helmer¹, Joshua Burt¹, Murat Demirtas¹, Charles Schleifer¹, Brendan Adkinson¹, Lisa Ji¹, Alan Anticevic¹, John Murray¹¹Yale University, New Haven, CT**1929 Trauma rapidly modifies functional connectivity**Geraldine Gvozdanovic¹, Erich Seifritz², Philipp Staempfli³, Antonietta Canna⁴, Björn Rasch⁵, Fabrizio Esposito⁶¹University of Zurich, Zurich, Switzerland, ²Psychiatric Hospital of the University of Zurich, Zurich, Switzerland, ³Psychiatric Hospital of University of Zurich, Zurich, Switzerland, ⁴University of Salerno, Salerno, Italy, ⁵University of Fribourg, Fribourg, Switzerland, ⁶Department of Medicine, Surgery and Dentistry, Scuola Medica Salernitana, University of Salerno, Salerno, Italy**1930 Functional Connectivity of the Executive Control Network in Bilinguals**Kaitlyn Downey^{1,2}, Nasheed Jamal¹, Daniel Koo^{1,3}, Guinevere Eden¹¹Center for the Study of Learning, Georgetown University, Washington, DC, ²Interdisciplinary Program in Neuroscience, Georgetown University, Washington, DC, ³Gallaudet University, Washington, DC**1931 Bias in least square estimation of hemodynamic response function due to uncertainty in neural input**Muhammad Osama¹, Wenju Pan², Shella Keilholz³, Waqas Majeed⁴¹Lahore University of Management Sciences, Lahore, Pakistan, ²Emory University, Atlanta, GA, ³Emory/Georgia Tech, Atlanta, GA, ⁴Ohio State University, Columbus, OH**1932 Resting-state fMRI dynamic connectivity analysis in prodromal Huntington's disease**Flor Espinoza¹, Victor Vergara², Robyn Miller³, Arvind Caprihan³, Jingyu Liu⁴, Jessica Turner⁵, Maria Misiura⁶, Jennifer Ciarochi⁶, Hans Johnson⁷, Jeffrey Long⁸, H. Jeremy Bockholt⁸, Jane Paulsen⁷, Vince Calhoun⁹¹The Mind Research Network, Albuquerque, NM, ²The Mind Research Network, Albuquerque, United States, ³The Mind Research Network, Albuquerque, NM, ⁴The Mind Research Network & LBERI, Albuquerque, United States, ⁵Department of Psychology, Georgia State University, Atlanta, GA, ⁶Georgia State University, Atlanta, GA, ⁷University of Iowa, Iowa City, IA, ⁸University of Iowa, Iowa City, IA, ⁹The Mind Research Network & The University of New Mexico, Albuquerque, NM**1933 Restingstate Changes related to Sexual Side-Effects: Bupropione & Paroxetine vs Placebo**Coraline Metzger¹, Birgit Abler², Georg Groen², Martin Walter³, Heiko Graf²¹Otto-von-Guericke University and German Center for Neurodegenerative Diseases (DZNE) Site Magdeburg, Magdeburg, Germany, ²Ulm University, Ulm, Germany, ³University of Tübingen, Tübingen, Germany**1934 Problems with DMN identification in patients with disorders of consciousness**Elena Kremneva¹, Elina Zmeykina¹, Liudmila Legostaeva¹, Dmitry Sergeev¹, Alexander Chervyakov¹, Alexandra Poydasheva¹, Elizaveta Mochalova¹, Julia Ryabinkina¹, Natalia Suponeva¹, Michael Piradov¹¹Research center of neurology, Moscow, Russian Federation**1935 Aberrant functional network connectivity in psychopathy from a large forensic sample (n=1180)**Flor Espinoza¹, Daisy Reyes², Victor Vergara³, Srinivas Rachakonda⁴, Eswar Damaraju⁵, Barnaly Rashid⁶, Robyn Miller⁷, Michael Koenigs⁸, David Kosson⁹, Jean Decety¹⁰, Nathaniel Anderson⁷, Keith Harenski⁷, Carla Harenski⁷, Kent Kiehl⁷, Vince Calhoun¹¹¹The Mind Research Network, Albuquerque, NM, ²Department of Mathematics and Statistics, University of New Mexico, Albuquerque, NM, ³The Mind Research Network, Albuquerque, United States, ⁴MRN, Albuquerque, NM, ⁵Mind Research Network, Albuquerque, NM, ⁶Mind Research Network, Albuquerque, NM, ⁷The Mind Research Network, Albuquerque, NM, ⁸Department of Psychiatry, University of Wisconsin, Madison, WI, ⁹Department of Psychology, Rosalind Franklin University, Chicago, IL, ¹⁰Departments of Psychology and Psychiatry and Behavioral Neuroscience, University of Chicago, Chicago, IL, ¹¹The Mind Research Network & The University of New Mexico, Albuquerque, NM

- 1936 Electrophysiological connectivity in the resting state**
Kaitlyn Casimo¹, Andrew Ko¹, Jeffrey Ojemann¹, Kurt Weaver¹
¹University of Washington, Seattle, WA
- 1937 Multiple intracranial electrophysiological correlates of intrinsic BOLD networks within individuals**
Aaron Kucyi¹, Stephan Bickel¹, Jessica Schrouff¹, Brett Foster², Josef Parvizi³
¹Stanford University, Palo Alto, CA, ²Baylor College of Medicine, Houston, TX, ³Stanford University, Stanford, CA
- 1938 Human inhibition cognitive component through rest and task performance: Dual-Regression**
Yin-Shan Wang¹, Fu Di¹, Zhenghan Li¹, Yanyan Qi¹, Xun Liu¹, Xi-Nian Zuo¹
¹Institute Psychology, Chinese Academy of Sciences, Beijing, China
- 1939 Frequency Analysis of the DMN Shows Only Low-Frequency Contributions After Deconvolution**
Muhammad Kaleem¹, Dietmar Cordes²
¹University of Management and Technology, Lahore, Pakistan, ²Cleveland Clinic Lou Ruvo Center, Las Vegas, NV
- 1940 Do resting-state networks change after short cognitive training? An fMRI study.**
Elisenda Bueichekú¹, Anna Miró-Padilla¹, Cesar Avila²
¹Universitat Jaume I, Castellón, Spain, ²Universitat Jaume I, Castello de la Plana, Spain
- 1941 Real-Time Seed-Based Resting-State fMRI: Network Dynamics using Sliding-Window Detrending**
Kishore Vakamudi¹, Kunxiu Gao², Cameron Trapp¹, Greg Scantlen³, Stefan Posse¹
¹University of New Mexico, Albuquerque, NM, ²NeurInsight, Albuquerque, United States, ³CreativeC LLC, Albuquerque, United States
- 1942 Connectivity of the human habenula using 7T resting state and meta-analytic coactivation modeling**
Katherine Bottenhorn¹, Jennifer Robinson², Jessica Flannery¹, Emily Boevig¹, Taylor Salo¹, Michael Riedel¹, Simon Eickhoff³, Julio Yanes⁴, Matthew Sutherland¹, Angie Laird¹
¹Florida International University, Miami, FL, ²Auburn University, Auburn, United States, ³Institute of Neuroscience and Medicine, INM-1, Research Centre Jülich, Jülich, Germany, ⁴Auburn University, Auburn, AL
- 1943 Mind the stats! On personality neuroscience and functional networks**
Jaroslav Hlinka^{1,2}, Nikola Jajcay^{1,2}, David Tomeček², Jaroslav Tintěra³, Renata Androvičová², Jiří Horáček², Filip Děchtěrenko⁴, Jiří Lukavský⁴
¹Institute of Computer Science, Czech Academy of Sciences, Prague, Czech Republic, ²National Institute of Mental Health, Klecany, Czech Republic, ³IKEM, Prague, Czech Republic, ⁴Institute of Psychology, Czech Academy of Sciences, Prague, Czech Republic
- 1944 Novel data-driven method for language dominance derived from resting-state functional connectivity**
Xiaozhen You¹, Madison Berl¹, Charles Lynch², Leigh Sepeta¹, Chandan Vaidya², William Gaillard¹
¹Center for Neuroscience, Children's National Medical Center, Washington, DC, ²Department of Psychology, Georgetown University, Washington, DC

- 1945 Multiscale Embeddings Map Brain State Dynamics**
Jacob Billings¹, Anzar Abbas¹, Amrit Kashyap², Sadia Shakil³, Wenju Pan⁴, Alessio Medda⁵, Gordon Berman¹, Shella Keilholz⁴
¹Emory University, Atlanta, GA, ²Georgia Tech, Atlanta, United States, ³Institute of Space Technology, Islamabad, Pakistan, ⁴Emory/Georgia Tech, Atlanta, GA, ⁵Georgia Tech Research Institute, Atlanta, GA
- 1946 Changes of local functional homogeneity in rest after an inhibition task predict conflict processing**
Hao-Ming Dong^{1,2}, Di Fu^{1,2}, Zhenghan Li^{1,2}, Yanyan Qi^{1,2}, Xun Liu¹, Xi-Nian Zuo¹
¹Key Laboratory of Behavioral Science, Institute of Psychology, Chinese Academy of Sciences, Beijing, China, ²University of Chinese Academy of Sciences, Beijing, China
- 1947 Resting-state spinal cord-brain networks revealed by simultaneous fMRI**
Shahabeddin Vahdat¹, Chadi Sayour¹, Ovidiu Lungu¹, Jürgen Finsterbusch², Veronique Marchand-Pauvert³, Julien Cohen-Adad⁴, Habib Benali⁵, Julien Doyon⁶
¹University of Montreal, Montreal, Canada, ²Department of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ³INSERM, Paris, France, ⁴École Polytechnique de Montréal, Montreal, Canada, ⁵Sorbonne Universités, UPMC Univ Paris 06, CNRS, INSERM, Laboratoire d'Imagerie Biomédicale, Paris, France, ⁶University of Montreal, Montreal, Quebec
- 1948 Network Topology and Fluid Intelligence in Children with Autism Spectrum Disorders (ASD)**
Emmanuel Pua^{1,2}, Charles Malpas^{2,3}, Stephen Bowden¹, Marc Seal^{2,1}
¹University of Melbourne, Victoria, Australia, ²Murdoch Childrens Research Institute, Victoria, Australia, ³Royal Melbourne Hospital, Victoria, Australia

MODELING AND ANALYSIS METHODS

Univariate Modeling

- 1949 Method to obtain residuals with Gaussian spatial auto-correlations function in fMRI analysis models**
Kaundinya Gopinath¹, Simon Lacey¹, Randall Stilla¹, Venkatagiri Krishnamurthy¹, K Sathian¹
¹Emory University, Atlanta, GA
- 1950 Maximized Likelihood Ratio Tests for Functional Localization in fMRI**
Jasper Degryse¹, Ruth Seurinck¹, Beatrijs Moerkerke¹
¹Ghent University, Gent, Belgium
- 1951 Optimal experimental fMRI designs using NeuroDesign.**
Joke Durnez¹, Ross Blair², Russell Poldrack³
¹Stanford University, Stanford, CA, ²Department of Psychology, Stanford University, Stanford, CA, USA, Stanford, CA, ³Stanford University, Stanford, United States

MOTOR BEHAVIOR

Brain Machine Interface

- 1952 Development of a Neurofeedback fMRI System Using Body Representation Visualized by a Small Humanoid**
Akihiro Yoshida^{1,2}, Epifanio Bagarinao³, Mika Ueno², Kazunori Terabe⁴, Shohei Kato⁴, Haruo Isoda^{3,1}, Toshiharu Nakai^{2,1}
¹Department of Radiological Sciences, Nagoya University Graduate School of Medicine, Nagoya, Japan, ²NeuroImaging & Informatics, NCGG, Ohbu, Japan, ³Brain & Mind Research Center, Nagoya University, Nagoya, Japan, ⁴Graduate School of Engineering, Nagoya Institute of Technology, Nagoya, Japan
- 1953 Optimizing electrode placement and frequency bands in EEG-based motor imagery BCIs.**
Tomonori Ishihara¹, Satoru Hiwa¹, Tomoyuki Hiroyasu¹
¹Doshisha University, Kyotanabe-shi, Kyoto, Japan
- 1954 Supplementary motor area, but not primary motor cortex - upper limb gradual fMRI neurofeedback**
David Mehler¹, Angharad Williams¹, Florian Krause², Michael Luhrs², Richard Wise¹, Duncan Turner³, David Linden¹, Joseph Whittaker¹
¹Cardiff University Brain Research Imaging Centre (CUBRIC), Cardiff, United Kingdom, ²Maastricht University, Department of Cognitive Neuroscience, Maastricht, Netherlands, ³University of East London, School of Health, Sport and Bioscience, London, United Kingdom
- 1955 Combined Action Observation and Motor Imagery Neurofeedback for modulation of brain activity**
Christopher Friesen¹, Timothy Bardouille², Heather Neyedli¹, Shaun Boe³
¹Dalhousie University, Halifax, Canada, ²IWK Health Centre, Halifax, Nova Scotia, ³Dalhousie University, Halifax, Nova Scotia
- 1956 Brain-based communication of yes/no answers using selective somatosensory attention and 7T fMRI**
Bettina Sorger¹, Cynthia van de Wauw¹, Lars Riecke¹, Rainer Goebel¹, Amanda Kaas¹
¹Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, Netherlands
- 1957 Patient validation of a motor imagery-based neurofeedback paradigm for stroke recovery**
Derek Rodgers¹, Shaun Boe¹, Timothy Bardouille²
¹Dalhousie University, Halifax, Nova Scotia, ²IWK Health Centre, Halifax, Nova Scotia
- 1959 A Network-Based BCI to Enhance the Representational Similarity Between Execution and Imagination**
Neda Kordjazi¹, Heidi Sveistrup², Amineh Koravand²
¹University of Western Ontario, London, Canada, ²University of Ottawa, Ottawa, Canada
- 1960 A whole-word encoding paradigm for fMRI-based communication: a divide-and-conquer approach**
Sophia Snipes¹, Denizhan Kurban¹, Simone Accascina², Benedikt A. Poser¹, Bettina Sorger¹
¹Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, Netherlands, ²Department of Information Engineering and Computer Science, University of Trento, Trento, Italy

- 1961 Short-term Arousal Fluctuations in Patients with Disorder of Consciousness**
Alexander Heilinger¹, Rossella Spataro², Brendan Allison³, Rupert Ortner¹, Christoph Guger¹, Fan Cao¹
¹g.tec medical engineering GmbH, Schiedlberg, Austria, ²University of Palermo, Palermo, Italy, ³University of California, San Diego, United States

MOTOR BEHAVIOR

Mirror System

- 1962 Exploring the potential of oxytocin for enhancing interpersonal motor resonance upon direct eye gaze**
Kaat Alaerts¹, Stephanie Brams¹, Jellina Prinsen¹
¹University of Leuven - KU Leuven, Leuven, Belgium
- 1963 Encoding the movement: the brain correlates of language cues. A pilot MRI study**
Marie Bendová¹, Yuliya Zaytseva¹, Monika Kolarova¹, Marek Mojzisek², Jan Rydlo¹, Rudolf Gaspar¹, Filip Spaniel¹
¹NIMH Klecany, Czech Republic, Klecany, Czech Republic, ²Second Faculty of Medicine, Charles University, Prague, Czech Republic

MOTOR BEHAVIOR

Motor Behavior Other

- 1964 Decoding self-other action attribution in the sensorimotor and the parietal cortices**
Ryu Ohata^{1,2}, Tomohisa Asai³, Hiroshi Kadota⁴, Hiroaki Shigemasu⁴, Kenji Ogawa^{5,2}, Hiroshi Imamizu^{1,2}
¹The University of Tokyo, Tokyo, Japan, ²ATR Cognitive Mechanisms Laboratories, Kyoto, Japan, ³NTT Communication Science Laboratories, Kanagawa, Japan, ⁴Kochi University of Technology, Kochi, Japan, ⁵Hokkaido University, Hokkaido, Japan
- 1965 Frontal-temporal-cerebellar beta phase synchronization for auditory-motor rhythm synchronization**
Masahiro Kawasaki¹, Kouki Edagawa¹
¹University of Tsukuba, Tsukuba, Japan
- 1966 GABA-related functional connectivity of the lateralized sensorimotor networks**
David Niddam¹, Shang-Yueh Tsai², Lin-Chao Liu¹, Yi-Ru Lin³
¹National Yang-Ming University, Taipei, Taiwan, ²National Chengchi University, Taipei, Taiwan, ³National Taiwan University of Science and Technology, Taipei, Taiwan
- 1967 Functional Plasticity in Somatosensory Cortex Supports Motor Learning by Observing**
Heather McGregor¹, Joshua Cashaback¹, Paul Gribble¹
¹The University of Western Ontario, London, Ontario
- 1968 The Neural Correlates of Motor Functioning in Preschool Aged Children**
Melody Grohs¹, Catherine Lebel², Deborah Dewey²
¹University of Calgary, Calgary, Alberta, ²University of Calgary, Calgary, Canada

MOTOR BEHAVIOR

Motor Planning and Execution

- 1969 Motor control mechanism of goal-directed movements**
Hong Gi Yeom¹, June Sic Kim², Chun Kee Chung^{1,2,3}
¹Interdisciplinary Program in Neuroscience, Seoul National University, Seoul, Korea, Republic of, ²Department of Brain and Cognitive Sciences, Seoul National University College of Natural Sciences, Seoul, Korea, Republic of, ³Department of Neurosurgery, Seoul National University Hospital, Seoul, Korea, Republic of
- 1970 Cognitive and Neural Mechanisms Underlying the Generation of Motor Hierarchies**
Mauricio Martins^{1,2}, Roberta Bianco², Daniela Sammler², Arno Villringer^{2,1}
¹Humboldt Universität zu Berlin, Berlin School of Mind and Brain, Berlin, Germany, ²Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
- 1971 Neural correlates of response inhibition as reflected by go/nogo and stop-signal tasks: an MEG study**
Ainara Jauregi¹, Klaus Kessler², Stefanie Hassel²
¹Aston University, Birmingham, West Midlands, ²Aston University, Birmingham, United Kingdom
- 1972 Mu and beta oscillations related to the development of anticipatory postural adjustment: a MEG study**
Fanny Barlaam¹, Anaëlle Bain¹, Sebastien Daligault², Franck Di Rienzo³, Judith Vergne¹, Alice Catherine Roy⁴, Claude Delpuech², Karim Jerbi⁵, Nathalie George⁶, Christina Schmitz¹
¹Lyon Neuroscience Research Center - Team DYCOG, BRON, France, ²CERMEP - MEG department, BRON, France, ³Centre de Recherche et d'Innovation sur le Sport, Lyon, France, ⁴Laboratoire Dynamique du Langage, CNRS UNR 5596, Lyon, France, ⁵University of Montreal, Montréal, Quebec, ⁶Social and Affective Neuroscience Laboratory and Centre MEG-EEG, Paris, France
- 1974 Changes in cortical dynamics track the effect of anxiety on motor variability and motor learning.**
Maria del Carmen Herrojo Ruiz^{1,2}, Sebastian Sporn¹
¹Goldsmiths University of London, London, United Kingdom, ²Charite University of Medicine, Berlin, Germany
- 1975 Neural Correlates of Hand Gesture Imitation in Children with Autism Spectrum Disorder**
Rosemary Nicholas¹, Elizabeth Sharer², Mary Beth Nebel¹, Nick Wymbs³, Deana Crocetti⁴, Stewart Mostofsky⁵
¹Kennedy Krieger Institute, Baltimore, MD, ²University of Minnesota, Twin Cities, MN, ³Johns Hopkins University, Baltimore, United States, ⁴Kennedy Krieger Institute, Baltimore, United States, ⁵Kennedy Krieger Institute & Johns Hopkins University, Baltimore, MD
- 1976 Sensorimotor and cortical correlates of balance deficit in traumatic brain injury - a pilot study**
Didier Allexandre¹, Armand Hoxha¹, David Cunningham¹, Soha Saleh¹, Easter Selvan¹, Guang Yue¹
¹Kessler Foundation, West Orange, NJ

MOTOR BEHAVIOR

Visuo-Motor Functions

- 1977 Neural networks underlying manual training in the absence of voluntary movement**
Ori Ossmy¹, Roy Mukamel¹
¹Sagol School of Neuroscience and School of Psychological Sciences, Tel-Aviv University, Tel-Aviv, Israel
- 1978 Modulation of intra- and extra-motor network connectivity: Effects of hand dominance and motor set**
Alexandra Morris¹, Mathura Ravishankar¹, Karthik Ramaseshan¹, David Rosenberg¹, Vaibhav Diwadkar¹
¹Wayne State University School of Medicine, Detroit, MI
- 1979 Sketchy and naturalistic portrait drawing differ in their fMRI representation**
Ulrike Horn¹, Katharina Schaer¹, Martin Lotze¹
¹University Medicine, Functional Imaging Unit, Greifswald, Germany
- 1980 Identification of “hot” brain subnetworks during motor learning**
Yi Zhao¹, Xi Luo¹, Eli Upfal¹, Patrick Bédard¹, Jerome Sanes¹
¹Brown University, Providence, RI
- 1981 Modulation of brain activity by visuoproprioceptive congruence during left- and right-hand grasping**
Jakub Limanowski¹, Felix Blankenburg²
¹Freie Universität Berlin, Berlin, Germany, ²Neurocomputation and Neuroimaging Unit, Freie Universität Berlin, Berlin, Germany
- 1982 Trans-saccadic prediction error signaling and saccadic adaption related activity in humans**
Jakob Heinzle¹, Eduardo Aponte¹, Klaas Enno Stephan^{1,2,3}
¹Translational Neuromodeling Unit, IBT, University of Zurich and ETH Zurich, Zürich, Switzerland, ²Laboratory for Social and Neural Systems Research (SNS), University of Zurich, Zürich, Switzerland, ³Wellcome Trust Center for Neuroimaging, UCL, London, United Kingdom

NEUROANATOMY

Anatomy and Functional Systems

- 1983* Receptor expression in primary sensory cortices of man, non-human primates, rodents and marsupials**
Nicola Palomero-Gallagher¹, Karl Zilles¹
¹Research Centre Juelich, Juelich, Germany
- 1984 Decomposing the interdependence of brain anatomy, connectivity, and perfusion**
R. Matthew Hutchison¹, Ping Chiao¹, Brian Avants¹
¹Biogen, Cambridge, MA

1985 Exploring the speech arrest/planning network by resting state-fMRI and direct electrical stimulation

Domenico Zacà¹, Silvio Sarubbo², Monica Dallabona², Enzo Colarusso², Giuseppe Pulcrano², Umberto Rozzanigo³, Mauro Recla³, Franco Chioffi², Jorge Jovicich¹

¹CIMeC Center for Mind/Brain Sciences, Trento University, Trento, Italy, ²Structural and Functional Connectivity Lab, Div. of Neurosurgery, S. Chiara Hospital APSS, Trento, Italy, ³Department of Radiology, Neuroradiology Unit, S. Chiara Hospital, APSS, Trento, Italy

1986 Effective and structural brain networks underlying statistical learning

Lena Oestreich¹, Roshini Randeniya¹, Marta Garrido¹

¹The University of Queensland, Brisbane, Australia

1987 Functional Connectivity of Cortical Resting-State Networks to the Thalamus

Vinod Kumar¹, Christian Beckmann², Klaus Scheffler¹, Wolfgang Grodd¹

¹Max Planck Institute for Biological Cybernetics, Tuebingen, Germany, ²Donders Institute for Brain, Cognition and Behaviour, Radboud University, Nijmegen, Netherlands

1988 Neural Structural and Functional Correlates of Perceived Stress in Typical Developing Brain

Jingsong Wu¹, Xiujuan Geng^{2,3,4}, Nichol Wong², Jing Tao¹, Lidian Chen⁵, Tatia Lee^{2,3,4}

¹Rehabilitation Medicine College, Fujian university of traditional chinese medicine, Fuzhou, China,

²Laboratory of Neuropsychology, The University of Hong Kong, Hong Kong, China, ³Laboratory of Social Cognitive Affective Neuroscience, The University of Hong Kong, Hong Kong, China, ⁴State Key Laboratory of Brain and Cognitive Sciences, The University of Hong Kong, Hong Kong, China, ⁵Fujian University of Traditional Chinese Medicine, Fuzhou, China

1989 Quasiperiodic patterns in the brain contribute to default mode functional connectivity

Anzar Abbas¹, Derek Smith², Eric Schumacher², Shella Keilholz³

¹Emory University, Atlanta, GA, ²Georgia Institute of Technology, Atlanta, GA, ³Emory/Georgia Tech, Atlanta, GA

1990 Relative Timing of Opposing Responses in Default Mode and Dorsal Attention Networks

Omri Raccach¹, Amy Daitch¹, Shrita Pendekanti¹, Josef Parvizi¹

¹Stanford University, Stanford, CA

1991 Gradients of connectivity distance depend on cortical projection type

Sabine Oligschläger^{1,2,3}, Blazej Baczowski^{1,2}, Daniel Margulies¹

¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²International Max Planck Research School NeuroCom, Leipzig, Germany, ³Faculty of Biosciences, Pharmacy and Psychology, University Leipzig, Leipzig, Germany

1992 Visualization of Functional Connectivity Networks using VR glasses.

Gonzalo Rojas¹, Jorge Fuentes², Carlos Montoya², María de la Iglesia-Vayá^{3,4}, Marcelo Galvez²

¹Laboratory of Medical Image Processing, Clinica las Condes, Santiago, Chile, ²Department of Radiology, Clinica las Condes, Santiago, Chile, ³Centre of Excellence in Biomedical Image (CEIB), Regional Ministry of Health in the Valencia Region, Valencia, Spain, ⁴Brain Connectivity Lab, Prince Felipe Research Centre (CIPF), Valencia, Spain

NEUROANATOMY

Cortical Anatomy and Brain Mapping

1993 Individual difference in neural substrates of video game dependence

Shota Hotchi¹, Hikaru Takeuchi¹, Teruo Hashimoto¹, Susumu Yokota¹, Ryuta Kawashima^{1,2}

¹Division of Developmental Cognitive Neuroscience, IDAC, Tohoku University, Sendai, Japan,

²Department of Functional Brain Imaging, IDAC, Tohoku University, Sendai, Japan

1994 Insular function with emotional experience and interoceptive awareness using the awake surgery

Kazuya Motomura¹, Kentaro Iijima¹, Satoshi Umeda², Yuri Terasawa², Atsushi Natsume¹,

Toshihiko Wakabayashi¹

¹Nagoya University Graduate School of Medicine, Nagoya, Japan, ²Keio University, Tokyo, Japan

1995 Dense Statistics on Cortical Thickness and Myelin Reveals Adolescent Brain Development

Dongjin Kwon^{1,2}, Adolf Pfefferbaum¹, Edith Sullivan², Kilian Pohl¹

¹SRI International, Menlo Park, CA, ²Stanford University, Stanford, CA

1996 Voxel-Based Morphometry analysis of gray matter alteration in patients with anisometropic amblyopia

Hsien-Te Su¹, Tzu-Hsun Tsai², Yao-Chia Shih³, Chien-Chung Chen⁴, Wen-Yih Tseng⁵

¹Institute of Medical Device and Imaging, National Taiwan University College of Medicine, Taipei,

Taiwan, ²Department of ophthalmology, National Taiwan University Hospital, Taipei, Taiwan, ³Institute

of Biomedical Engineering, National Taiwan University, Taipei, Taiwan, ⁴Department of Psychology,

National Taiwan University College of Science, Taipei, Taiwan, ⁵Institute of Medical Device and

Imaging, National Taiwan University College of Medicine, Taipei, Taiwan

1997 Temporal quantitative susceptibility mapping of cortical regions

Surabhi Sood¹, David Reutens¹, Steffen Bollmann¹, Kieran O'Brien², Viktor Vegh¹

¹Centre for Advanced Imaging, Brisbane, Australia, ²Siemens Ltd., Brisbane, Australia

1998 Preferential Evolutionary Expansion of Human Prefrontal Cortex Relative to Nonhuman Primates

Chad Donahue¹, Matthew Glasser¹, Timothy Coalson¹, Todd Preuss², James Rilling²,

David Van Essen¹

¹Washington University in St. Louis, St. Louis, MO, ²Emory University, Atlanta, GA

1999 From visuomotor to orthography – human posterior intraparietal cytoarchitectonic complexity decoded

Monika Richter¹, Katrin Amunts^{1,2,3}, Mohlberg Hartmut², Simon Eickhoff^{2,4}, Karl Zilles^{2,5},

Svenja Caspers^{1,2,3}

¹C. and O. Vogt Institute for Brain Research, Heinrich-Heine-University Düsseldorf, 40001 Düsseldorf,

Germany, ²Institute of Neuroscience and Medicine (INM-1), Research Centre Jülich, 52425 Jülich,

Germany, ³JARA-BRAIN, Jülich-Aachen Research Alliance, 52425 Jülich, Germany, ⁴Institute

of Clinical Neuroscience and Medical Psychology, Heinrich-Heine University Düsseldorf, 40001

Düsseldorf, Germany, ⁵Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH

Aachen University, 52062 Aachen, Germany

- 2000 Profiling inferior left dorsal premotor cortex: when Area 55b meets Premotor Eye-Field**
Sarah Genon¹, Andrew Reid², Robert Langner³, Angie Laird⁴, Peter Fox⁵, Simon Eickhoff⁶
¹Jülich Research Centre, Jülich, Germany, ²Donders Centre for Cognition, Nijmegen, Netherlands, ³Heinrich Heine University, Düsseldorf, Germany, ⁴Florida International University, Miami, FL, ⁵University of Texas Health Science Center at San Antonio, San Antonio, TX, ⁶Research Center Jülich, INM-1, Jülich, Germany
- 2001 Automatic pattern recognition for cortical sulci: application to the ACC pattern recognition**
Léonie Borne¹, Denis Rivière¹, Cloélia Tissier², Edouard Duchesnay¹, Grégoire Borst², Nitin Gogtay³, Jay Giedd³, Olivier Houde², Armin Raznahan³, Zhong Yi Sun¹, Arnaud Cachia², Jean-Francois Mangin¹
¹UNATI, NeuroSpin, CEA, Université Paris-Saclay, Gif-sur-Yvette, France, ²LaPsyDe, CNRS UMR 8240, Paris, France, ³NIMH, Bethesda, United States
- 2002 A Manual for Classifying Anatomical Variation of Heschl's Gyrus**
Stener Nerland¹, Anna Antosz², Vera Lonning³, Kjetil Jørgensen¹, Lynn Mørch-Johnsen¹, Ole Andreassen⁴, Ingrid Agartz³
¹NORMENT, KG Jebsen Centre, University of Oslo & Diakonhjemmet Hospital, Oslo, Norway, ²Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, Poland, ³NORMENT, KG Jebsen Centre, Institute of Clinical Medicine, University of Oslo, Oslo, Norway, ⁴NORMENT, KG Jebsen Centre for Psychosis Research, Oslo University Hospital, Oslo, Norway
- 2003 Medial wall morphology of the intraparietal sulcus of children prenatally exposed to alcohol.**
Marlie Greeff¹, Ernesta Meintjes², Christopher Molteno¹, Sandra Jacobson³, Joseph Jacobson³, Fleur Warton¹, Christopher Warton¹
¹University of Cape Town, Cape Town, South Africa, ²University of Cape Town, Cape Town, Western Province, ³Wayne State University School of Medicine, Detroit, MI
- 2004 Congenital unilateral upper limb absence flattens the contralateral hand knob**
Zhong Yi Sun^{1,2}, Arnaud Cachia^{3,4}, Denis Rivière^{5,6}, Clara Fischer^{7,2}, Tamar Makin^{8,9}, Jean-François Mangin^{7,2}
¹UNATI, Neurospin, DRF, CEA, Paris Saclay University, Gif-sur-Yvette, France, ²CATI Multicenter Neuroimaging Platform, cati-neuroimaging.com, Gif-sur-Yvette, France, ³LaPsyDe, CNRS UMR 8240, Paris, France, ⁴INSERM-Paris Descartes University UMR 894, Imaging Biomarkers of Brain Development and Disorders, Ste Anne Hospital, Paris, France, ⁵UNATI, CEA DRF/I2BM NeuroSpin center, University Paris Saclay, Gif sur Yvette, France, ⁶CATI Multicenter Neuroimaging Platform, cati-neuroimaging.com, Gif-sur-yvette, France, ⁷UNATI, Neurospin, DRF, CEA, Paris Saclay University, Gif sur Yvette, France, ⁸FMRIB Centre, Nuffield Department of Clinical Neuroscience, University of Oxford, Oxford, United Kingdom, ⁹Institutes of Cognitive Neuroscience, University College London, London, United Kingdom
- 2005 Structural Variability Across the Primate Brain**
Paula Croxson¹, Stephanie Forkel², leonardo cerliani³, Michel Thiebaut de Schotten⁴
¹Icahn School of Medicine at Mount Sinai, New York, NY, ²King's College London, London, United Kingdom, ³ICM Institute - INSERM U1127, Paris, France, ⁴Brain Connectivity and Behaviour Group, Paris, France
- 2006 Development of Covariance Networks of Cortical/Subcortical Volumes on New-Onset Pediatric Epilepsy**
Camille Garcia-Ramos¹, Kevin Dabbs¹, Jack Lin², Vivek Prabhakaran¹, Bruce Hermann¹
¹UW-Madison, Madison, WI, ²University of California-Irvine, Irvine, CA
- 2007 An ALE Meta-Analytical Search for the Putative Number Form Area and its Associated Network**
Darren Yeo¹, Eric Wilkey¹, Gavin Price¹
¹Vanderbilt University, Nashville, TN
- 2008 Exploring Infant Cortical Folding Patterns based on Multi-Scale Curvature Information**
Dingna Duan^{1,2}, Yu Meng², Shunren Xia¹, Li Wang², Weili Lin², John Gilmore³, Dinggang Shen², Gang Li²
¹Key Laboratory of Biomedical Engineering of Ministry of Education, Zhejiang University, Hangzhou, China, ²Department of Radiology and BRIC, University of North Carolina at Chapel Hill, Chapel Hill, NC, ³Department of Psychiatry, University of North Carolina at Chapel Hill, Chapel Hill, NC
- 2009 Organization of cortical thickness by genetic modules: a structural MRI study of extended pedigrees**
Aaron Alexander-Bloch¹, Samuel Mathias¹, Ravindranath Duggirala², Joanne Curran², John Blangero², David Glahn¹
¹Yale University, New Haven, United States, ²University of Texas River Grande Valley, Brownsville, TX, United States
- 2010 Electrocorticography of mathematical processing with differing visual representations of numbers**
So Baek¹, Amy Daitch², Josef Parvizi¹
¹Stanford University, Stanford, CA, ²Stanford University, Belmont, CA
- 2011 Beyond binary parcellation of the vestibular cortex**
Valerie Kirsch^{1,2,3}, Rainer Boegle^{4,2}, Daniel Keeser^{5,6}, Kierig Emilie⁷, Birgit Ertl-Wagner⁸, Marianne Dieterich^{4,2,3,9}
¹LMU, Neurology, Munich, Germany, ²LMU, DSGZ, Munich, Germany, ³LMU, GSN, Munich, Germany, ⁴LMU, Neurology, Munich, Germany, ⁵LMU, Institute of Clinical Radiology, Munich, Germany, ⁶LMU, Psychiatry, Munich, Germany, ⁷LMU, Department of Neurology, Munich, Germany, ⁸LMU, Institute of Clinical Radiology, Munich, Germany, ⁹LMU, Synergy, Munich, Germany
- 2012 Using Laplace's equation to generate a standardized, 'unfolded' map of hippocampal grey matter**
Jordan DeKraker^{1,2}, Kayla Ferko^{1,2}, Jonathan Lau², Stefan Köhler^{1,3}, Ali Khan²
¹Brain and Mind Institute, University of Western Ontario, London, Ontario, ²Robarts Research Institute, University of Western Ontario, London, Canada, ³Baycrest Centre, Toronto, Canada
- 2013 Conformal Invariants on Cortical Flat Maps**
Carolyn Drobak¹, Monica Hurdal¹
¹Florida State University, Tallahassee, FL
- 2014 Uncovering the Connectional Architecture and Structure-function Organization of Orbitofrontal Cortex**
Lingzhong Fan¹, Hai Li¹, Zhengyi Yang², Junjie Zhuo², Simon Eickhoff³, Tianzi Jiang¹
¹Brainnetome Center, Institute of Automation, Chinese Academy of Sciences, Beijing, Beijing, ²Brainnetome Center, Institute of Automation, Chinese Academy of Sciences, Beijing, China, ³Institute of Neuroscience and Medicine, INM-1, Research Centre Jülich, Jülich, Germany
- 2015 Topological differences in cortical networks between impaired and nonimpaired active fighters**
Virendra Mishra¹, Karthik Sreenivasan¹, Xiaowei Zhuang¹, Zhengshi Yang¹, Sarah Banks¹, Charles Bernick¹, Dietmar Cordes¹
¹Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, NV
- 2016 Effects of Alzheimer's Disease Upon the Volume and Surface Area of the Human Claustrum Using MRI**
Carinna Torgerson¹, Zachary Jacokes², Jocelyn Hull¹, Andrei Irimia¹, John Van Horn³
¹University of Southern California, Los Angeles, CA, ²University of Southern California, Los Angeles, United States, ³University of Southern California, Los Angeles, WA

- 2017 Increased idiosyncrasy in parceled brain networks associated with autistic symptomatology**
adonay nunes¹, Nicholas Peatfield², Vasily Vakorin³, Sam Doesburg⁴
¹BCNI & BPK, Simon Fraser University, Surrey, Canada, ²BCNI & BPK, Simon Fraser University, Burnaby, BC, ³BCNI & BPK, Simon Fraser University, Vancouver, Canada, ⁴BCNI & BPK, Simon Fraser University, Vancouver, British Columbia
- 2018 In Vivo Identification of Granular Cortices using Whole-brain Cortical Diffusion MRI Analysis**
Qiyuan Tian¹, Christoph W.U. Leuze¹, Hua Wu¹, Grant Yang¹, Jingyuan Chen¹, Jonathan Polimeni², Jennifer A. McNab¹
¹Stanford University, Stanford, CA, United States, ²Massachusetts General Hospital, A.A. Martinos Center for Biomedical Imaging, Charlestown, MA, United States
- 2019 Elucidating micro-scale substrates of macro-scale network organization in humans**
Svenja Kiljan¹, Kim Meijer¹, Martijn Steenwijk¹, Menno Schoonheim¹, Geert Schenk¹, Jeroen Geurts¹, Linda Douw¹
¹VU University Medical Center, Amsterdam, Netherlands
- 2020 Local exploration of human brain folding**
Fabrizio Pizzagalli¹, Vikash Gupta¹, Joshua Faskowitz¹, Peter Kochunov², Paul M. Thompson¹, Neda Jahanshad¹
¹Imaging Genetics Center, University of Southern California, Marina Del Rey, CA, ²Maryland Psychiatric Research Center, Baltimore, MD

NEUROANATOMY

Cortical Cyto- and Myeloarchitecture

- 2021 Neurite properties revealed by in vivo diffusion MRI in human cerebral cortex.**
Hikaru Fukutomi^{1,2}, Matthew Glasser³, Tomohisa Okada⁴, Kaori Togashi¹, David Van Essen³, Takuya Hayashi²
¹Diagnostic Imaging and Nuclear Medicine, Graduate School of Medicine, Kyoto University, Kyoto, Japan, ²RIKEN Center for Life Science Technologies, Kobe, Japan, ³Washington University in St. Louis, St. Louis, MO, ⁴Human Brain Research Center, Graduate School of Medicine, Kyoto University, Kyoto, Japan
- 2022* The body parcellates the brain**
Esther Kuehn¹, Juliane Dinse², Estrid Jakobsen², Xiangyu Long², Pierre-Louis Bazin², Arno Villringer³, Martin Sereno⁴, Daniel Margulies³
¹DZNE, Magdeburg, Germany, ²MPI CBS, Leipzig, Germany, ³Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ⁴UCL, London, United Kingdom
- 2023 Intracortical myelination of Heschl gyri and planum temporale: association with rhyming performances**
Sophie Maingault¹, Fabrice Crivello¹, Bernard Mazoyer², Nathalie Tzourio-Mazoyer³
¹IMN - UMR5293 - CNRS, CEA, Bordeaux University, Bordeaux, France, ²IMN UMR5293 CNRS Bordeaux University CEA, Bordeaux, France, ³IMN UMR5293 CNRS University of Bordeaux CEA, Bordeaux, France
- 2024 Comparison of Inter-Regional and Inter-Subject Variations of Cortical NODDI and DTI Parameters**
Andac Hamamci¹, Hatice Demiran²
¹Yeditepe University, Istanbul, Turkey, ²Yeditepe University, Istanbul, Turkey

NEUROANATOMY

Microcircuitry and Modules

- 2025 Mesoscale Circuits and Cortical Functions: A Patchwork Approach**
Philipp Haueis¹
¹Berlin School of Mind and Brain, Berlin, Germany
- 2026 'Hierarchical' Organization Revisited: Constraining Network Topology with Structure and Function**
Michael Capalbo¹
¹Maastricht University, Maastricht, Netherlands

NEUROANATOMY

Neuroanatomy Other

- 2027 Wired minds: The neural underpinning of the entrepreneurial brain**
Paulo Rodrigues¹, Marc Ramos², David Moreno-Dominguez¹, Pablo Villoslada³, David Gallardo⁴, Vesna Prčkovska²
¹Mint Labs, Barcelona, Barcelona, ²Mint Labs, Barcelona, Spain, ³IDIBAPS, Barcelona, Spain, ⁴University of Barcelona, Faculty of Psychology, Barcelona, Spain
- 2028 The Impact of Retinal Gene Therapy on Auditory-to-Visual Cross Modal Plasticity**
Aimee Willett¹, Mani Mahmoudian¹, Gloria Young¹, Albert Maguire^{1,2,3}, Jean Bennett^{1,2,3}, Manzar Ashtari^{1,2,4}
¹University of Pennsylvania, Center for Advanced Retinal and Ocular Therapeutics (CAROT), Philadelphia, PA, ²University of Pennsylvania, Department of Ophthalmology, Philadelphia, PA, ³The Children's Hospital of Philadelphia, Center for Cellular and Molecular Therapeutics, Philadelphia, PA, ⁴University of Pennsylvania, Department of Radiology, Philadelphia, PA

NEUROANATOMY

Normal Development

- 2029 Modelling brain development during childhood and adolescence with multimodal manifold embedding**
Gareth Ball¹, Chris Adamson¹, Richard Beare¹, Marc Seal^{1,2}
¹Developmental Imaging, Murdoch Childrens Research Institute, Melbourne, Australia, ²Department of Paediatrics, University of Melbourne, Melbourne, Australia
- 2030 Mechanical Properties of the Adolescent Human Brain**
Grace McIlvain¹, Laura Lane¹, Ethan McCormick², Eva Telzer², Curtis Johnson¹
¹University of Delaware, Newark, DE, ²University of North Carolina, Chapel Hill, NC

- 2031 Coordinated cortical remodeling: connections to functional specialization and evolutionary novelty**
Aristeidis Sotiras¹, Jon Toledo^{1,2}, Raquel Gur¹, Ruben Gur¹, Theodore Satterthwaite^{1,3}, Christos Davatzikos^{1,3}
¹University of Pennsylvania, Philadelphia, United States, ²Houston Methodist Neurological Institute, Houston, United States, ³shared senior authorship,

- 2032 T1/T2 - A Novel Measure of Brain Tissue Maturation**
Jack Knight-Scott¹, Patricia Brennan², Susan Palasis^{1,2}, Xiaodong Zhong³
¹Children's Healthcare of Atlanta, Atlanta, GA, ²Emory University, Atlanta, GA, ³MR R&D Collaborations, Siemens Healthcare, Atlanta, GA

NEUROANATOMY

Subcortical Structures

- 2033 Hippocampal morphometry is related to substance use in youth with perinatally-acquired HIV infection**
Christine Paula Lewis-de los Angeles¹, Kathryn Alpert², Paige Williams³, Katheen Malee², Yanling Huo³, John Csernansky², Ram Yogev⁴, Russell Van Dyke⁵, Elizabeth Sowell⁶, Lei Wang⁷, Pediatric HIV/AIDS Cohort Study (PHACS)⁸
¹Interdepartmental Neuroscience Program, Northwestern University Feinberg School of Medicine, Chicago, IL, ²Department of Psychiatry & Behavioral Sciences, Northwestern University Feinberg School of Medicine, Chicago, IL, ³Department of Biostatistics, Harvard T. H. Chan School of Public Health, Boston, MA, ⁴Department of Pediatrics, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL, ⁵Department of Pediatrics, Tulane University School of Medicine, New Orleans, LA, ⁶Dept. of Pediatrics, Children's Hosp. Los Angeles/ Univ. of Southern California, Keck School of Med., Los Angeles, CA, ⁷Northwestern University Feinberg School of Medicine, Chicago, IL, ⁸Pediatric HIV/AIDS Cohort Study, <http://phacsstudy.org/>, United States
- 2034 The thalamus mediates interactions between large-scale cortical functional networks**
Kai Hwang¹, Maxwell Bertolero¹, Mark D'Esposito¹
¹UC Berkeley, Berkeley, CA
- 2035 Precision and reliability of functional imaging of brainstem motor nuclei at 7 T**
Eva Matt^{1,2}, Florian Ph.S Fischmeister^{1,2}, Ahmad Amini^{1,2}, Simon Robinson^{2,3}, Thomas Fokj^{1,2}, Elke Gizewski⁴, Roland Beisteiner^{1,2}
¹Department of Neurology, Medical University of Vienna, Vienna, Austria, ²High Field Magnetic Resonance Centre, Medical University of Vienna, Vienna, Austria, ³Department of Biomedical Imaging and Image-guided Therapy, Medical University of Vienna, Vienna, Austria, ⁴Department of Neuroradiology, Medical University of Innsbruck, Innsbruck, Austria
- 2036 Resting State fMRI of Brainstem Raphé Nucleus Activity Following Ketamine**
Ronald Salomon¹, Kimberly Golden², Jill Mhyre², Lou Ann Eads¹, Andrew James³, Jeffrey Clothier¹, Abdallah Hayar⁴, Pedro Delgado¹, Linda Larson-Prior⁵
¹Psychiatric Research Institute, University of Arkansas for Medical Sciences, Little Rock, AR, ²Department of Anesthesiology, University of Arkansas for Medical Sciences, Little Rock, AR, ³Departments of Psychiatry and Neurology, University of Arkansas for Medical Sciences, Little Rock, AR, ⁴Department of Neurobiology & Developmental Sciences, University of Arkansas for Medical Sciences, Little Rock, AR, ⁵Depts of Psychiatry, Neurology, and Neurobiol. & Devel. Sci., Univ. of Arkansas for Medical Sciences, Little Rock, AR

- 2037 Genetic influence on human hippocampal size and shape in relation to hippocampal subfields**
Wei Wen¹, Anbupalam Thalamuthu¹, Jiyang Jiang¹, Wanlin Zhu², Tao Liu², Perminder Sachdev¹
¹University of New South Wales, Randwick, Australia, ²Beihang University, Beijing, China

NEUROANATOMY

White Matter Anatomy, Fiber Pathways and Connectivity

- 2038 Think outside the box: novel approaches to assess distant lesion effect in the brain**
Chris Foulon¹, Leonardo Cerliani¹, Richard Levy², Serge Kinkingnéhun², Charlotte Rosso³, Marika Urbanski¹, Emmanuelle Volle¹, Michel Thiebaut de Schotten¹
¹Brain Connectivity and Behaviour Group, Paris, France, ²Frontlab, ICM, Paris, France, ³Centre de Neuroimagerie de Recherche CENIR, Groupe Hospitalier Pitié-Salpêtrière, Paris, France
- 2039 Mapping of the human brainstem connectivity and microstructure using diffusion MRI at 11.7T**
Justine Beaujoin^{1,2,3}, Christophe Destrieux⁴, Jérémy Bernard¹, Fabrice Poupon⁵, Jean-François Mangin⁵, Cyril Poupon¹
¹CEA/I2BM/Neurospin/UNIRS, Gif-sur-Yvette, France, ²Université Paris Saclay, Orsay, France, ³FLI / Noeud Paris-Sud, Orsay, France, ⁴Laboratoire d'Anatomie, Faculté de Médecine/CHU Tours, Tours, France, ⁵CEA/I2BM/Neurospin/UNATI, Gif-sur-Yvette, France
- 2040* Rostro-caudal architecture of the frontal lobes in humans**
Michel Thiebaut de Schotten¹, Marika Urbanski¹, Leonardo Cerliani¹, Emmanuelle Volle¹
¹Brain Connectivity and Behaviour Group, Paris, France
- 2041 Neuronal Migration and Axonal Pathways Linked to Fetal Insular Development Using MR Tractography**
Avilash Das^{1,2,3}, Emi Takahashi^{2,3,4}
¹Boston University, Boston, MA, ²Boston Children's Hospital, Boston, MA, ³Fetal-Neonatal Brain Imaging and Developmental Science Center, Boston Children's Hospital, Boston, MA, ⁴Athinoula A. Martinos Center for Biomedical Imaging, Boston, MA
- 2042* Two different pathways connect amygdala and prefrontal cortex in both human and monkey brains**
Davide Folloni¹, Lennart Verhagen¹, Jerome Sallet¹, Saad Jbabdi², Sean Foxley², Alexandr Khrapichev³, Karla Miller², Matthew Rushworth¹, Rogier Mars^{4,2}
¹Department of Experimental Psychology, University of Oxford, Oxford, United Kingdom, ²Oxford Centre for Functional MRI of the Brain, University of Oxford, Oxford, United Kingdom, ³Department of Oncology, University of Oxford, Oxford, United Kingdom, ⁴Donders Institute, Nijmegen, Netherlands
- 2043 Probing the test-retest reliability of quantitative estimates of structural connectivity**
Lena Schumacher^{1,2,3,4}, Marco Reisert^{5,4}, Kai Nitschke^{1,4,6}, Karl Egger^{2,4}, Horst Urbach^{2,4}, Jürgen Hennig^{5,4,6}, Cornelius Weiller^{1,4,6}, Christoph Kaller^{1,4,6}
¹Dept. of Neurology, Faculty of Medicine, University of Freiburg, Freiburg, Germany, ²Dept. of Neuroradiology, Faculty of Medicine, University of Freiburg, Freiburg, Germany, ³Dept. of Medical Psychology and Medical Sociology, Faculty of Medicine, University of Freiburg, Freiburg, Germany, ⁴Freiburg Brain Imaging Center, University of Freiburg, Freiburg, Germany, ⁵Medical Physics, Dept. of Radiology, Faculty of Medicine, University of Freiburg, Freiburg, Germany, ⁶BrainLinks-BrainTools Cluster of Excellence, University of Freiburg, Freiburg, Germany

2044 Structural properties of the human corpus callosum: Multimodal assessment and sex differences

Lassi Björnholm¹, Juha Nikkinen², Vesa Kiviniemi³, Tanja Nordström⁴, Solja Niemelä^{5,6}, Mark Drakesmith⁷, John Evans⁷, Bruce Pike⁸, Juha Veijola¹, Tomas Paus^{9,10,11}

¹Department of Psychiatry, University of Oulu and Oulu University Hospital, Oulu, Finland,

²Department of Radiotherapy, Oulu University Hospital, Oulu, Finland, ³Institute of Diagnostics,

Department of Diagnostic Radiology, Oulu University Hospital, Oulu, Finland, ⁴Institute of Health

Sciences, University of Oulu, Oulu, Finland, ⁵Department of Psychiatry, University of Oulu, Oulu,

Finland, ⁶Department of Psychiatry, Lapland Hospital District, Rovaniemi, Finland, ⁷School of

Psychology, Cardiff University, Cardiff, United Kingdom, ⁸Department of Radiology, Cumming School

of Medicine, University of Calgary, Calgary, Canada, ⁹Rotman Research Institute, Baycrest, Toronto,

Canada, ¹⁰Departments of Psychology and Psychiatry, University of Toronto, Toronto, Canada, ¹¹Child

Mind Institute, New York, NY

2045 Pathways to visuomotor integration in humans

Jan Schreiber¹, Monika Richter², Katrin Amunts^{1,2,3}, Svenja Caspers^{1,2,3}

¹Research Centre Jülich, Jülich, Germany, ²C. and O. Vogt Institute for Brain Research, Heinrich-

Heine-University Düsseldorf, Düsseldorf, Germany, ³JARA-BRAIN, Jülich-Aachen Research Alliance,

Jülich, Germany

2046 Longitudinal MS Study of White Matter Integrity in CST during Two Year Treatment with Fingolimod

Jian Lin¹, Pallab Bhattacharyya¹, Ken Sakaie¹, Robert Fox¹, Mark Lowe¹

¹The Cleveland Clinic, Cleveland, OH

2047 Topography of the acoustic tract as revealed by ex-vivo fiber dissections and in-vivo tractography

Chiara Maffei¹, Jorge Jovicich¹, Alessandro De Benedictis², Franco Chioffi³, Silvio Sarubbo³

¹CIMeC Center for Mind/Brain Sciences, Trento University, Trento, Italy, ²Division of Neurosurgery,

Bambino Gesù Hospital, Rome, Italy, ³Structural and Functional Connectivity Lab, Div. of

Neurosurgery, S. Chiara Hospital, Trento, Italy

2048 Template-based individual cortical parcellation of the human cerebral cortex

Sandrine Lefranc¹, Cyril Poupon², Denis Le Bihan³, Jean-François Mangin¹, Denis Rivière¹

¹UNATI, NeuroSpin, CEA, Université Paris-Saclay, Gif sur Yvette, France, ²UNIRS, NeuroSpin, CEA,

Université Paris-Saclay, Gif sur Yvette, France, ³NeuroSpin, CEA, Université Paris-Saclay, Gif-sur-

Yvette, France

2049 Mapping whole brain connectivity change associated with surgical technique in temporal lobe epilepsy

Natalie Busby¹, Ajay Halai¹, Matthew Lambon Ralph¹

¹University of Manchester, Manchester, United Kingdom

2050* Mapping Asymmetries in the U-shape fibre system of the Human Brain

Francisco De Santiago Requejo¹, Pedro Luque Laguna², Ahmad Beyh², Steven Williams³, Marco

Catani², Flavio Dell'Acqua²

¹NatBrainLab, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London,

United Kingdom, ²NatBrainLab, Institute of Psychiatry, Psychology & Neuroscience, King's College

London, London, United Kingdom, ³Institute of Psychiatry, Psychology & Neuroscience, King's

College London, London, United Kingdom

2051 Investigating dyslexia and dyscalculia comorbidity through diffusion tensor imaging

David Moreau¹, Anna Wilson¹, Nicole McKay¹, Karen Waldie¹

¹University of Auckland, Auckland, New Zealand

2052 Anatomy and lateralization of the uncinate fasciculus: a tractography study

Rémy Nguyen¹, Bruno Dubois¹, Michel Thiebaut de Schotten²

¹Institut du Cerveau et de la Moelle, Paris, France, ²Brain Connectivity and Behaviour Group,

Paris, France

2053 White matter network alterations in patients with depersonalization/derealization disorder

Anika Sierk¹, Judith Daniels², Jelmer Kok², Michael Gaebler³, Jan-Peter Lamke¹, Antje Manthey¹,

Johann Kruschwitz¹, Henrik Walter¹

¹Charité Universitätsmedizin Berlin, Berlin, Germany, ²University of Groningen, Groningen,

Netherlands, ³Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

2054 Direct intragyrar connections between different body parts along the homunculus

Henrietta Howells¹, Flavio Dell'Acqua¹, Anne Fritz¹, Declan Murphy¹, Marco Catani²

¹King's College London, London, United Kingdom, ²NATBrainLab, Institute of Psychiatry, Psychology

& Neuroscience, King's College London, London, United Kingdom

2055 White Matter Tract Segmentation By Means of Streamlines Correspondence

Nusrat Sharmin¹, Emanuele Olivetti¹, Paolo Avesani¹

¹Fondazione Bruno Kessler, Trento, Italy

2056* Prenatal development of major fibre pathways in the human cerebrum revealed by HARDI

Lana Vasung^{1,2}, Ivica Kostovic³, Hart Lidov², Emi Takahashi²

¹Harvard Medical School, Boston, United States, ²Boston Children's Hospital, Boston, MA, ³Croatian

Institute for Brain Research, Zagreb, Croatia

2057 White Matter Microstructure is Related to Reading Comprehension in Reading-Related Tracts

Bryce Geeraert¹, Marc Lebel¹, Catherine Lebel¹

¹University of Calgary, Calgary, Canada

2058 In Vivo, MRI based microstructural parcellation of the human hippocampus

Raihaan Patel^{1,2}, Christopher Steele^{2,3}, Sejal Patel^{4,5}, Jurgen Germann², Christine Tardif², M. Mallar

Chakravarty^{1,2,6}

¹Department of Biological and Biomedical Engineering, McGill University, Montreal, Canada,

²Cerebral Imaging Centre, Douglas Mental Health University Institute, Montreal, Canada, ³Department

of Neurology, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany,

⁴Campbell Family Mental Health Research Institute, Centre for Addiction and Mental Health, Toronto,

Canada, ⁵Institute of Medical Science, University of Toronto, Toronto, Canada, ⁶Department of

Psychiatry, McGill University, Montreal, Canada

2059 Influence of Tractography Algorithms and Settings on Local Curvature Estimations

Irene Brusini¹, Daniel Jörgens¹, Örjan Smedby¹, Rodrigo Moreno¹

¹KTH Royal Institute of Technology, Huddinge, Sweden

2060 Parcellation-based Connectomes Detect Network Structure: A Preliminary TBI Study

Ying-Chia Lin^{1,2}, Steven Baete^{1,2}, Charles Marmar³, Fernando Boada^{1,2}

¹Center for Biomedical Imaging, Dept of Radiology, NYU School Of Medicine, New York, United

States, ²Center for Advanced Imaging Innovation and Research (CAI2R), NYU School Of Medicine,

New York, NY, ³Cohen Veterans Center for Posttraumatic Stress and Traumatic Brain Injury, Dept of

Psychiatry, New York, United States

2061 Structural brain network development is associated with pubertal timing and tempo.

Rajpreet Chahal¹, Shawn Rhoads¹, Scott Marek², Veronika Vilgis¹, Kate Keenan³, Erika Forbes²,

Alison Hipwell², Amanda Guyer¹

¹University of California Davis, Davis, CA, ²University of Pittsburgh, Pittsburgh, PA, ³University of

Chicago, Chicago, IL

- 2062 Increased Expressive Language Network Segregation in Children Born Preterm**
Brady Williamson¹, Maria Barnes-Davis², Cameron Laue³, Scott Holland⁴, Stephanie Merhar³, Darren Kadis³
¹University of Cincinnati, Cincinnati, OH, ²Cincinnati Children's Hospital Medical Center, Cin, OH, ³Cincinnati Children's Hospital Medical Center, Cincinnati, OH, ⁴Cincinnati Children's Hospital Reading and Literacy Discovery Center, Cincinnati, OH
- 2063 Neuroimaging analysis of white matter connectivity between the claustrum and the rich-club network**
Avnish Bhattarai¹, Andrei Irimia², Carinna Torgerson², John Van Horn²
¹University of Southern California, Los Angeles, CA, ²University of Southern California, Los Angeles, CA
- 2064 Diffusion Imaging based White Matter Biomarkers in Prodromal Huntington Disease**
Arvind Caprihan¹, H. Jeremy Bockholt², Jessica Turner³, Jingyu Liu⁴, Jatin Vaidya⁵, Hans Johnson⁵, Jeffrey Long², Jennifer Ciarochi⁶, Flor Espinoza¹, Jane Paulsen⁵, Vince Calhoun⁷
¹The Mind Research Network, Albuquerque, NM, ²University of Iowa, Iowa City, IA, ³Department of Psychology, Georgia State University, Atlanta, GA, ⁴The Mind Research Network & LBERI, Albuquerque, New Mexico, Albuquerque, NM, ⁵University of Iowa, Iowa City, IA, ⁶Georgia State University, Atlanta, GA, ⁷The Mind Research Network & LBERI; Department of Electrical and Computer Engineering, UNM, Albuquerque, NM
- 2065 The Anatomy of the Vertical Occipital System**
Marco Catani¹, Zeead Yaghi¹, Youngheun Jo¹, Ahmad Beyh¹, Flavio Dell'Acqua¹, Francisco De Santiago Requejo¹, Stephanie Forkel¹, Dominic ffytche²
¹NatBrainLab, Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, United Kingdom, ²Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, United Kingdom
- 2066 A DTI Quality control pipeline for running TRACULA**
Xiaofu He^{1,2}, Mihaela Stefan¹, Martine Fontaine¹, Jiook Cha², Helen Simpson^{1,2}, Rachel Marsh^{1,2}
¹Department of Psychiatry, Columbia University, New York, NY, ²The New York State Psychiatric Institute, New York, NY
- 2067 The posterior hippocampal commissure: in-vivo reconstruction and comparison with dissection studies**
Dorian Pustina¹, Philip Cook², Kathryn Davis¹
¹Dept. of Neurology, University of Pennsylvania, Philadelphia, United States, ²Dept. of Radiology, University of Pennsylvania, Philadelphia, PA, United States
- 2068 Short Parietal Lobe Connections of the Human and Monkey Brain**
Naianna Robertsson¹, Vincent Huynh¹, Henrietta Howells¹, Rachel Barrett¹, Francisco De Santiago Requejo², Tim Dyrby³, Kristine Krug⁴, Helen A'Darceuil⁵, Maurice Ptito⁶, Flavio Dell'Acqua¹, Declan Murphy¹, Marco Catani⁷
¹King's College London, London, United Kingdom, ²King's College London, London, Please select an option below, ³Danish Research Centre for Magnetic Resonance, Copenhagen, Denmark, ⁴University of Oxford, Oxford, United Kingdom, ⁵University of Oxford, Oxford, United Kingdom, ⁶Copenhagen University Hospital Hvidovre, Hvidovre, Denmark, ⁷NATBrainLab, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, United Kingdom
- 2069 Investigating structural backbone network in early Parkinson's disease (PD) subjects**
Virendra Mishra¹, Karthik Sreenivasan¹, Xiaowei Zhuang¹, Zhengshi Yang¹, Christopher Bird¹, Dietmar Cordes¹, Ryan Walsh¹
¹Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, NV

- 2070 Dorsal-ventral stream networks in skilled actions**
Sanja Budisavljevic¹, Flavio Dell'Acqua², Diego Miotto³, Raffaella Motta³, Umberto Castiello⁴
¹University of Padova, Padova, Italy, ²King's College London, London, United Kingdom, ³Department of Medicine, University of Padova, Padova, Italy, ⁴Department of General Psychology, University of Padova, Padova, Italy
- 2071 Voxelwise differences in white matter of early Parkinson's disease (PD) subjects**
Virendra Mishra¹, Karthik Sreenivasan¹, Xiaowei Zhuang¹, Zhengshi Yang¹, Christopher Bird¹, Dietmar Cordes¹, Ryan Walsh¹
¹Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, NV
- 2072 Structural and functional characteristics of transcallosal pathways in chronic stroke**
Cassandra Fierro¹, kamal shadi², Whitney Gray¹, Michael Borich¹
¹Emory University, Atlanta, GA, ²Georgia Institute of Technology, Atlanta, GA

PERCEPTION AND ATTENTION

Attention: Auditory/Tactile/Motor

- 2073 The right temporoparietal junction supports speech tracking during selective listening**
Sebastian Puschmann^{1,2}, Simon Steinkamp³, Imke Gillich², Robert Zatorre¹, Christiane Thiel²
¹McGill University, Montreal, QC, Canada, ²Universität Oldenburg, Oldenburg, Germany, ³Jülich Research Center, Jülich, Germany
- 2074* L-dopa modulates brain networks and signal variability in the listening brain**
Mohsen Alavash¹, Sung-Joo Lim¹, Christiane Thiel², Bernhard Sehm³, Lorenz Deserno³, Jonas Obleser¹
¹University of Lübeck, Lübeck, Germany, ²Universität Oldenburg, Oldenburg, Germany, ³Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
- 2075 Information content during narrative listening modulates functional brain network connectivity**
Rossana Mastrandrea¹, Luca Cecchetti², Andrea Leo², Paolo Papale², Giacomo Handjaras², Tommaso Gili³, Nicola Martini⁴, Daniele Della Latta⁴, Dante Chiappino⁴, Guido Caldarelli¹, Pietro Pietrini², Emiliano Ricciardi²
¹Networks, IMT School for Advanced Studies, Lucca, Italy, ²MoMiLab, IMT School for Advanced Studies, Lucca, Italy, ³Museo Storico della Fisica e Centro Studi e Ricerche "Enrico Fermi", Rome, Italy, ⁴Fondazione Toscana "G. Monasterio", Pisa, Italy
- 2076 Hemispheric Difference in Anticipation Process of Voice, Beep, and Rhythmic Sound**
Yasunori Kotani¹, Yoshimi Ohgami², Nobukiyo Yoshida³, Shigeru Kiryu⁴, Yusuke Inoue⁵
¹Tokyo Institute of Technology, Tokyo, Japan, ²Tokyo Institute of Technology, Meguro, Tokyo, ³The University of Tokyo, Minato, Tokyo, ⁴The University of Tokyo, Tokyo, Japan, ⁵Kitasato University, Kanagawa, Japan

PERCEPTION AND ATTENTION

Attention: Visual

- 2077 Location, object and similarity coding in the intraparietal sulcus in the absence of a task**
Rose Bruffaerts^{1,2,3}, Veerle Neyens¹, Ronald Peeters⁴, Rufin Vogels⁵, Simon De Deyne⁶, Gerrit Storms⁶, Patrick DUPONT¹, Rik Vandenberghe^{1,2}
¹Laboratory for cognitive neurology, KU Leuven, Leuven, Belgium, ²Neurology Department, University Hospitals Leuven, Leuven, Belgium, ³Centre for Speech, Language and the Brain, University of Cambridge, Cambridge, United Kingdom, ⁴Radiology Department, University Hospitals Leuven, Leuven, Belgium, ⁵Laboratory of Neurophysiology, KU Leuven, Leuven, Belgium, ⁶Psychology Department, KU Leuven, Leuven, Belgium
- 2078 Noninvasive induction of neural noise in the left FEF improves conscious visual perception in humans**
Chloé Stengel¹, Julià Amengual¹, Antoni Valero-Cabre^{1,2,3}
¹Institut du Cerveau et de la Moelle épinière, Paris, France, ²Dept. Anatomy and Neurobiology, Laboratory of Cerebral Dynamics, Boston University School of Medicine, Boston, MA, ³Cognitive Neuroscience and Information Tech. Research Program, Open University of Catalonia, Barcelona, Spain
- 2079 Biased competition in semantic representations during category-based visual search**
Mohammad Shahdloo^{1,2}, Tolga Çukur^{1,2,3}
¹Department of Electrical and Electronics Engineering, Bilkent University, Ankara, Turkey, ²Ulusal Manyetik Rezonans Araştırma Merkezi, Sabuncu Brain Research Center, Bilkent University, Ankara, Turkey, ³Neuroscience Program, Bilkent University, Ankara, Turkey
- 2080 Peripheral versus central visual spatial attention: an fMRI study**
Maarten Schrooten^{1,2}, Eshwar Ghumare¹, Rik Vandenberghe^{1,2}, Patrick Dupont¹
¹Laboratory for cognitive neurology, KU Leuven, Leuven, Belgium, ²Department of neurology, UZ Leuven, Leuven, Belgium
- 2081 Depleted or disengaged? Dissociable neural signatures of time-on-task based on pacing and task type**
Julian Lim¹, James Teng¹, Stijn Massar¹, Michael Chee¹
¹Duke-NUS Medical School, Singapore, Singapore
- 2082 Allocation of Attention to Personally Familiar and Stranger Faces over Time**
Matteo Visconti di Oleggio Castello¹, Nathan Weisz², M. Ida Gobbini^{1,3}
¹Dartmouth College, Hanover, United States, ²University of Salzburg, Salzburg, Austria, ³University of Bologna, Bologna, Italy
- 2083 Alpha band functional connectivity supports inhibition in Covert Attention: a MEG-DTI study**
Antea D'Andrea^{1,2}, Federico Chella^{1,2}, Tom Marshall³, Vittorio Pizzella^{1,2}, Gian Luca Romani^{1,2}, Ole Jensen⁴, Laura Marzetti^{1,2}
¹Department of Neuroscience, Imaging and Clinical Sciences University of Chieti-Pescara, Chieti, Italy, ²Institute for Advanced Biomedical Technologies, ITAB, University of Chieti-Pescara, Chieti, Italy, ³Donders Institute, Radboud University, Netherlands, Nijmegen, Netherlands, ⁴School of Psychology, University of Birmingham, UK, Birmingham, United Kingdom
- 2084 Real-time Neurofeedback for Attention Training: Brainwave-based Brain Computer Interface**
Reza Aibir¹, Soheil Borhani¹, Xiaopeng Zhao¹, Yang Jiang²
¹University of Tennessee, Knoxville, TN, ²University of Kentucky, Lexington, KY

2085 Meditation-Inspired Cognitive Training Improves Working Memory and Increases Cortical Thickness

David Ziegler¹, Sasha Skinner¹, Alexander Simon¹, Adam Gazzaley¹

¹UCSF, San Francisco, CA

2086 Distinct attentional strategies differentially engage the attention system

Ella Weik¹, Christine Tipper²

¹University of British Columbia, Vancouver, Canada, ²University of British Columbia, Vancouver, BC

PERCEPTION AND ATTENTION

Chemical Senses: Olfaction, Taste

2087 Umami ingestion modulates functional connectivity in the human brain: a resting-state fMRI study

Ikuhiro Kida^{1,2}, Norberto Nawa^{1,2}, Yuichiro Matsuoka^{1,2}, Kenji Leibnitz^{1,2}

¹CiNet, National Institute of Information and Communications Technology, Suita-shi, Osaka, Japan, ²Graduate School of Frontier Bioscience, Osaka University, Suita-shi, Osaka, Japan

2088 Oscillatory representations of olfactory stimuli during episodic memory encoding and retrieval

Anne-Lise Saive¹, Jean-Pierre Royet², Etienne Combrisson², David Meunier², Samuel Garcia², Marc Thévenet², Sylvain Rheims³, Jean Isnard³, Jane Plailly², Nadine Ravel², Karim Jerbi⁴

¹University of Montreal, Montreal, Canada, ²CRNL, Lyon, France, ³Université Claude Bernard Lyon 1, Lyon France; Neurological Hospital, Bron, France, Lyon, France, ⁴University of Montreal, Montréal, Quebec

2089 Differences in Neural Processing of Taste between Lean and Obese Individuals: An EEG Study

Samyogita Hardikar¹, Raphael Wallroth^{2,3}, Arno Villringer¹, Kathrin Ohla²

¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²German Institute for Human Nutrition, Potsdam-Rehbruecke, Nuthetal, Germany, ³NutriAct – Competence Cluster Nutrition Research, Berlin-Potsdam, Germany

2090 Meta-analysis of the effects of fasting on palatable food taste

Eunice Chen¹, Thomas Zeffiro²

¹Temple University, Philadelphia, United States, ²Neurometrika, Potomac, MD

PERCEPTION AND ATTENTION

Consciousness and Awareness

2091 Tracking thoughts: Exploring the neural architecture of mental time travel during mind-wandering

Theodoros Karapanagiotidis¹, Boris Bernhardt², Elizabeth Jefferies¹, Jonathan Smallwood¹

¹The University of York, York, United Kingdom, ²McGill University, Montreal, Canada

2092 Functional connectivity analysis during breath-counting meditation using multichannel fNIRS

Tomoka Katayama¹, Satoru Hiwa¹, Tomoyuki Hiroyasu¹

¹Doshisha University, Kyotanabe-shi, Kyoto, Japan

- 2093 Identifying multivariate patterns for spontaneous color perception with decoded fMRI neurofeedback**
JD Knotts¹, Aurelio Cortese², Mitsuo Kawato², Hakwan Lau¹
¹University of California Los Angeles, Los Angeles, CA, ²Advanced Telecommunications Research Institute International, Kyoto, Japan
- 2094 Resting functional connectivity in minimally conscious state minus and plus**
Charlène Aubinet¹, Lizette Heine¹, Charlotte Martial¹, Steve Majerus², Steven Laureys¹, Carol Di Perri¹
¹University Hospital of Liege, GIGA Research Center, Liège, Belgium, ²Psychology and Neuroscience of Cognition Research Unit, University of Liege, Liège, Belgium
- 2095 Propofol Induces Impaired Cross-Frequency Coupling Across the Cortical Hierarchy**
Robert Sanders¹, Matthieu Darracq¹, Jamie Sleight², Rosalyn Moran³, Olivia Gosseries⁴, Marie-Aurèle Bruno⁴, Vincent Bonhomme⁴, Jean-François Brichant⁴, Mario Rosanova⁵, Ayel Raz¹, Matthieu Banks¹, Giulio Tononi¹, Marcello Massimini⁵, Steven Laureys⁶, Melanie Boly⁷
¹University of Wisconsin, Madison, United States, ²University of Auckland, Auckland, New Zealand, ³University of Bristol, Bristol, United Kingdom, ⁴University of Liege, Liege, Belgium, ⁵University of Milan, Milan, Italy, ⁶University Hospital of Liege, GIGA Research Center, Liège, Belgium, ⁷University of Wisconsin, Verona, WI
- 2096 Characterizing the meditative state based on functional connectivity and low-frequency fluctuation**
Satoru Hiwa¹, Mari Iizuka², Tomoyuki Hiroyasu¹
¹Faculty of Life and Medical Sciences, Doshisha University, Kyotanabe-shi, Kyoto, Japan, ²Graduate School of Business, Doshisha University, Kyoto, Japan
- 2097 Effects of breath-counting meditation on functional brain connectivity and salivary hormones**
Takuma Miyoshi¹, Satoru Hiwa¹, Tomoyuki Hiroyasu¹
¹Doshisha University, Kyotanabe-shi, Kyoto, Japan
- 2098 Frontal lobe activity during breath-counting meditation: fNIRS study**
Seika Fujii¹, Satoru Hiwa², Tomoyuki Hiroyasu³
¹Doshisha University, Kyotanabe-shi, Kyoto, Japan, ²Doshisha University, Kyotanabe-shi, Kyoto, Japan, ³Doshisha University, Kyotanabe-Shi, Kyoto, Japan
- 2099 Differentiation of TBI and non-TBI Etiologies of VS and MCS Improves Diagnosis in Patient Subgroups**
Shanshan Chen^{1,2}, Lubin Wang², Yi Yang³, Xinhui Wu³, Jianghong He³, Bing Wu³, Mingmei Ge³, Shi-Jiang Li¹, Zheng Yang², Xiaolin Liu¹
¹Radiology and Biophysics Departments, Medical College of Wisconsin, WI, USA, ²Cognitive and Mental Health Research Center, Beijing Institute of Basic Medical Sciences, Beijing, China, ³Radiology and Neurosurgery Departments, Beijing Army General Hospital, Beijing, China
- 2100 Increased Segregation Between Major Sensory Systems During Deepening of Propofol Sedation**
Xiaolin Liu¹, Kathryn Lauer¹, Barney Ward¹, Christopher Roberts¹, Suyan Liu¹, Suneeta Gollapudy¹, Robert Rohloff¹, William Gross¹, Jeffrey Binder¹, Anthony Hudetz², Shi-Jiang Li¹
¹Medical College of Wisconsin, Milwaukee, WI, ²University of Michigan, Ann Arbor, MI
- 2101 Intra-individual variations in functional connectivity during resting and meditative states**
Takeru Aimoto¹, Satoru Hiwa¹, Tomoyuki Hiroyasu²
¹Doshisha University, Kyotanabe-shi, Kyoto, Japan, ²Doshisha University, Kyotanabe-Shi, Kyoto, Japan

- 2102 Anesthetic-induced unconsciousness is associated with shifts in neuronal scaling properties.**
TT THIERY¹, Tarek Lajnef², Etienne Combrisson³, George Mashour⁴, Stefanie Blain-Moraes⁵, Karim Jerbi⁶
¹UNIVERSITY OF MONTREAL, Montréal, Quebec, ²University of Sfax, Sfax, Tunisia, ³CRNL, Lyon, France, ⁴University of Michigan, Ann Arbor, MI, ⁵McGill University, Montreal, Quebec, ⁶Département de Psychologie, Université de Montréal, Montréal, Canada
- 2103 Dynamical Functional Connectivity States may Detect Changes in Brain Patterns of Proprioception**
Ana Martínez¹, Clemens Bauer², Zeus Gracia¹, Sarael Alcauter¹, Fernando Barrios¹
¹Universidad Nacional Autónoma de México, Queretaro, Mexico, ²Massachusetts Institute of Technology, Cambridge, MA
- 2104 Dorsal Thalamus: A Common Site with Above-Baseline Sense/Memory Connections in Anesthesia Recovery**
Xiaolin Liu¹, Kathryn Lauer¹, Barney Ward¹, Christopher Roberts¹, Suyan Liu¹, Suneeta Gollapudy¹, Robert Rohloff¹, William Gross¹, Jeffrey Binder¹, Anthony Hudetz², Shi-Jiang Li¹
¹Medical College of Wisconsin, Milwaukee, WI, ²University of Michigan, Ann Arbor, MI
- 2105 Recurrent processing supports perceptual awareness: an fMRI study on somatosensory target detection**
Pia Schröder^{1,2}, Timo Schmidt^{1,3}, Felix Blankenburg¹
¹Neurocomputation and Neuroimaging Unit, Freie Universität Berlin, Berlin, Germany, ²Bernstein Center for Computational Neuroscience Berlin, Berlin, Germany, ³Institute of Cognitive Science, University of Osnabrück, Osnabrück, Germany
- 2106 Dynamic transitions of consciousness: An EEG study using DMT**
Christopher Timmermann¹, Leor Roseman¹, Luke Williams², Suresh Muthurukumaraswamy³, Amanda Feilding⁴, Robert Leech⁵, David Nutt¹
¹Imperial College London, London, United Kingdom, ²Imperial College London, London, United States Minor Outlying Islands, ³The University of Auckland, Auckland, New Zealand, ⁴The Beckley Foundation, Oxford, United Kingdom, ⁵Imperial College London, London, [Select a State]
- 2107 Orientation decoding in V1 during Motion-Induced Blindness using high-field high-resolution fMRI**
Johanna Bergmann¹, Fiona McGruer¹, Lucy Petro¹, Lars Muckli¹
¹University of Glasgow, Glasgow, United Kingdom

PERCEPTION AND ATTENTION

Perception and Attention Other

- 2109 Effect Of Continuous Touch On Interoceptive Cortex Is Modified By The Operator Tactile Attention**
Francesco Cerritelli^{1,2}, Piero Chiacchiaretta^{1,3}, Francesco Gambi¹, Antonio Ferretti^{1,3}
¹Department of Neuroscience, Imaging and Clinical Sciences - University of Chieti-Pescara, Chieti, Italy, ²C.O.M.E. Collaboration, Pescara, Italy, ³ITAB - Institute for Advanced Biomedical Technologies, Chieti, Italy

- 2110 Functional Connectivity-Based Predictors of Naturalistic Reading Comprehension**
David Jangraw¹, Javier GonzalezCastillo¹, Daniel Handwerker¹, Merage Ghane², Monica Rosenberg³, Puja Panwar¹, Benjamin Gutierrez¹, Peter Bandettini¹
¹Section on Functional Imaging Methods, NIMH, Bethesda, MD, ²Virginia Polytechnic Institute and State University, Blacksburg, VA, ³Yale University, New Haven, CT
- 2111 Attention matters - Somatosensory processing for the leg is altered by attention after stroke.**
Sue Peters¹, Katlyn Brown², Todd Handy³, S. Jayne Garland⁴, W. Richard Staines⁵, Lara Boyd¹
¹University of British Columbia, Vancouver, Canada, ²University of British Columbia, Vancouver, BC, ³University of British Columbia, Vancouver, British Columbia, ⁴Western University, London, Canada, ⁵University of Waterloo, Waterloo, Canada
- 2112 Effect of multi-tasking and external distractors on primary task performance: an iEEG study**
Diego Mac-Auliffe^{1,2}, Jean-Philippe Lachaux¹, Mathilde PETTON², Sylvain Rheims³, Philippe Kahane⁴, Anne-Claire Croizé⁴
¹Lyon Neuroscience Research Center, INSERM U1028, CNRS UMR5292, Brain Dynamics and Cognition Team, Lyon, France, ²Lyon 1 University, Lyon, France, ³Department of neurology, hospital for neurology and neurosurgery, Hospices Civils de Lyon, Lyon, France, ⁴CHU Grenoble and Department of Neurology, INSERM U704, F-38043 Grenoble, Grenoble, France
- 2113 Pre-stimulus alpha contributes differentially to the post-stimulus response**
Antony Passaro¹, Cameron Good², Jean Vettel²
¹U.S. Army Research Laboratory, Los Angeles, CA, ²U.S. Army Research Laboratory, Aberdeen, MD

PERCEPTION AND ATTENTION

Perception: Auditory/Vestibular

- 2114 Manifold confounders hamper the delineation of vestibular responses in functional neuroimaging**
Ria Maxine Ruehl^{1,2,3}, Thomas Stephan^{1,2,3}, Marianne Dieterich^{1,2,3,4}, Peter zu Eulenburg^{1,2,3}
¹German Center for Vertigo and Balance Disorders, Munich, Germany, ²Department of Neurology, Munich, Germany, ³Ludwig-Maximilians-University, Munich, Germany, ⁴Munich Cluster for Systems Neurology (SyNergy), Munich, Germany
- 2115 Integration of Auditory- and Vestibular Processing at the Posterior Superior Temporal Gyrus and Caud**
Sun-Young Oh¹, Rainer Boegle², Matthias Ertl³, Peter zu Eulenburg⁴, Thomas Stephan⁴, Marianne Dieterich⁵
¹Chonbuk National University Hospital, Jeonju, Korea, Republic of, ²Ludwig-Maximilians University, munchen, Germany, ³LMU, Munich, Germany, ⁴Ludwig-Maximilians-University, Munich, Germany, ⁵Department of Neurology, Munich, Germany
- 2116 Functional asymmetries in amplitude modulation processing can be elucidated by fMRI-guided TMS.**
Adam Partridge¹, Faith Marsh¹, Elenor Morgenroth¹, Sophia Tsitsopoulou¹, Mark Hymers¹
¹University of York, York, United Kingdom

- 2117 Implicit discrimination of auditory regularities in subcortical and temporo-parietal regions**
Athina Tzovara¹, Laurent Spinelli², Bogdan Draganski³, Margitta Seeck², Marzia De Lucia³
¹University of Zurich, Zurich, Switzerland, ²Hôpitaux Universitaires Genève, Geneva, Switzerland, ³Laboratoire de Recherche en Neuroimagerie, Lausanne University Hospital and University of Lausanne, Lausanne, Switzerland
- 2118 Compensation of neglect is accompanied by fc changes in multisensory vestibular and visual areas**
Julian Conrad^{1,2}, Rainer Boegle^{2,3}, Matthias Ertl^{1,3}, Thomas Brandt⁴, Marianne Dieterich^{1,2,3}
¹Department of Neurology, LMU, Munich, Germany, ²German Center for Vertigo and Balance Disorders - IFBLMU (DSGZ), LMU, Munich, Germany, ³Graduate School for systemic Neuroscience (GSN), LMU, Munich, Germany, ⁴Clinical Neuroscience, LMU, Munich, Germany
- 2119 Tonotopic mapping of the auditory cortex using a high resolution 7T Scanner**
Gaelle Doucet¹, Rafael O'Halloran², Hannah Krinsky², Alejandro Paulino², Priti Balchandani², Sophia Frangou²
¹Icahn School of Medicine at Mount Sinai, New York, NY, ²Icahn School of Medicine at Mount Sinai, New York, United States
- 2120 Changes in brain network topology in vestibular neuritis using graph theory**
JAHEE KIM¹, Hyun-Jung Ahn², Hyejin Kang³, Eunkyung Kim⁴, Hyo-Jeong Lee²
¹Hallym university medical center, Anyang, Korea, Republic of, ²Hallym University College of Medicine, Anyang, Korea, Republic of, ³Seoul National University, Seoul, Korea, Republic of, ⁴SNUH, SEOUL, Korea, Republic of
- 2121 Using diffusion and functional MRI at 7T to localize primary auditory cortex in-vivo**
Omer Faruk Gulban¹, Elia Formisano¹, Michelle Moerel¹, Essa Yacoub², Christophe Lenglet², Federico De Martino¹
¹Maastricht University, Maastricht, Netherlands, ²University of Minnesota, Minneapolis, MN
- 2122 Lateralization of activations during uni- and bilateral galvanic vestibular stimulation revisited**
Thomas Stephan¹, Rainer Boegle¹, Carolin Koriath², Marianne Dieterich¹
¹Ludwig-Maximilians-Universität, Munich, Germany, ²University College London, London, United Kingdom
- 2123 Cerebral voice- and face-processing networks in the absence of voices and faces – an rs-fMRI study**
Benjamin Kreifelts¹, Dirk Wildgruber², Thomas Ethofer³, Heike Jacob², Carolin Brück¹, Michael Erb⁴, Kathrin Karle¹
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- 2124 Modulation of corticocortical interactions during concurrent visual and vestibular stimulus**
Hellen Della-Justina¹, Anderson Winkler², Humberto Gamba¹, Edson Amaro Jr.³
¹Universidade Tecnológica Federal do Paraná, Curitiba, PR, ²Oxford University, Oxford, United Kingdom, ³Universidade de São Paulo, São Paulo, SP
- 2125 An fMRI analysis of reproducible brain activity while listening to real-world sounds**
Po-Chih Kuo¹, Yi-Li Tseng², Philip E. Cheng¹, Michelle Liou¹
¹Institute of Statistical Science, Academia Sinica, Taipei, Taiwan, ²Department of Electrical Engineering, Fu Jen Catholic University, New Taipei City, Taiwan

- 2126 Brain network in congenital deaf children for prediction of prognosis after cochlear implantation**
Seunggyun Ha¹, Hyo-Jeong Lee², Hyejin Kang¹, Eunjoo Kang³, Seung-Ha Oh¹, Dong Soo Lee¹
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PERCEPTION AND ATTENTION

Perception: Multisensory and Crossmodal

- 2127 Task-specific reorganization of the auditory cortex in deaf humans**
Łukasz Bola^{1,2}, Maria Zimmermann^{1,3}, Piotr Mostowski⁴, Katarzyna Jednoróg⁵, Artur Marchewka², Paweł Rutkowski⁴, Marcin Szwed¹
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- 2128 Differences in CNS Thermoregulatory Response between Subjects with and without Brown Adipose Tissue**
Otto Muzik¹, Vaibhav Divadkar¹
¹Wayne State University, Detroit, MI
- 2129 The effect of cardio-visual feedback on rubber hand illusion**
Atsushi Yumoto¹, Sotaro Shimada¹
¹Meiji university, Kawasaki, Japan
- 2130 Cross-modal phase entrainment improves auditory gap detection performance**
Anna-Katharina Bauer¹, Sylvain Baillet², Stefan Debener¹
¹University of Oldenburg, Oldenburg, Germany, ²McGill University, Montreal, Canada
- 2131 Is the Middle Longitudinal Fasciculus involved in audio-visual integration?**
Chiara Maffei¹, Jorge Jovicich¹, Laurent Cohen², Katarzyna Siuda-Krzywicka², Sami Abboud², Paolo Bartolomeo², Gabriele Miceli¹
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- 2132 Multisensory causal inference evolves late in the processing of audiovisual numeric signals**
Tim Rohe¹, Ann-Christine Ehls^{1,2}, Andreas Fallgatter^{1,2,3}, Uta Noppeney⁴
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- 2133 Investigating the rubber hand illusion using electrocorticography**
Arvid Guterstam¹, Kelly Collins², Jeneva Cronin³, Kurt Weaver³, Hugo Zeberg¹, Jeffrey Ojemann³, Henrik Ehrsson¹
¹Karolinska Institutet, Stockholm, Sweden, ²University of Washington, Seattle, United States, ³University of Washington, Seattle, WA

- 2134 Changes in functional connectivity patterns in functional dizziness**
Pauline Popp¹, Peter zu Eulenburg², Thomas Stephan¹, Marianne Dieterich³
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PERCEPTION AND ATTENTION

Perception: Pain and Visceral

- 2135 The propensity to develop central sensitization is not correlated to pain relevant brain structures**
Morten Hansen¹, Mohammad Asghar¹, Jørn Wetterslev², Christian Pipper³, Johan Mårtensson⁴, Lino Becerra⁵, Anders Christensen⁶, Janus Nybing⁶, Inger Havsteen⁶, Mikael Boesen⁶, Jørgen Dahl⁷
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- 2136 Features of Somatosensory Finger Representation Associated with Complex Regional Pain Syndrome**
Jörg Pfannmöller¹, Sebastian Strauß¹, Inga Langner¹, Martin Lotze¹
¹University Medicine Greifswald, Greifswald, Germany
- 2137 An fMRI study of brainstem and hypothalamic nuclei mediating blood pressure control in humans**
Florian Beissner¹, Patrick Stahl¹, Karsten Heusser¹, Jens Tank¹
¹Hannover Medical School, Hannover, Germany
- 2138 Reduced low frequency oscillations in the dynamic pain connectome of chronic pain patients**
Anton Rogachov^{1,2}, Joshua Cheng^{1,2}, Kasey Hemington^{1,2}, Junseok Kim^{1,2}, Rachael Bosma^{1,2}, Robert Inman^{1,2}, Karen Davis^{1,2}
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- 2139 Measuring Subjective Pain in Cold Pressor Test by means of fNIRS**
Shilan Mohammadi¹, Seyed Kamaledin Setarehdan²
¹N.A, Tehran, Iran, Islamic Republic of, ²University of Tehran, Tehran, Iran, Islamic Republic of
- 2140 Roles of cortical thickness and anxiety in individual difference in motion sickness susceptibility**
Xuejuan Yang¹, Tianshi Yang¹, Jingjing Zhu¹, Yang Yu¹, Ningbo Fei¹, Peng Liu¹, Jinbo Sun¹, Wei Qin¹
¹School of Life Science and Technology, Xidian University, Xi'an, China
- 2141 Auditory versus aural nociception: modality-dependent representations of painful sensations**
Peter zu Eulenburg¹, Rolf-Detlef Treede², Andre Rupp³, Nadine Hummel¹, Ulf Baumgärtner²
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- 2142 Altered Brain Response to Highly Palatable Foods in Chronic Low Back Pain**
Xiao Deng¹, Dana Small², Peter Whang², Hani Mowafi², Marga Veldhuizen³, Paul Geha²
¹Chongqing Medical University, Chongqing, China, ²Yale University, New Haven, CT, ³The John B. Pierce Laboratory, New Haven, CT
- 2143 Differentiating Brain Activation Between Sensitization and Maintenance of Pain**
Amy Sentis¹, Christine Law¹, Ayo Adediji¹, Philippe Goldin², James Gross¹, Sean Mackey¹
¹Stanford University, Palo Alto, CA, ²University of California Davis Health System, Sacramento, CA
- 2144 Disease-Related Microstructural Brain Differences in Females with Localized Provoked Vulvodynia**
Arpana Gupta¹, Davis Woodworth², Andrea Rapkin³, Jean Stains², Kirsten Tillisch⁴, Benjamin Ellingson⁵, Emeran Mayer⁴, Jen Labus⁴
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- 2145 Using Parametric Analysis of fMRI to differentiate cognitive modulation strategies for pain**
Christine Law¹, Ayo Adediji¹, Amy Sentis¹, Jingyuan Chen¹, Gary Glover¹, Philippe Goldin², James Gross¹, Sean Mackey¹
¹Stanford University, Stanford, CA, ²University of California Davis Health System, Sacramento, CA
- 2146 No modulation of the default mode network with increasing pain in fibromyalgia patients and controls**
Marta Ceko¹, Eleni Frangos², Emily Richards², Binqun Wang², Petra Schweinhardt³, Mary Catherine Bushnell²
¹University of Colorado, Boulder, CO, ²NIH, Bethesda, MD, ³McGill University, Montreal, Canada
- 2147 Comparable placebo-related DLPFC activity in fibromyalgia patients and healthy subjects**
Eleni Frangos¹, Marta Ceko², Emily Richards¹, Binqun Wang¹, Petra Schweinhardt³, Mary Catherine Bushnell¹
¹NIH, Bethesda, MD, ²University of Colorado, Boulder, CO, ³McGill University, Montreal, Canada
- 2148 The influence of explicit pain labeling on pain-related brain processing**
Marta Ceko¹, Choong-Wan Woo², Marina Lopez-Sola³, Erin Biringen², Jordan Griffin⁴, Tor Wager³
¹CU Boulder, Boulder, CO, ²Institute of Cognitive Science, Boulder, United States, ³Institute of Cognitive Science, University of Colorado Boulder, Boulder, United States, ⁴Institute of Cognitive Science, Boulder, United States
- 2149 Paracentral lobule-insula connectivity gradients in healthy men and women**
Lisa Kilpatrick¹, Kirsten Tillisch¹, Cody Ashe-McNalley², Emeran Mayer³, Jennifer Labus²
¹UCLA, Los Angeles, CA, ²David Geffen School of Medicine at UCLA, Los Angeles, CA, ³Oppenheimer Center for Neurobiology of Stress, Los Angeles, CA
- 2150 Altered intrinsic network connectivity contributes to visual hypersensitivity in Fibromyalgia**
Tony Larkin¹, Eric Ichresco¹, Chelsea Cummingford¹, Steven Harte¹, Daniel Clauw¹, Richard Harris¹
¹University of Michigan, Ann Arbor, MI

PERCEPTION AND ATTENTION

Perception: Tactile/Somatosensory

- 2151 Discontinuity of cortical gradients reflects sensory impairment**
Noam Saadon Grosman^{1,2}, Zohar Tal², Eyal Itshayek³, Amir Amedi^{2,4}, Shahar Arzy^{1,2}
¹Department of Neurology, Hadassah Hebrew University Medical Center, Jerusalem, Israel, ²Department of Medical Neurobiology, Faculty of Medicine, The Hebrew University, Jerusalem, Israel, ³Department of Neurosurgery, Hadassah Hebrew University Medical Center, Jerusalem, Israel, ⁴The Edmond and Lily Safra Center for Brain Sciences (ELSC), The Hebrew University, Jerusalem, Israel
- 2152 Effects of acute 3,4-methylenedioxymethamphetamine (MDMA) on tactile network connectivity**
Malin Bjornsdotter¹, Alexander Lebedev², Leor Roseman³, David Erritzoe⁴, Amanda Feilding⁵, Predrag Petrovic⁶, David Nutt³, Robin Carhart-Harris³
¹University of Gothenburg, Gothenburg, Sweden, ²Aging Research Center, Karolinska Institutet & Stockholm University, Stockholm, Sweden, ³Imperial College London, London, United Kingdom, ⁴Centre for Neuropsychopharmacology, Division of Brain Sciences, Faculty of Medicine, Imperial College, London, United Kingdom, ⁵The Beckley Foundation, Oxford, United Kingdom, ⁶Department of clinical neuroscience, Karolinska Institutet, Stockholm, Sweden
- 2153 Investigation of cortical activity related to perception of tactile hardness**
Jihyun Kim¹, Yerin Park¹, Jiwon Yeon¹, Junsuk Kim², Jang-Yeon Park³, Sung-Phil Kim¹
¹Ulsan National Institute of Science and Technology, Ulsan, Korea, Republic of, ²Max Planck Institute for Biological Cybernetics, Tuebingen, Germany, ³Sungkyunkwan University, Suwon, Korea, Republic of
- 2154 Negative and positive BOLD signal changes in contralateral S1 to electrical finger stimulation**
Birol Taskin¹, Susanne Holtze¹, Arno Villringer¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
- 2155 Aberrant Somatosensory Gating and Functional Connectivity in Children with Cerebral Palsy**
Alex Wiesman¹, Elizabeth Heinrichs-Graham¹, Tony Wilson¹, Max Kurz¹
¹University of Nebraska Medical Center, Omaha, NE
- 2156 Sensorimotor activities are differentially modulated by observing normal and abnormal hand movements**
Chia-Hsiung Cheng¹, Yi-Jhan Tseng², Chia-Yih Liu³
¹Chang Gung University, Taoyuan, Taiwan, ²Hsinchu MacKay Memorial Hospital, Hsinchu, Taiwan, ³Chang Gung Memorial Hospital, Linkuo, Taiwan
- 2157 Differences in EEG response traits to vibrotactile stimuli at different frequencies**
Mi-Hyun Choi¹, Hyung-Sik Kim¹, Woo-Ram Kim¹, Soon-Cheol Chung¹
¹Konkuk University, Chungju, Korea, Republic of
- 2158 On the spatial resolutions for fMRI mapping of finger representations in the primary somatosensory**
Renate Schweizer^{1,2}, Ariane Holler¹, Melanie Bueckner^{1,2}, Jens Frahm¹
¹Biomedizinische NMR Forschungs GmbH, MPI biophysical Chemistry, Goettingen, Germany, ²Leibniz-ScienceCampus Primate Cognition, Goettingen, Germany

- 2159 Preterm neonates perceive missing stimuli in a regular tactile sequence: A DCS study**
Victoria Dumont¹, Martina Giovannella², Daniel Zuba³, Sylvain Lebargy⁴, Turgut Durduran², Marc Zabalia⁵, Bernard Guillois⁶, Nadège Roche-Labarbe³

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- 2160 Corticokinematic coherence is stronger in old than young individuals**
Harri Piitulainen¹, Simon Walker², Santtu Seipäjärvä², Viki-Veikko Elomaa², Simo Monto², Janne Avela², Tiina Parviainen²

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PERCEPTION AND ATTENTION

Perception: Visual

- 2161 Neuronal Correlates of Face Detection during Perceptual Uncertainty**

Carolyn Wagener¹, Andreas Jansen²

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- 2162 Neural dynamics of visual ambiguity resolution by perceptual prior**

Matthew Flounders^{1,2}, Carlos González-García^{3,2}, Richard Hardstone^{1,2}, Biyu He^{1,2}

¹New York University Langone Medical Center, Neuroscience Institute, New York, NY, ²National Institutes of Health, NINDS, Bethesda, MD, ³University of Granada, Granada, Spain

- 2163 Human iEEG Indicates Increasing Suppression of Saccade-Related Transients along the Visual Hierarchy**

Tal Golan¹, Ido Davidesco², Meir Meshulam³, David Groppe^{4,5}, Pierre Mégevand^{4,5}, Erin Yeagle^{4,5}, Matthew Goldfinger^{4,5}, Michal Harel³, Lucia Melloni^{6,2}, Charles Schroeder^{7,8}, Leon Deouell¹, Ashesh Mehta^{4,5}, Rafael Malach³

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- 2164 Development Differentially Sculpts Population Receptive Fields Across Human Visual Cortex**

Jesse Gomez¹, Vaidehi Natu¹, Brianna Jeska¹, Michael Barnett², Kalanit Grill-Spector¹

¹Stanford University, Stanford, CA, ²University of Pennsylvania, Philadelphia, PA

- 2165 Brain-Computer Interface for Image Retrieving based on Real-time fMRI**

Chi Zhang¹, Linyuan Wang¹, Ying Zeng¹, Hui Gao¹, Bin Yan¹, Li Tong¹

¹China National Digital Switching System Engineering and Technological Research Center, Zhengzhou, China

- 2166 Compromised Intrinsic Functional Connectivity of the Face Network in Developmental Prosopagnosia**

Yuan-Fang Zhao¹, Zonglei Zhen¹, Yiyang Song¹, Jia Liu²

¹State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China, ²School of Psychology, Beijing Normal University, Beijing, China

- 2167 The Sledge Runner: A White Matter Pathway for Spatial Navigation**

Ahmad Beyh¹, Pedro Luque Laguna¹, Francisco De Santiago Requejo¹, Flavio Dell'Acqua¹, Dominic ffytche², Marco Catani¹

¹NatBrainLab, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, United Kingdom, ²Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, United Kingdom

- 2168 Tracing Structural Plasticity following Graded Obscuring of the Visual Field**

Shir Hofstetter^{1,2}, Norman Sabbah^{3,4,5,6}, Saddek Mohand-Saïd^{3,4,5,6}, José-Alain Sahel^{3,4,5,6,7,8}, Christophe Habas^{3,4,5,9}, Avinoam Safran^{3,4,5,6,10}, Amir Amedi^{1,2,11,3,4,5}

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- 2169 Distributed cortical networks represent visual object categories**

Haiguang Wen¹, Junxing Shi¹, Yizhen Zhang¹, Kuan Han¹, Zhongming Liu¹

¹Purdue University, West Lafayette, IN

- 2170 Temporal dynamics of face processing circuitry: ERP source analysis guided by fMRI.**

Ana Maria Castro Laguardia¹, Agustín Lage-Castellanos^{2,3}, Ela Olivares⁴, Johanna Pérez¹, Joanna Jaén¹, Jaime Iglesias⁴, Pedro Valdés-Sosa⁵, María Antonieta Bobes¹

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- 2171 Using frequency tagged MEG to compare binocular rivalry to monocular pattern rivalry**

Elizabeth Bock¹, Sylvain Baillet¹, Jeremy Fesi¹, Janine Mendola¹

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- 2172* Deep Recurrent Neural Network Reveals A Hierarchy of Temporal Receptive Window in the Visual Cortex**

Junxing Shi¹, Haiguang Wen¹, Yizhen Zhang¹, Kuan Han¹, Zhongming Liu¹

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- 2173 Decoding Cortical Activity with Variational Autoencoder Supports Direct Visual Reconstruction**

Kuan Han¹, Haiguang Wen¹, Junxing Shi¹, Kun-Han Lu¹, Zhongming Liu¹

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- 2174 Noise-induced nonlinear neural dynamics as an individual trait**

Keiichi Kitajo¹, Takumi Sase¹, Yoko Mizuno¹, Hiromichi Suetani²

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- 2175 Correlation between gamma-band activity and subjective confidence during 3D SFM**

Sunao Iwaki¹

¹AIST, Tsukuba, Japan

- 2176 Cortical Stability Reflects Level of Consciousness during Perceptual Decision Making**
Niels Kloosterman¹, Douglas Garrett¹, Johannes Jacobus Fahrenfort²
¹Max Planck UCL Centre for Computational Psychiatry and Ageing Research, Berlin, Germany, ²VU University, Amsterdam, Netherlands
- 2177 How does blindness onset impact on the structure of the optic radiation?**
Chiara Maffei¹, Isabella Giachetti¹, Stefania Mattioni^{2,1}, Ceren Battal¹, Mohamed Rezk², Olivier Collignon^{2,1}, Jorge Jovicich¹
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- 2178 What our morning coffee tells us about face perception**
Ina Hübener¹, Andreas Jansen¹
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- 2179 Making a scene: Neural representation of visual features in object and scene perception**
Matthew Lowe¹, Jason Rajsic¹, Jason Gallivan², Susanne Ferber¹, Jonathan Cant¹
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- 2180 Retinotopic Biases in Object and Scene Feedback to V1 are Task-Dependent**
Matthew Bennett¹, Lucy Petro¹, Lars Muckli¹
¹University of Glasgow, Glasgow, United Kingdom
- 2181 Comparison of Population Receptive Field Characteristics Between Different Retinotopic Stimuli**
Joana Carvalho¹, Funda Yildirim², Frans W. Cornelissen¹
¹Laboratory of Experimental Ophthalmology, University Medical Center Groningen, Groningen, The Netherlands, ²Brain and Vision Research Laboratory, Boston University of Biomedical Engineering, Boston, United States
- 2182 Scene Segmentation of Natural Images in Human Early Visual Areas**
Paolo Papale¹, Andrea Leo^{2,1}, Luca Cecchetti¹, Giacomo Handjaras¹, Kendrick Kay³, Pietro Pietrini¹, Emiliano Ricciardi¹
¹MoMiLab, IMT School for Advanced Studies, Lucca, Italy, ²Research Center 'E. Piaggio', University of Pisa, Pisa, Italy, ³Center for Magnetic Resonance Research, Department of Radiology, University of Minnesota, Twin Cities, Minneapolis, MN
- 2183 A Voxel-wise, Model-based Motion Localiser for the Human Motion Complex (hMT+)**
Marian Schneider¹, Ingo Marquardt¹, Federico De Martino¹, Rainer Goebel¹
¹Maastricht University, Maastricht, Netherlands
- 2184 Effects of segmentation on population receptive field mapping in visual cortex**
Allan Hummer¹, Lea Kovač¹, Anna Ledolter¹, Markus Ritter¹, Michael Woletz¹, Martin Tik¹, Ursula Schmidt-Erfurth¹, Christian Windischberger¹
¹Medical University of Vienna, Vienna, Austria
- 2185 Orientation coding in Cartesian and polar coordinates for contour extraction**
En Zhang^{1,2}, Yin Yan^{1,2}, Xiaoping Xiang¹, Yutai Shen¹, Mingguai Chen¹, Wu Li^{1,2}
¹State Key Laboratory of Cognitive Neuroscience and Learning, Beijing, China, ²IDG/McGovern Institute for Brain Research, Beijing, China

- 2186 The temporal dynamics of individually unique object representations.**
Ian Charest¹, Daniel Lindh^{1,2}, Sara Asseconci¹, Matthias Treder¹
¹School of Psychology, University of Birmingham, Birmingham, United Kingdom, ²Department of Brain and Cognition, University of Amsterdam, Amsterdam, Netherlands
- 2187* Differential contributions of transient and sustained channels across the visual hierarchy**
Anthony Stigliani¹, Brianna Jeska¹, Kalanit Grill-Spector¹
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- 2188 Predicting upcoming scene information in early visual cortex**
Lucy Petro¹, Fabiana Carvalho², Angus Paton¹, Fraser Smith³, Lars Muckli¹
¹University of Glasgow, Glasgow, United Kingdom, ²University of Sao Paulo, Sao Paulo, Brazil, ³University of East Anglia, Norwich, United Kingdom
- 2189 Investigating Auditory Input to Early Visual Areas**
Angus Paton¹, Lucy Petro¹, Lars Muckli¹
¹University of Glasgow, Glasgow, United Kingdom
- 2190 The speed of light in the human brain: mapping propagation from retina to thalamus to cortex**
Sarang Dalal¹, Britta Westner^{1,2}, Christopher Bailey¹, Martin Dietz¹, Tzvetan Popov²
¹Aarhus University, Aarhus, Denmark, ²University of Konstanz, Konstanz, Germany
- 2191 TMS selectively modulates cortical networks underlying perceptual decision making**
Susan Hilbig¹, Lawrence Appelbaum¹, David Jangraw², Austin Harrison¹, Tristan Jones¹, Paul Sajda³, Sarah Lisanby², Bruce Luber²
¹Duke University School of Medicine, Durham, NC, ²National Institute of Mental Health, Bethesda, MD, ³Columbia University, New York, NY
- 2192 Modelling contextual sensitivity in early visual cortex using high-resolution 7T fMRI.**
Andrew Morgan¹, Federico De Martino², Matthew Bennett¹, Lucy Petro¹, Rainer Goebel³, Lars Muckli¹
¹University of Glasgow, Glasgow, United Kingdom, ²Maastricht University, Maastricht, Netherlands, ³Brain Imaging Center, University of Maastricht, Maastricht, Netherlands
- 2193 The neural substrate of the development of other race effect: An fNIRS study**
Guifei Zhou¹, Jiangang Liu¹
¹Beijing Jiaotong University, Beijing, China

PERCEPTION AND ATTENTION

Sleep and Wakefulness

- 2194 Effects of Acoustic Stimulation during a Nap on Encoding-Related Activity**
Ju Lynn Ong¹, Amiya Patanaik¹, Nicholas Chee¹, Xuan Kai Lee¹, Jia-Hou Poh¹, Michael Chee¹
¹Duke-NUS Medical School, Singapore, Singapore
- 2195 Effect of a nap on resting state functional connectivity following a night of sleep restriction**
Jesica Tandi¹, Ju Lynn Ong¹, Amiya Patanaik¹, Michael Chee¹
¹Duke-NUS Medical School, Singapore, Singapore

- 2196 Thalamocortical reactivation during sleep spindles following declarative learning**
Aude Jegou¹, Manuel Schabus², Olivia Gosseries³, Brigitte Dahmen⁴, Geneviève Albouy⁵, Martin Desseilles⁶, Virginie Sterpenich⁷, Christophe Phillips³, Pierre Maquet³, Christophe Grova¹, Thien Thanh Dang-Vu¹
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- 2197 Diurnal Functional Connectivity Patterns of Neural Network in Healthy Adult Brain**
Chunxiang Jiang¹, Xiaojing Long¹, Hang Zhang¹, Lijuan Zhang¹
¹Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China
- 2198 Sleep Loss is Associated with Medial Prefrontal Cortex Activity During an Emotional Distracter Task**
Annika Dimitrov¹, Mazda Adli¹, Jonathan Schaaake¹, Armin Ligdorf¹, Nicole Oei², Henrik Walter¹, Ilya Veer¹
¹Charité - Universitätsmedizin Berlin, Department of Psychiatry and Psychotherapy CCM, Berlin, Germany, ²University of Amsterdam, Department of Developmental Psychology, Amsterdam, Netherlands
- 2199 Sleep quality modulates activity and connectivity of the left anterior insula in emotional empathy**
Veronica Guadagni¹, Ford Burles¹, Chelsie Hart¹, Michele Ferrara², Giuseppe Iaria¹
¹University of Calgary, Calgary, Alberta, ²University of L'aquila, L'aquila, Italy
- 2200 Sleep deprivation significantly influences the dynamics of resting-state functional networks**
Huaze Xu¹, Hui Shen¹, Ling-Li Zeng¹, Dewen Hu¹
¹National University of Defense Technology, Changsha, Hunan
- 2201* Data-driven estimates of vigilance are linked with fluctuations in task performance**
Catie Chang¹, Jacco de Zwart¹, Hendrik Mandelkow¹, Jeff Duyn¹
¹NIH, Bethesda, MD
- 2202 Investigating the Relationship between Meditation-Induced Changes in Waking and Sleep EEG**
Daniela Dentico¹, Tammi Kral¹, David Bachhuber¹, Brady Riedner¹, Fabio Ferrarelli², Giulio Tononi¹, Richard Davidson¹, Antoine Lutz³
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PHYSIOLOGY, METABOLISM AND NEUROTRANSMISSION

Cerebral Metabolism and Hemodynamics

- 2203 ASL-MRICloud: Towards a comprehensive online tool for ASL data analysis**
Yang Li^{1,2}, Peiying Liu¹, Yue Li³, Hongli Fan¹, Shin-Lei Peng⁴, Denise Park⁵, Karen Rodrigue⁵, Hangyi Jiang¹, Andreia Faria¹, Can Ceritoglu⁶, Michael Miller⁶, Susumu Mori¹, Hanzhang Lu¹
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- 2204 Exercise-induced cerebrovascular changes are accounted for by changes in C02**
Jessica Steventon¹, Joseph Whittaker¹, Catherine Foster¹, Alex Hansen², Michael Tymko², Daniela Flueck², Kevin Wildfong², Phil Ainslie², Kevin Murphy¹
¹Cardiff University, Cardiff, United Kingdom, ²Centre for Heart, Lung, and Vascular Health, University of British Columbia, Kelowna, Canada
- 2205 Local and global functional connectivity are linked to gray-matter myelination and metabolic rate**
Ehsan Shokri Kojori¹, Nora Volkow², Sukru Demiral¹, Dardo Tomasi¹
¹NIH, Bethesda, MD, ²NIDA, Bethesda, MD
- 2206 The post-stimulus BOLD undershoot is due to CBF-CBV uncoupling: a multi-echo fMRI study**
Martin Havlicek¹, Dima Ivanov¹, Benedikt A. Poser¹, Kamil Uludag²
¹Maastricht University, Maastricht, Netherlands, ²Maastricht University, Maastricht, Netherlands
- 2207 Mapping hemodynamic delay times from Human Connectome Project Resting State Data**
Blaise Frederick¹, Kimberley Lindsey (dec.)¹, Sinem Erdogan^{2,1}, Lia Hocke^{3,1}, Yunjie Tong^{4,1}
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PHYSIOLOGY, METABOLISM AND NEUROTRANSMISSION

Neurophysiology of Imaging Signals

- 2208 Resting State Hemodynamic Response Functions Measured with BOLD MRI and Optical Intrinsic Signals**
Wen-Ju Pan¹, Jacob Billings¹, Maysam Nezafati¹, Waqas Majeed¹, Shella Keilholz¹
¹Emory University/Georgia Institute of Technology, Atlanta, GA
- 2209 Regional GABA concentrations modulate inter-network resting-state functional connectivity**
Xi Chen¹, Xiaoying Fan¹, Yuzheng Hu², Chun Zuo¹, Dost Ongur¹, Fei Du¹
¹McLean Hospital, Belmont, MA, ²National Institute on Drug Abuse, Baltimore, MD
- 2210 BOLD Signal Amplitude and Electrical Activity during task performance in MS and Healthy Subjects**
Mark Lowe¹, Wanyong Shin¹, Balu Krishnan¹, Lael Stone¹
¹Cleveland Clinic, Cleveland, OH

- 2211 Identifying neural contributions to high frequency dynamics in the fMRI signal at 9.4 Tesla**
Laura Lewis^{1,2}, Kavin Setsompop^{2,3}, Johannes Stelzer^{4,5}, Jonas Bause⁵, Philipp Ehses^{4,5}, Klaus Scheffler^{4,5}, Bruce Rosen^{2,3}, Jonathan Polimeni^{2,3}
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- 2212 Different Modulated Laser Acupuncture Induced the alternations in Resting-state Network**
Chang-Wei Hsieh¹, Chao-Hsien Hsieh², Chia-Wei Li³, Qwa-Fun Wang⁴, Jyh-Horng Chen⁵
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PHYSIOLOGY, METABOLISM AND NEUROTRANSMISSION

Pharmacology and Neurotransmission

- 2213 Effective connectivity changes in LSD-induced altered states of consciousness**
Katrin Preller^{1,2}, Adeel Razi^{2,3}, Philipp Stämpfli¹, Peter Zeidman², Karl Friston², Franz Vollenweider¹
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- 2214 Functional segregation of the dorsal striatum: acute pHMRI response to psychostimulants in rodents**
Marco Ganzetti^{1,2,3}, Thomas Mueggler², Juergen Dukart², Basil Kuennecke², Markus von Kienlin², Andreas Bruns²
¹KU Leuven, Movement Control & Neuroplasticity Research Group, Leuven, Belgium, ²Roche Pharma Research & Early Development, Neuroscience, Roche Innovation Center, Basel, Switzerland, ³ETH Zurich, Neural Control of Movement Lab, Zurich, Switzerland
- 2215 Acute Nicotine Affects White Matter Integrity of Fronto-Striato-Thalamic Circuits in Non-Smokers**
Stefan Ahrens¹, Imke Gillich¹, Christiane Thiel^{1,2}
¹Biological Psychology, Department of Psychology, European Medical School, C.v.O. University, Oldenburg, Germany, ²Cluster of Excellence "Hearing4all", C.v.O. University, Oldenburg, Germany
- 2216 Dopaminergic modulation of functional connectome in anesthetized macaque monkeys**
Kantaro Nishigori^{1,2}, Takayuki Ose¹, Masahiro Ohno¹, Masataka Yamaguchi¹, Joonas Autio¹, Atsushi Yoshida¹, Toru Negishi², Shunsuke Nakazawa², Naoko Urushino², Junji Ichihara², Takuya Hayashi¹
¹RIKEN Center for Life Science Technologies, Hyogo, Japan, ²Sumitomo Dainippon Pharma Co., Ltd., Osaka, Japan
- 2217 Neuromelanin-sensitive MRI as a proxy-measure of dopamine function in neuropsychiatric illness**
Clifford Cassidy¹, Luigi Zecca², Ragy Girgis³, Fabio Zucca², Jodi Weinstein³, Emanuele Ferrari², Seth Baker³, Caridad Benavides³, Un Kang³, David Sulzer³, Anissa Abi-Dargham⁴, Guillermo Horga³
¹The Royal Ottawa, Ottawa, ON, ²Institute of Biomedical Technologies, National Research Council, Milan, Italy, ³Columbia University, New York, NY, ⁴Stony Brook University, Stony Brook, NY

- 2218 Changes in global brain connectivity in LSD-induced states are attributable to the 5-HT_{2A} receptor**
Katrin Preller^{1,2}, Charles Schleifer², Philipp Stämpfli³, John Krystal², Franz Vollenweider³, Alan Anticevic²
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PHYSIOLOGY, METABOLISM AND NEUROTRANSMISSION

Physiology, Metabolism and Neurotransmission Other

- 2219 In vivo imaging of mitochondrial complex CM-1 in the human brain**
Yasuomi Ouchi¹, Tatsuhiro Terada¹, Masami Futatshubashi², Tomoyasu Bunai¹, Masamichi Yokokura¹, Etsuji Yoshikawa³, Hideo Tsukada²
¹Hamamatsu University School of Medicine, Hamamatsu, Japan, ²Hamamatsu Photonics KK, Hamamatsu, Japan, ³Hamamatsu Photonics KK, Hamamatsu, Japan
- 2220 Cardiac Vagal Control in Young Women: Brain Oscillations During Recognition of Ambiguous Sentences**
Michelle Liou¹, Jih-Fu Hsieh¹, Jonathan Evans², Lily Su³, Siddharth Nayak⁴, Juin-Der Lee⁵, Alexander Savostyanov⁶
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- 2221 FMRI to identify central modulators of the autonomous nervous system (ANS) stress response**
Philipp Sämann¹, Benedikt Brücklmeier¹, Ines Eidner¹, Immanuel Elbau¹, Christopher Eberle¹, Binder Elisabeth¹, Michael Czisch¹
¹Max Planck Institute of Psychiatry, Munich, Germany
- 2222 Functional ¹H-MRS of physiological activation by J-edited lactate detection**
Yury Koush¹, Robin de Graaf¹, Fahmeed Hyder¹
¹Yale University, New Haven, United States
- 2223* Linking cortical architecture and perception: a mechanistic role for GABA?**
James Kolasinski¹, John Logan², Emily Hinson², Daniel Manners², Amir Divanbeighi Zand², Tamar Makin³, Uzay Emir², Charlotte Stagg²
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Abstracts

Wednesday, June 28, 2017 and Thursday, June 29, 2017

* Indicates poster will also be presented during an Oral Session.

All Information listed, including author affiliations, appear as submitted during the Call For Abstracts.

DISORDERS OF THE NERVOUS SYSTEM

Alzheimer's Disease and Other Dementias

3000 Assessing longitudinal white matter changes in preclinical subjects at risk of Alzheimer's disease

Ashwathi Vipin¹, Kwun Kei Ng¹, Ji Fang¹, Yingwei Qiu¹, Ofer Pasternak², Juan Zhou¹

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3001* Anatomical evidence for an indirect pathway for repetition

Stephanie Forkel¹, Emily Rogalski², Niki Drossinos Sancho¹, Lucio D'Anna¹, Flavio Dell'Acqua¹, Cynthia Thompson³, Sandra Weintraub², Marsel Mesulam², Marco Catani⁴

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3002 Resting state fMRI connectivity in Alzheimer's disease and depression: A preliminary study

Tomoko HAMA^{1,2}, Michihiko Koeda¹, Amane TATENO¹, Tokuhiko KAWARA², Yoshiro Okubo¹

¹Nippon Medical School, Tokyo, Japan, ²Bunkyo Gakuin University, Tokyo, Japan

3003 Characterization of the fornix in Alzheimer's Disease: A Connectome diffusion tractography analysis

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3004 Disruption of the Functional Connectome in a 5XFAD Transgenic Mouse Model of Alzheimer's Disease

Shelli Kesler¹, Paul Acton¹, Vikram Rao¹, Rick Shin¹, Jim Ray¹

¹University of Texas MD Anderson Cancer Center, Houston, TX

3005 Profiles of White Matter Microstructure in a Population-Based Cohort of Elderly Patients.

Daniel Peterson¹, Natalie Koh¹, Mary Askren¹, Chris Gatenby¹, Tara Madhyastha¹, Thomas Grabowski¹

¹University of Washington, Seattle, WA

3006 Patterns of GM Volume with WM Connectivity in Comparison in Diagnosing Alzheimer's disease

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3007 Hierarchical Subcortical Shape Network Analysis in Alzheimer's Disease

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3008 Detection of Specific Tau Pathology Networks in Alzheimer's Disease

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3009 Healthy Elders with Subjective Cognitive Decline Exhibit AD-like Alterations in MEG Alpha Band

David López Sanz¹, Pilar Garcés¹, Ricardo Bruña¹, Noelia Serrano¹, Ramón López², María Luisa Delgado², Blanca Álvarez³, Fernando Maestú²

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3010 GWAS of decline in posterior cingulate glucose metabolism identifies a protective variant in SMEK1

Leigh Christopher¹, Valerio Napolioni¹, Raiyan Khan¹, Summer Han², Michael Greicius¹

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3011 BOLD variability in Alzheimer's disease: a marker of cognitive decline or cerebrovascular status?

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3012 Functional connectivity in the default mode network in individuals with subjective cognitive decline

Jodie Gawryluk¹, Vanessa Scarapicchia¹, Colette Smart¹

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3013 Abnormal Functional Connectivity in Mild Cognitive Impairment with White Matter Hyperintensities

Yong Liu¹, Wenhao Zhu², Hao Huang², Wei Wang²

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3014 Amyloid deposits in idiopathic normal-pressure hydrocephalus: an 18F-florbetaben study

Sang-Woo Lee¹, Shin Young Jeong¹, Kyunghun Kang², Uicheul Yoon³

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3015 MRI modalities determine classification accuracy in different types of dementia

Mark Bouts^{1,2,3}, Christiane Möller^{1,2,3}, Anne Hafkemeijer^{1,2,3}, John van Swieten^{4,5}, Elise Doppe^{4,6}, Wiesje van der Flier^{6,7}, Hugo Vrenken^{8,9}, Alle Meije Wink⁹, Yolande Pijnenburg⁶, Philip Scheltens⁶, Frederik Barkhof^{9,10}, Jeroen van der Grond², Mark de Rooij^{1,3}, Serge Rombouts^{1,2,3}

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3016 The Relationship of Tau Burden to Diffusivity across the Alzheimer's Disease Continuum

John West¹, Shannon Risacher¹, Karmen Yoder¹, Yu-Chien Wu¹, Eileen Tallman¹, James Fletcher¹, Martin Farlow¹, Liana Apostolova¹, Andrew Saykin¹

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3017 Prediction of conversion from MCI to AD using a multi-modal and multi-atlas approach

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3018 Increases in functional connectivity networks in presymptomatic progranulin mutation carriers

Suzee Lee¹, Ana Sias¹, Jesse Brown¹, Eena Kosik¹, Jersey Deng¹, Anna Vidovszky¹, Anna Karydas¹, Giovanni Coppola², Daniel Geschwind², Rosa Rademakers³, Howard Rosen¹, Bruce Miller¹, William Seeley¹

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3019 Distinct Alzheimer's disease progression patterns revealed by subtype and stage inference (SuStaln)

Alexandra Young¹, Razvan Marinescu¹, Neil Oxtoby¹, David Cash², Nick Fox², Jonathan Rohrer², Jonathan Schott², Daniel Alexander¹

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3020 Interaction of APOE and Cognitive Status on Functional Connectivity Strength within Default Network

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3021 Modeling and prediction of clinical symptom trajectories of MCI subjects using longitudinal data

Nikhil Bhagwat¹, Raihaan Patel², Gülebru Ayrancı², Vivian Lynn², Abdel Elshiekh², Aristotle Voineskos³, Mallar Chakravarty⁴

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3022 Aging effects on functional brain connectivity by Magnetic Resonance Imaging

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3023 Relationship between DTI metrics, executive function, and memory in Alzheimer's and older adults

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3024 Amplitude of low-frequency oscillations and episodic memory dysfunction in Alzheimer's Disease

Michele Veldsman¹, Natalia Egorova², Dan Mungas³, Amy Brodtmann⁴, Charles DeCarli³

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3025 Pharmacological fMRI Connectivity Analysis in Elderly Women: A Supervised Classification Study

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3026 A Classification Method in Alzheimer's Disease using MRI and PET

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3027 Disrupted structural connectome in subjective cognitive decline subjects

Qiuhui Bi¹, Ni Shu², Xiaoni Wang^{3,4}, Tengda Zhao², Ying Han^{3,4}

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3028 Grey Matter Atrophy in behavioural variant Frontotemporal Dementia two years before its diagnosis

Willem Bruin¹, Paul Zhutovsky¹, Everard Vijverberg², Yolande Pijnenburg³, Guido van Wingen⁴, Annemiek Dols⁵

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3029 Longitudinal assessment of cerebral blood flow changes in patients with mild cognitive impairment

Lars Michels¹, Rafael Meyer², Florian Riese², Ruth O'Gorman³, Christoph Hock², Roger Lüchinger⁴, Spyros Kollias¹, Anton Gietl²

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3030 Alterations of Structural and Functional Connectivity of Mild Cognitive Impairment: Network AnalysisWon Sang Jung¹, Woo Hee Choi¹, Hyun Kook Lim¹, Yon Kwon Ihn¹¹St. Vincent's Hospital, the Catholic University of Korea, Suwon, Korea, Republic of**3031 Individual prediction of the development of frontotemporal dementia using machine learning**
Paul Zhutovsky¹, Willem Bruin¹, Rajat Thomas¹, Everard Vijverberg^{2,3}, Yolande Pijnenburg⁴, Annemiek Dols^{5,6}, Guido van Wingen¹¹Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands, ²Alzheimer Centre and Department of Neurology, VU University Medical Centre, Amsterdam, Netherlands, ³Department of Neurology, Haga Ziekenhuis, The Hague, Netherlands, ⁴Alzheimer Centre and Department of Neurology, VU University Medical Center, Amsterdam, Netherlands, ⁵Department of Old Age Psychiatry, GGZ inGeest, VU University Medical Center, Amsterdam, Netherlands, ⁶EMGO+ Institute of Health and Care Research, VU University Medical Center, Amsterdam, Netherlands**3032 Brain structure measurement and neuropsychological function in dementia and normal elderly.**Chun Yuan Chang¹, Jong-Ling Fuh², Fa-Hsuan Lin³¹National Taiwan University, New Taipei city, Taiwan, ²Neurological Institute, Taipei Veterans General Hospital, Taipei, Taiwan, ³National Taiwan University, Taipei, Taiwan**3033 Graph analysis of structural brain networks in Alzheimer's disease: beyond small world properties**Majnu John¹, Toshikazu Ikuta², Janina Ferbinteanu³¹Feinstein Institute of Medical Research, Northwell Health System, Manhasset, NY, ²University of Mississippi, Oxford, MS, ³SUNY Downstate, Brooklyn, NY**3034 Combining SVM classification in MRI data & meta-analyses to predict primary progressive aphasia**Matthias Schroeter¹, Sandrine Bisenius², Jane Neumann², Adrian Danek³, Markus Otto⁴, Karsten Mueller⁵¹Max Planck Institute Human Cognitive Brain Science, Leipzig, Germany, ²Max-Planck-Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ³Clinic of Neurology, Ludwig Maximilian University of Munich, Munich, Germany, ⁴Department of Neurology, University of Ulm, Ulm, Germany, ⁵Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany**3035 Baseline 18F-AV-45 PET Predictors of Dementia Transition in Down Syndrome**David Keator¹, Eric Doran², Theo G. M. van Erp¹, Michael Yassa³, Steven G. Potkin¹, Ira Lott²¹Department of Psychiatry and Human Behavior, University of California Irvine, Irvine, CA, ²Department of Pediatrics and Neurology, University of California Irvine, Irvine, CA, ³Department of Neurobiology and Behavior, University of California, Irvine, Irvine, CA**3036 Zscape – An Intuitive Data Visualization Method for Predicting AD progression**Da Ma¹, Donghuan Lu¹, Karteek Popuri¹, Rakesh Balachander¹, Kathryn Alpert², Lei Wang³, Mirza Faisal Beg¹¹Simon Fraser University, Burnaby, British Columbia, ²Department of Psychiatry & Behavioral Sciences, Northwestern University Feinberg School of Medicine, Chicago, IL, ³Northwestern University Feinberg School of Medicine, Chicago, IL**3037 EEG Fluctuations of wakefulness and sleep in mild cognitive impairment**Johnny O'Keefe¹, Barbara Carlson², Lisa De Stefano¹, Michael Wenger¹, Melissa Craft², Linda Hershey², Jeremy Hughes², Dee Wu², Lei Ding¹, Han Yuan¹¹University of Oklahoma, Norman, OK, ²University of Oklahoma Health Sciences Center, Oklahoma City, OK**3038 Brain Network Alteration in Mild Cognitive Impairment**Zhengshi Yang¹, Christopher Bird¹, Karthik Sreenivasan¹, Xiaowei Zhuang¹, Virendra Mishra¹, Dietmar Cordes¹, Sarah Banks¹¹Cleveland Clinic Lou Ruvo Center for Brain Health, LAS VEGAS, NV**3039 Predicting neurocognitive function with sMRI data in Alzheimer's disease & mild cognitive impairment**Geumsook Shim^{1,2}, Kwang-Yeon Choi³, Dohyun Kim^{2,4}, Sang-il Suh⁵, Suji Lee⁶, Hyun-Ghang Jeong³, Bumseok Jeong^{1,2,4}¹KAIST Clinic Pappalardo Center, KAIST, Daejeon, Korea, Republic of, ²KAIST Institute for Health Science and Technology, KAIST, Daejeon, Korea, Republic of, ³Department of Psychiatry, Korea University College of Medicine, Seoul, Korea, Republic of, ⁴Laboratory of Clinical Neuroscience and Development, Graduate School of Medical Science and Engineering, KAIST, Daejeon, Korea, Republic of, ⁵Department of Radiology, Korea University Guro Hospital, Korea University College of Medicine, Seoul, Korea, Republic of, ⁶Department of Biomedical Sciences, Korea University Graduate School, Seoul, Korea, Republic of**3040 Detection of white matter functional changes in Alzheimer's disease using fMRI**Xiaowei Song¹, Hui Guo², Sujoy Ghosh Hajra³, Careesa Liu⁴, Gabriela Pawlowski⁵, Ryan D'Arcy⁵¹Simon Fraser University/ Fraser Health, Surrey, Canada, ²Department of Diagnostic Imaging, Tianjin Medical University General Hospital, Tianjin China, Tianjin, China, ³Simon Fraser University, Burnaby, BC, Canada, British Columbia, ⁴Simon Fraser University, SURREY, BC, ⁵Simon Fraser University, Burnaby, British Columbia**3041 Diagnostic performance and uptake pattern analysis with early-phase F-18 florbetaben PET**
Sang-Woo Lee¹, Seung Hyun Son¹, Kyunghun Kang², Shin Young Jeong¹, Uicheul Yoon³, Byeong-Cheol Ahn¹, Jaetae Lee¹¹Dept. of Nuclear Medicine, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, ²Dept. of Neurology, School of Medicine, Kyungpook National University, Daegu, Korea, Republic of, ³Dept. of Biomedical Engineering, College of Health and Medical Science, Catholic University of Daegu, Gyeongsan-si, Korea, Republic of**30431 Within-network functional connectivity changes in Down syndrome**Katherine Koenig¹, Pallab Bhattacharyya¹, Mark Lowe¹¹The Cleveland Clinic, Cleveland, OH**3044 Shared and divergent striatal network connectivity changes in aMCI and svMCI patients**Alaka Acharya¹, Liye Yi², Weiming Tian¹, Xia Liang³¹School of Life Science, Harbin Institute of Technology, Harbin, China, ²Department of Neurosurgery, The Second Affiliated Hospital of Harbin Medical University, Harbin, China, ³Research Center of Basic Space Science, Harbin Institute of Technology, Harbin, China**3045 Coefficient of variation of BOLD signal in Alzheimer's disease**Timo Tuovinen^{1,2}, Riikka Rytty^{1,3}, Janne Kananen^{1,2}, Ville Raatikainen^{1,2}, Vesa Korhonen^{1,2}, Anne Remes^{4,5}, Vesa Kiviniemi^{1,2}¹University of Oulu, Oulu, Finland, ²Oulu University Hospital, Oulu, Finland, ³Hyvinkää hospital, Hyvinkää, Finland, ⁴University of Eastern Finland, Kuopio, Finland, ⁵Kuopio University Hospital, Kuopio, Finland**3046 Statistical Disease Mapping for Heterogeneous Alzheimer's Disease PET Images**Rongjie Liu¹, Chao Huang², Liuqing Yang³, Tengfei Li⁴, Hongtu Zhu⁴¹MD Anderson, Houston, TX, ²University of North Carolina at Chapel Hill, Chapel Hill, NC, ³UNC, Chapel Hill, United States, ⁴University of Texas MD Anderson Cancer Center, Houston, TX

- 3047 Biophysical parameters correlate with cognitive deterioration in Alzheimers: TheVirtualBrain study**
Joelle Zimmermann¹, Ana Solodkin², Michael Breakspear³, Alistair Perry⁴, Michael Schirner⁵, Petra Ritter⁶, Perminder Sachdev⁷, Wei Wen⁸, Nicole Kochan⁹, Henry Brodaty¹⁰, Anthony McIntosh¹¹
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- 3048 Neuro-inflammation in Alzheimer's disease and progressive supranuclear palsy**
Luca Passamonti¹, Patricia Vázquez Rodríguez¹, Young Hong¹, William Bevan-Jones¹, Peter Jones¹, Ronert Arnold¹, Robin Borchert¹, Ajenthan Surendranathan¹, Elijah Mak¹, Li Su¹, Tim Fryer¹, Franklin Aigbirio¹, John O'Brien¹, James Rowe¹
¹University of Cambridge, Cambridge, United Kingdom
- 3049 Lyapunov exponent analysis of rs-fMRI signals in older adults with significant memory concerns**
Arlene Fang¹, Yasser Iturria-Medina¹, Alan Evans¹
¹Montreal Neurological Institute, McGill University, Montreal, QC
- 3050* Functional connectivity deficits/enhancements depend on atrophy proximity in frontotemporal dementia**
Jesse Brown¹, Jersey Deng¹, Isabel Sibley¹, Ana Sias², Suzee Lee², John Kornak¹, Maria Luisa Gorno-Tempini¹, Howard Rosen³, Bruce Miller³, William Seeley³
¹University of California San Francisco, San Francisco, CA, ²UCSF Memory and Aging, San Francisco, CA, ³UCSF, San Francisco, CA
- 3051 Towards elucidating the role of ABCA1 variants in mediating risk for Alzheimer's disease**
Brandalyn Riedel¹, Neda Jahanshad², David Bennett³, Paul M. Thompson⁴
¹USC, Los Angeles, CA, ²Imaging Genetics Center, USC, Marina del Rey, CA, ³Rush Alzheimer's Disease Center, Rush University Medical Center, Chicago, IL, ⁴Imaging Genetics Center, University of Southern California, Marina Del Rey, CA
- 3052 A novel approach to investigate MCI onset using structural covariance network of gray matter atrophy**
Bahram Mohajer¹, Amirhussein Abdolizadeh¹, Nooshin Abbasi¹
¹Multiple Sclerosis Research Centre of TUMS, Tehran, Iran, Islamic Republic of
- 3053 Cortical thickness and obstructive sleep apnoea in older adults at risk of dementia.**
Nathan Cross^{1,2,3}, Shantel Duffy^{1,2,3}, Negar Memarian^{1,2,3}, Angela D'Rozario^{1,2,3}, Simon Lewis^{1,4}, Ronald Grunstein^{2,4}, Sharon Naismith^{1,3}
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- 3054 Brain Differential Structural Connectome**
Liang Zhan¹, Lei Guo¹, Yan Jin², Emily Marzofka¹, Melissa Lamar³, Alex Leow⁴, Paul Thompson⁵
¹University of Wisconsin-Stout, Menomonie, WI, ²University of Texas MD Anderson Cancer Center, Houston, TX, ³Rush Alzheimer's Disease Center, Chicago, IL, ⁴University of Illinois, Chicago, Chicago, IL, ⁵Imaging Genetics Center, University of Southern California, Marina Del Rey, CA

- 3055 Alzheimer's and Parkinsons dDiseas: Morphometric Concordance in Striatal Shape Alterations**
Boris Gutman¹, Anjanibhargavi Ragothaman², Christopher Ching³, Dmitry Isaev², Paul M. Thompson²
¹USC Imaging Genetics Center, Los Angeles, CA, ²Imaging Genetics Center, University of Southern California, Marina Del Rey, CA, ³UCLA, Marina Del Rey, CA

DISORDER OF THE NERVOUS SYSTEM

Disorders of the Nervous System Other

- 3056 Quantitative Measurements of White Matter Content in the Healthy Brain and in Multiple Sclerosis**
Jonathan O'Muircheartaigh¹, Irene Vavasour², David Li², Victoria Levesque³, Hideki Garren⁴, David Clayton⁴, Anthony Traboulsee², Shannon Kolind⁵
¹King's College London, London, United Kingdom, ²University of British Columbia, Vancouver, Canada, ³Genentech, Inc, Vancouver, Canada, ⁴Genentech, Inc, San Francisco, CA, ⁵University of British Columbia, Vancouver, BC
- 3057 Disrupted cerebellar network dynamics and cognitive impairment in progressive multiple sclerosis**
Menno Schoonheim¹, Linda Douw¹, Anand Eijlers¹, Kim Meijer¹, Jeroen Geurts¹
¹VU University Medical Center, Amsterdam, Netherlands
- 3058 Brain white matter microstructural changes in life-long premature ejaculation patients: A DTI study.**
Lin Liu¹, Ming Gao², Ziliang Xu¹, Yibin Xi³, Ningbo Fei¹, Wei Qin¹
¹Life Sciences Research Center, School of Life Sciences and Technology, Xidian University, Xi'an, China, ²Department of Urology, Xijing Hospital, The Fourth Military Medical University, Xi'an, China, ³Department of Radiology, Xijing Hospital, The Fourth Military Medical University, Xi'an, China
- 3059 Sensorimotor network alterations in children and youth with prenatal alcohol exposure**
Xiangyu Long¹, Graham Little², Dongming Zhou², Christian Beaulieu², Catherine Lebel¹
¹University of Calgary, Calgary, Canada, ²University of Alberta, Edmonton, Canada
- 3060 Comparing MRI measures of myelin changes in multiple sclerosis**
Ilona Lipp¹, Sonya Bells^{2,1}, Nils Muhlert^{3,1}, Catherine Foster¹, Rachael Stickland¹, Alison Davidson¹, Derek Jones¹, Richard Wise¹, Valentina Tomassini^{1,4}
¹Cardiff University, Cardiff, United Kingdom, ²University of Toronto, Toronto, Canada, ³Manchester University, Manchester, United Kingdom, ⁴IRCCS Fondazione Santa Lucia, Rome, Italy
- 3061 Hippocampal flexibility explains memory function in multiple sclerosis**
Quinten van Geest¹, Hanneke Hulst¹, Kim Meijer¹, Lieke Hoyng¹, Jeroen Geurts¹, Linda Douw¹
¹VU University Medical Center, Amsterdam, Netherlands
- 3062 Functional dynamics of the medial temporal lobe in autoimmune epilepsy linked to neuronal antibodies**
Julia Nantes^{1,2}, Sarosh Irani¹, Natalie Voets¹, Adam Al-Diwani¹, Charlotte Stagg¹
¹University of Oxford, Oxford, United Kingdom, ²McGill University, Montreal, Canada

- 3063 Network-based alterations following anti-N-methyl-D-aspartate receptor encephalitis.**
Francesco Barban¹, Harald Prüss^{2,3}, Ute Kopp², Matteo Mancini⁴, Mara Cercignani⁵, Friedemann Paul^{6,7,8,9,10}, Carsten Finke^{1,2,6}
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- 3064 Lesion load vs normal appearing white matter integrity to monitor Multiple Sclerosis progression**
Nicolas Gillingham¹, Benjamin Ades-Aron¹, Bettina Conti¹, Jasmine Pathan¹, Tamar Bacon¹, Yvonne Lui¹, Dmitry Novikov², Timothy Shepherd¹, Els Fieremans¹
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- 3065 Abnormalities in resting-state networks of migraine**
Yuchen Liu¹, Lin Liu¹, NingBo Fei¹, ZiLiang Xu¹, Jie Gong¹, Peng Liu¹, Xuejuan Yang¹, Jinbo Sun¹, Wei Qin¹
¹Life Sciences Research Center, School of Life Sciences and Technology, Xidian University, Xi'an, China
- 3066 Regional gray matter atrophy in a larger sample of HAART-treated AIDS cohort**
Zhi Wen^{1,2}, Fuchun Lin³, Guangyao Wu¹
¹Zhongnan Hospital of Wuhan University, Wuhan, Hubei, ²Renmin Hospital of Wuhan University, Wuhan, China, ³Wuhan Institute of Physics and Mathematics, Chinese Academy of Sciences, Wuhan, Hubei
- 3067 Disruptions of functional connectivity in the orbito-frontal network of suicidal military veterans**
Jadwiga Rogowska¹, Margaret Legarreta², Jennifer DiMuzio¹, Charles Bueler¹, Erin McGlade^{1,2,3}, Deborah Yurgelun-Todd^{1,2,3}
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- 3068 White matter microstructural alterations in neonates with prenatal exposure to methamphetamine**
Fleur Warton¹, Paul Taylor², Christopher Warton¹, Christopher Molteno¹, Pia Wintermark³, Nadine Lindinger¹, Lilla Zöllei⁴, Andre van der Kouwe⁴, Joseph Jacobson⁵, Sandra Jacobson⁵, Ernesta Meintjes¹
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- 3069 Gulf War Illness patients exhibit impaired/abnormal connectivity in multiple brain rsfMRI networks**
Kaundinya Gopinath¹, Binod Thapa-Chhetry², Lou Ouyang², Lisa Krishnamurthy², Venkatagiri Krishnamurthy¹, Aman Goyal², Parina Gandhi², Yan Fang², Unal Sakoglu³, Bruce Crosson¹, Robert Haley²
¹Emory University, Atlanta, GA, ²University of Texas Southwestern Medical Center, Dallas, TX, ³University of Houston Clear-Lake, Houston, TX
- 3070 Brain network profiles in youth with OCD: Developmental deviations revealed with basic motor tasks**
Amy Friedman¹, Ashley Burgess¹, Karthik Ramaseshan¹, Phillip Easter¹, Asadur Chowdury¹, David Rosenberg¹, Vaibhav Diwadkar¹
¹Wayne State University, Detroit, United States
- 3071 Correlation of Pre-surgical fMRI Language Mapping with Post-operative Language Outcomes**
Nikhitha Thrikutam¹, zerrin yetkin¹, Thomas O'Neill²
¹UT Southwestern, Dallas, TX, ²UT Southwestern Medical Center, Dallas, TX
- 3072 Increased iron accumulation in brain in adolescents with Rett syndrome: a SWI study**
Tz-Yun Jan¹, Shinn-Fong Peng², Wen-Yih Tseng³, Wang-Tso Lee⁴
¹Graduate Institute of Brain and Mind Science, National Taiwan University College of Medicine, Taipei, Taiwan, ²Radiology, National Taiwan University Hospital and National Taiwan University College of Medicine, Taipei, Taiwan, ³Institute of Medical Device and Imaging, National Taiwan University College of Medicine, Taipei, Taiwan, ⁴Department of Pediatrics, National Taiwan University Hospital and National Taiwan University College, Taipei, Taiwan
- 3073 White Matter Lesion Segmentation using Texture-based Classification on MR imaging**
Mariana Bento¹, Simone Appenzeller¹, Richard Frayne², Roberto Lotufo¹, Letícia Rittner¹
¹University of Campinas, Campinas, Brazil, ²University of Calgary, Calgary, Alberta
- 3074 How do MS stages differ in terms of cortical and deep grey matter functional connectivity?**
Kim Meijer¹, Anand Eijlers¹, Jeroen Geurts¹, Menno Schoonheim¹
¹VU University Medical Center, Amsterdam, Netherlands
- 3075 Impact of lesion extent on spinal cord white and grey matter degeneration and disability after SCI**
Eveline Huber¹, Gergely David¹, Nikolaus Weiskopf^{2,3}, Siawoosh Mohammadi^{2,3,4}, Patrick Freund^{1,2,3,5}
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- 3076 The Propagation Pattern of Brain Alterations in Multiple Sclerosis.A Meta-Analytic Network Approach**
Karina Tatu¹, Tommaso Costa¹, Andrea Nani¹, Ugo Vercelli¹, Jordi Manuella¹, Giuliano Geminiani¹, Sergio Duca¹, Franco Cauda¹
¹GCS fMRI, Koelliker Hospital and University of Turin, Turin, Italy

- 3077 A neural validation of work- versus activity-related fear avoidance beliefs in chronic low back pain**
Michael Meier¹, Andrea Vrana¹, Erich Seifritz^{2,3}, Philipp Stämpfli^{2,3}, Kim Humphreys¹, Schweinhardt Petra^{1,4}
¹Interdisciplinary Spinal Research, Department of Chiropractic Medicine, University Hospital Balgrist, Zurich, Switzerland, ²Psychiatric Hospital of the University of Zurich, Zurich, Switzerland, ³MR-Center of the Psychiatric Hospital, University of Zurich, Zurich, Switzerland, ⁴Alan Edwards Center for Research on Pain, McGill University, Montreal, Canada
- 3078 Abnormal thalamo-cortical functional connectivity in disorders of consciousness**
You Wang¹, Qiuyou Xie², Yuan He³, Xiaoyan Wu³, Ping Chen³, Miao Zhong³, Huiyuan Huang³, Lixiang Chen³, Ruiwang Huang³
¹Southern Medical University, Guangzhou, China, ²Centre for Hyperbaric Oxygen and Neurorehabilitation, Guangzhou General Hospital of Guangzhou Milita, Guangzhou, China, ³South China Normal University, Guangzhou, China
- 3079 Corpus callosum: a DTI biomarker to classify disorder of consciousness haemorrhagic patients?**
Anna Nigri¹, Simone Nava¹, Ludovico d'Incerti¹, Maria Grazia Bruzzone¹, Davide Sattin¹, Matilde Leonardi¹, Cristina Rosazza¹, Stefania Ferraro¹
¹IRCCS Neurological Institute C. Besta, Milano, Italy
- 3080 Resting-state Networks in Adult Patients with Attention Deficit Hyperactivity Disorder**
Ali Bayram¹, Sevinç Dervent², Gökben Hızlı Sayar³, Elif Kurt⁴, Hakan Gurvit⁵, Tamer Demiralp⁴, Nevzat Tarhan³
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- 3081 Functional mobility change following slope walking is related to myelin status in multiple sclerosis**
Erin King¹, Manning Sabatier¹, Maruf Hoque¹, Michael Borich¹
¹Emory University, Atlanta, GA
- 3082 Does intense stuttering therapy influence brain function?**
Sarah Wolter¹, Annika Primaßin², Alexander von Gudenberg³, Peter Dechent⁴, Walter Paulus², Roberto Goya-Maldonado¹, Martin Sommer²
¹Department of Psychiatry and Psychotherapy, University Medical Center, Goettingen, Germany, ²Department of Clinical Neurophysiology, University Medical Center, Goettingen, Germany, ³Institut der Kasseler Stottertherapie, Bad Emstal, Germany, ⁴Department of Cognitive Neurology, University Medical Center, Goettingen, Germany
- 3083 Making a Murderer: Connectivity of Brain Lesions Causing Immoral Behavior**
Ryan Darby¹, Andreas Horn², Michael Fox³
¹BIDMC, Boston, MA, ²Dept. for Neurology, Beth Israel Deaconess Center, Harvard Medical School, Boston, United States, ³Harvard Medical School, Boston, MA

- 3084 Interactions between age and multiple sclerosis in functional MRI activation**
Xiaowei Song¹, Hui Guo², Perveen Sivia³, Gabriela Pawlowski⁴, Careesa Liu⁵, Sujoy Ghosh Hajra⁶, Ryan D'Arcy⁴
¹Simon Fraser University/ Fraser Health, Surrey, Canada, ²Department of Diagnostic Imaging, Tianjin Medical University General Hospital, Tianjin China, Tianjin, China, ³Health Sciences and Innovation, Fraser Health Authority, Surrey, British Columbia, ⁴Simon Fraser University, Burnaby, British Columbia, ⁵Simon Fraser University, Surrey, British Columbia, ⁶Simon Fraser University, Burnaby, BC, Canada, British Columbia
- 3085 Disrupted default mode network dynamics in chronic fatigue syndrome**
Zack SHAN¹, Kevin Finegan², Sandeep Bhuta², Donald Staines¹, Sonya Marshall-Gradisnik¹, Leighton Barnden¹
¹Menzies Health Institute Queensland, Griffith University, Gold Coast, Australia, ²Medical Imaging Department, Gold Coast University Hospital, Gold Coast, Australia
- 3086 Graph theoretical analysis of intrinsic connectivity in C9orf72 mutation carriers**
Rachel Smallwood¹, Michael Clark¹, Mary Kay Floeter¹
¹NIH, Bethesda, MD
- 3087 Joint analysis of gray & white matter development trajectories associated with childhood stuttering**
Ho Ming Chow¹, Soo-Eun Chang²
¹University of Michigan, Ann Arbor, MI, ²University of Michigan, Ann Arbor, United States
- 3088 Detecting ALS Pathology Using 3D Whole Brain Texture Analysis**
Michael Chunn¹, Abdullah Ishaque¹, Daniel Ta¹, Sneha Chenji¹, Dennell Mah¹, Peter Seres¹, Herbert Yang¹, Sanjay Kalra¹
¹University of Alberta, Edmonton, Alberta
- 3089 Multiple sclerosis risk variants affect white-matter integrity in regions with high gene expression**
Daniel Rinker¹, Neda Jahanshad¹, Derrek Hibar¹, Katie McMahon², Greig de Zubicaray², Margaret Wright², Paul M. Thompson¹
¹Imaging Genetics Center, University of Southern California, Marina del Rey, CA, ²Centre for Advanced Imaging, University of Queensland, Brisbane, Australia
- 3090 Increased left cerebellar functional connectivity with rhythm networks in adults who stutter**
Andrew Etchell¹, Elizabeth Wieland², Ho Ming Chow¹, Devin McAuley³, Soo-Eun Chang¹
¹Department of Psychiatry University of Michigan, Ann Arbor, MI, ²Department of Communication Sciences and Disorders Michigan State University, East Lansing, MI, ³Department of Psychology and Neuroscience Program Michigan State University, East Lansing, MI
- 3091 Neural basis of covert and overt processing of familiar faces. An fMRI study.**
Yusniel Santos-Rodríguez¹, Daylín Góngora¹, Joanna Jaén², Beatrice De Gelder³, Elisabeth Huis⁴, Minye Zhan⁴, María Antonieta Bobes²
¹Cuban Neuroscience Center, Havana, Cuba, ²Cuban Center for Neurosciences, Havana, Cuba, ³Maastricht University, Maastricht, Netherlands, ⁴Tilburg University, Tilburg, Netherlands
- 3092 A role for the medial temporal lobe in nociceptive processing: A meta-analytic study**
Lizbeth Ayoub¹, Mitchell Golosky¹, Mary Pat McAndrews¹, Massieh Moayed¹
¹University of Toronto, Toronto, Canada
- 3093 Structural connectivity abnormality in children treated for medulloblastoma**
Adeoye Oyefiade¹, Donald Mabbott¹
¹The Hospital for Sick Children, Toronto, Canada

DISORDER OF THE NERVOUS SYSTEM

Eating Disorders

- 3094 Impaired prefrontal cognitive control over food-related interference in binge-eating disorder**
Jaeun Ahn¹, YOUNG-CHUL JUNG²

¹Yonsei Univ, Seoul, Korea, Republic of, ²Yonsei Univ., Seoul, Korea, Republic of

- 3095 Shared gray matter reductions in anorexia nervosa and autism spectrum disorder**
Malin Bjornsdotter^{1,2}, Monika Davidovic¹, Louise Karjalainen¹, Goran Starck¹, Hakan Olausson², Elisabet Wentz¹

¹University of Gothenburg, Gothenburg, Sweden, ²Linköping University, Linköping, Sweden

- 3096 Aberrant fronto-limbic connectivity in body dysmorphic disorder and anorexia nervosa**
D Rangaprakash¹, Nathan Hutcheson¹, Katherine Lawrence¹, Teena Moody¹, Sarah Madsen², Sahib Khalsa³, Michael Strober¹, Cara Bohon⁴, Jamie Feusner¹

¹University of California Los Angeles, Los Angeles, CA, ²University of Southern California, Los Angeles, CA, ³University of Tulsa, Tulsa, OK, ⁴Stanford University, Stanford, CA

- 3097 Neural correlates of negative emotion regulation in patients with anorexia nervosa**
Maria Seidel¹, Joseph King¹, kersten Diers², Alexander Strobel², Henrik Walter³, Thomas Goschke², Stefan Ehrlich¹

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- 3098 Neuroimaging Trait or State Markers of Bulimia Nervosa: A Longitudinal Study over Adolescence**

Marilyn Cyr¹, Daniel Kopala-Sibley², Seonjoo Lee³, Mihaela Stefan¹, Kate Terranova¹, Laura Berner⁴, Rachel Marsh¹

¹Columbia University and the New York State Psychiatric Institute, New York, NY, ²Stony Brook University, Stony Brook, NY, ³Columbia University, New York, NY, ⁴University of California, San Diego, San Diego, CA

- 3099 Reduced cortical and cerebellar volume typifies Binge-eating Disorder: Metaanalysis & confirmation**

Eunice Chen¹, Timothy Zeffiro², Thomas Zeffiro²

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DISORDER OF THE NERVOUS SYSTEM

Epilepsy

- 3100 Rs-fMRI localization of seizure foci compared to intraoperative monitoring**
Varina Boerwinkle¹, Deepankar Mohanty¹, Sandi Lam¹, Daniel Curry¹

¹Baylor College of Medicine, Houston, TX

- 3101 Non-invasive Brain Imaging Biomarkers in Sudden Unexpected Death in Epilepsy Patients (SUDEP)**

Annika Kim¹, Justin Jangyoon Choi¹, Richard Lee¹

¹New York University, New York, NY

- 3102 Thinning of the Left Middle Temporal Gyrus is Associated with Word Retrieval Difficulties in Tempora**

Clara Yoon¹, Victor Kang¹, Joo Sung Yi¹

¹New York University, New York, NY

- 3103 Negative BOLD in the pons in bilateral mesial temporal epilepsy studied with iEEG-fMRI**

Craig Beers¹, Fabio Gregoraci², Ismael Gaxiola-Valdez¹, Daniel Pittman¹, Paolo Federico¹

¹University of Calgary, Calgary, Alberta, ²University Magna Graecia of Catanzaro, Catanzaro, Italy

- 3104 Novel Surface Features for Automated Detection of Focal Cortical Dysplasias in Paediatric Epilepsy**

Sophie Adler¹, Konrad Wagstyl², Roxana Gunny³, Lisa Ronan², David Carmichael¹, Helen Cross¹, Paul Fletcher², Torsten Baldeweg¹

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- 3105 Presurgical language fMRI: mapping of six critical regions**

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- 3106 Reorganized functional and structural memory encoding network after medial temporal lobe resection**

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- 3107 Aberrant thalamocortical functional connectivity in juvenile myoclonic epilepsy**

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- 3108 Voxel-based MRI Analysis Can Assist Clinical Diagnostics in Patients with MRI-negative Epilepsy**

Barbara Kreilkamp^{1,2}, Kumar Das², Udo Wiesmann², Kath Tyler², Susan Kiel², Sharon Gould², Anthony Marson^{1,2}, Simon Keller^{1,2}

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- 3109 FLAIR Hyperintensity in Paediatric TLE: Topographic principles, clinical and cognitive correlates**

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- 3110 Cannabidiol increases resting state functional connectivity in treatment resistant epilepsy**
Jerzy Szaflarski¹, Jane Allendorfer¹, Rodolphe Nenert¹, Barbara Hansen¹, Tyler Gaston¹, E Bebin¹
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- 3111 Exercise induced connectivity changes could improve neuropsychological functions in epilepsy**
Dongpyo Lee¹, Gyan Raj Koirala², Soyong Eom¹, Nam-Young Kim², Heung Dong Kim¹
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- 3112 Cortico-cerebellar underconnectivity of the language network in children with rolandic epilepsy.**
Marjolein Verly¹, Lieven Lagae², Charlotte Sleurs³, Sabine Deprez³, Stefan Sunaert⁴, Ronald Peeters⁵, Inge Zink¹, Nathalie Rommel¹
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- 3113 Alterations in resting state coupling over the temporal lobe network in temporal lobe epilepsy**
Chang-hyun Park¹, Hyeon Jin Kim¹, Yun Seo Choi¹, Eun Jin Kwon¹, Ji-Eun Lee¹, Chan-Young Lee¹, Min-Young Jun¹, Hyang Woon Lee¹
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- 3114 Seizure onset zone localization from clinical ictal EEG in refractory epilepsy**
Willeke Stalianssens¹, Gregor Strobbe¹, Roel Van Holen¹, Vincent Keereman^{1,2}, Stefanie Gadeyne², Evelien Carrette², Margitta Seeck³, Paul Boon², Stefaan Vandenberghe¹, Serge Vulliémot^{3,4}, Kristl Vonck², Pieter van Mierlo^{1,4}
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- 3115 Structural grey matter changes in drug naïve newly diagnosed Genetic Generalised Epilepsy patients**
Suejen Perani^{1,2}, Maria Centeno³, Jonathan O'Muircheartaigh¹, Elhum Shamshiri⁴, David Carmichael⁵, Mark Richardson⁶
¹King's College London, IOPPN, London, United Kingdom, ²University College London, ICH, London, United Kingdom, ³UCL, Institute of Neurology, London, United Kingdom, ⁴University College London, ICH, London, United Kingdom, ⁵Great Ormond Street ICH, UCL, London, United Kingdom, ⁶King's College London, IOPPN, London, United Kingdom
- 3116 Altered motor-related functional connectivity in benign adult familial myoclonic epilepsy**
Ling-Li Zeng¹, Lili Long², Yanmin Song², Hui Shen¹, Hongyu Long², Luo Zhou², Bo Xiao², Dewen Hu¹
¹National University of Defense Technology, Changsha, Hunan, ²Xiangya Hospital, Central South University, Changsha, Hunan
- 3117 Attention deficits contribute to acalculia in new-onset childhood absence epilepsy**
Dazhi Cheng¹, Xiuxian Yan¹, Qian Chen¹
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- 3118 A deep learning based semi-automatic spike detector for EEG-fMRI analysis**
Yongfu Hao¹, Hui Ming Khoo², Nicolas von Ellenrieder³, Natalja Zazubovits⁴, Jean Gotman²
¹Montreal Neurological Institute, McGill University, Montreal, Canada, ²Montreal Neurological Institute and Hospital, Montreal, QC, ³Montreal Neurological Institute and Hospital, Montreal, Quebec, ⁴McGill University, Montreal, Quebec
- 3119 Identification of reliably active epileptogenic areas in response to interictal discharges, iEEG-fMRI**
Burak Akin¹, Craig Beers², Ismael Gaxiola-Valdez², Daniel Pittman², Jürgen Hennig¹, Paolo Federico², Pierre LeVan¹
¹Medical Physics, Dept. of Radiology, University of Freiburg, Freiburg, Germany, ²University of Calgary, Calgary, Alberta
- 3120 Functional Network Dynamics of the Language System in Temporal Lobe Epilepsy**
Xiaosong He¹, Danielle Bassett², Chaitanya Ganne¹, Lauren Kozlowski¹, Shatha Alwethinani¹, Na Young Kim¹, Noah Sideman¹, Joseph Tracy¹
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- 3121 Diffusion alterations of the uncinate fasciculus in non-lesional temporal lobe epilepsy**
Lucy Lisanti¹, Barbara Kreilkamp^{1,2}, Kumar Das², Udo Wiesmann², Anthony Marson^{1,2}, Simon Keller^{1,2}
¹Institute of Translational Medicine, University of Liverpool, Liverpool, United Kingdom, ²The Walton Centre NHS Foundation Trust, Liverpool, United Kingdom
- 3122 A quantitative MRI study of subcortical structures in newly-diagnosed focal epilepsy**
Mollie Neason¹, Barbara Kreilkamp¹, Samia Elkommos², Besa Ziso², Kumar Das², Anthony Marson², Simon Keller¹
¹University of Liverpool, Liverpool, United Kingdom, ²The Walton Centre NHS Foundation Trust, Liverpool, United Kingdom
- 3123 Temporal lobe epilepsy: hippocampal subfield anomalies modulate whole-brain pathoconnectomics**
Boris Bernhardt¹, Min Liu¹, Seok-Jun Hong¹, Danielle Bassett², Shi Gu³, Jonathan Smallwood⁴, Andrea Bernasconi¹, Neda Bernasconi¹
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- 3124 Coefficient of variation method in MREG as a potential marker in epilepsy**
Janne Kananen¹, Timo Tuovinen¹, Niko Huotari¹, Heta Helakari¹, Alekski Rasila², Ville Raatikainen¹, Vesa Korhonen², Hanna Ansakorpi¹, Vesa Kiviniemi¹
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- 3125 Neurite orientation dispersion and density imaging of 3 patients with heterotopia**
Lohith Kini¹, Joel Stein², Ilya Nasrallah², Sandhitsu Das³, Brian Litt^{3,1}, Kathryn Davis³
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- 3126 Functional Connectivity in Temporal Lobe Epilepsy with Usual and Unusual Propagation Patterns**
Elif Kurt^{1,2}, Nermin Gorkem Sirin Inan³, Zerrin Karaaslan³, Ali Bayram², Tamer Demiralp^{1,4}, Candan Gurses³
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- 3127 Predicting acute seizures in comatose critically ill children**
Vasily Vakorin¹, Dragos Nita², Elisabeth van Straaten³, Cornelis Stam³, Cecil Hahn⁴, Sam Doesburg⁵
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- 3128 Investigating resting state connectivity alterations in temporal lobe epilepsy with machine learning**
Gyujoon Hwang¹, Jed Mathis², VEENA NAIR¹, Ferdaus Kawsar², Rosaleena Mohanty¹, Gengyan Zhao¹, Megan Rozman², Taylor McMillan¹, Dace Almane¹, Andrew Nencka², Mohsen Mazrooyisebdani¹, Elizabeth Felton¹, Aaron Struck¹, Rasmus Birn¹, Rama Maganti¹, Lisa Conant², Colin Humphries², Bruce Hermann¹, Manoj Raghavan², Edgar DeYoe², Jeffrey Binder², Beth Meyerand¹, Vivek Prabhakaran¹
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- 3129 Predicting post-operative language ability using connectivity measures in temporal lobe epilepsy**
Samantha Audrain¹, Alexander Barnett², Mary Pat McAndrews³
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- 3130 Epilepsy Connectome Project: Resting-State Connectivity Dynamics in Temporal Lobe Epilepsy**
Gengyan Zhao¹, Jed Mathis², VEENA NAIR¹, Andrew Nencka², Gyujoon Hwang¹, Megan Rozman², Taylor McMillan¹, Dace Almane¹, Ferdaus Kawsar², Mohsen Mazrooyisebdani¹, Elizabeth Felton¹, Aaron Struck¹, Rama Maganti¹, Lisa Conant², Colin Humphries², Bruce Hermann¹, Manoj Raghavan², Edgar DeYoe², Vivek Prabhakaran¹, Jeffrey Binder², Beth Meyerand¹, Rasmus Birn¹
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- 3131 Improved modelling of interictal epileptiform discharges with smooth Finite Impulse Response filters**
Elhum Shamshiri¹, Tim Tierney¹, Maria Centeno¹, Kelly St Pier², Suejen Perani³, J Helen Cross¹, David W Carmichael¹
¹University College London, Institute of Child Health, London, United Kingdom, ²Great Ormond Street Hospital, London, United Kingdom, ³King's College London, London, United Kingdom
- 3132 Interictal epileptic discharge is linked to cognitive comorbidity and brain atrophy**
Vera Dinkelacker^{1,2}, Xu Xin³, Séverine Samson⁴, Sophie Dupont⁵
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- 3133 Cortical thickness correlates with spike frequency and neuropsychological outcome in BECTS**
Hisako Fujiwara^{1,2}, Jeffrey Tenney¹, Caroline Spencer², Mekibib Altaye¹, Jennifer Vannest¹
¹Cincinnati Children's Hospital Medical Center, Cincinnati, OH, ²University of Cincinnati, Cincinnati, OH
- 3134 A functional network study on corpus callosum in epileptic patients with secondary generalization**
Yue-Loong Hsin^{1,2}, Syu-Jyun Peng³
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- 3135 Differences in BOLD Response to Inter-Ictal Spikes in Benign Epilepsy with Centrottemporal Spikes**
Thomas Maloney¹, Jerzy Szaflarski², Jeffrey Tenney³, Jennifer Vannest³
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- 3136 Altered metabolic connectivity in medial temporal lobe epilepsy patients measured by F-18 FDG PET**
Yeon-koo Kang¹, Hyekyoung Lee¹, Hyejin Kang¹, Dong Soo Lee¹
¹Seoul National University, Seoul, Korea, Republic of

DISORDERS OF THE NERVOUS SYSTEM

Other Psychiatric Disorders

- 3137 Structural and Functional Anomalies in Subgenual Anterior Cingulate Cortex in Children with ADHD**
Yu Gao¹, Chenyang Zhan², Xiaobo Li^{3,4}
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- 3138 Altered Resting-State Connectivity in PTSD and Real-Time fMRI Neurofeedback Training Effect**
Masaya Misaki¹, Raquel Phillips¹, Vadim Zotev¹, Chung Ki Wong¹, Frank Krueger², Matthew Feldner³, Jerzy Bodurka^{1,4}
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- 3139 Strengthening of Default Mode Network connectivity in adult ADHD patients after MPH treatment**
Felipe Picon¹, João Ricardo Sato², Maurício Anés¹, Leonardo Vedolin³, Alessandro Mazzola⁴, Bruna Valentini³, Rafael Karam¹, Marcelo Victor¹, Vitor Breda¹, Katiane Silva¹, Neivo da Silva Jr⁵, Claiton Henrique Baú⁶, Eugenio Grevet¹, Luis Augusto Rohde¹
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- 3140 Full-brain network-based classification of borderline personality disorder**
Juha Lahnakoski¹, Tobias Nolte^{2,3}, Alec Solway⁴, Iris Vilares², Andreas Hula², Janet Feigenbaum⁵, Terry Lohrenz⁴, Peter Fonagy^{3,5}, P. Read Montague^{2,4,6,7}, Leonhard Schilbach^{1,8}
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- 3141 An Investigation of Obesity and Sex-Related Alterations in Resting State Activity of Reward Regions**
Arpana Gupta¹, Emeran Mayer², Claudia Sanmiguel², Ravi Bhatt², Tiffany Ju², Amanat Bal², Kirsten Tillisch², Bruce Naliboff², Jen Labus², Lisa Kilpatrick²
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- 3142 Age and sex differences in whole-brain neural network in attention deficit hyperactivity disorder**
Yu Sun Chung¹, Michael Stevens^{1,2}
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- 3143 Sex differences in brain activation during a working memory task in adult patients with ADHD**
Peter Soros¹, Katharina Bachmann¹, Alexandra Lam^{1,2}, Manuela Kanat³, Eliza Hoxhaj⁴, Swantje Matthies⁴, Bernd Feige⁴, Alexandra Philipsen^{1,4}
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- 3144 Gray Matter Alteration Related to ADHD Symptoms and Working Memory in Adults**
Jingyu Liu^{1,2}, KuaiKuai Duan², Jiayu Chen¹, Vince Calhoun^{1,2}, Wenhao Jiang³, Barbara Franke⁴, Jan Buitelaar⁴, Martine Hoogman⁴, Alejandro Arias Vasquez⁴, Jessica Turner³
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- 3145 Dynamic functional brain imprint of dissociation in PTSD**
Susanne Mueller¹, Thomas Neylan², Scott Mackin², Esther Blessing³, Janine Flory⁴, Jingyun Chen⁵, Duna Abu-Amara⁶, Rachel Yehuda⁴, Synthia Mellon², Owen Wolkowitz², Marti Jett⁷, Charles Marmar⁶
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- 3146 Neurobiological antecedents of self-harm and suicidal behavior in adolescence**
Philip Spechler¹, Kelsey Hudson¹, Bader Chaarani¹, Matthew Albaugh¹, Nicholas Allgaier¹, Nicholas D'Albarto¹, Scott Mackey¹, Catherine Orr¹, Robert Althoff¹, Hugh Garavan¹, Imagen Consortium²
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- 3147 Affected right Posterior Cingulate Cortex and Precuneus in Borderline Personality Disorder**
Jinyao Yi¹, Xiaoxia Lei¹, Mingtian Zhong², Shuqiao Yao¹
¹Second Xiangya Hospital of Central South University, Changsha, China, ²South China Normal University, Guangzhou, China
- 3148 Networks Perturbation in Conversion Disorder**
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- 3149 Responding to Ambiguous Stimuli in Delusional Disorder : An fMRI Study**
Sara Saban¹, Emine Kiliç¹, Andaç Hamamcı¹, Zeynep Firat²
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- 3150 Altered spontaneous brain activity as a new biomarker defining subtypes of ADHD**
Xuan Bu¹, Chuang Yang², Ming Zhou¹, Haixi Lin², Yan Liang², Hong Chen², Lu Lu¹, Lianqing Zhang¹, Hailong Li¹, Xinyu Hu¹, Xiaoqi Huang³
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- 3151 Ventromedial prefrontal volume in adolescence is linked to attention problems in early adulthood**
Matthew Albaugh¹, Catherine Orr², Bader Chaarani², Robert Althoff², Nicholas Allgaier², Nicholas D'Albarto³, Kelsey Hudson², Scott Mackey², Philip Spechler², Tobias Banaschewski⁴, Rudiger Bruhl⁵, Arun Bokde⁶, Uli Bromberg⁷, Christian Büchel⁸, Anna Cattrell⁹, Patricia Conrod¹⁰, Sylvane Desrivieres⁹, Herta Flor⁴, Vincent Frouin¹¹, Jürgen Gallinat¹², Robert Goodman¹³, Penny Gowland¹⁴, Yvonne Grimmer⁴, Andreas Heinz¹⁵, Viola Kappel¹⁶, Jean-Luc Martinot¹⁷, Marie-Laure Paillère Martinot¹⁸, Frauke Nees⁴, Dimitri Papadopoulos Orfanos¹⁹, Jani Penttilä²⁰, Luise Poustka⁴, Tomas Paus²¹, Michael Smolka²², Maren Struve⁴, Henrik Walter²³, Robert Whelan²⁴, Gunter Schumann⁹, Hugh Garavan², Alexandra Potter¹
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- 3152 Comparison between HD-tDCS and conventional tDCS of the rIFG in children and adolescents with ADHD**
Carolyn Breitling¹, Tino Zaehle², Moritz Dannhauer³, Jana Tegelbeckers¹, Hans-Henning Flechtner¹, Kerstin Krauel^{1,4}
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- 3153 Regional CBF Differences in Dimensions of Psychopathology Across Categorical Diagnoses**
Antonia Kaczurkin¹, Tyler Moore¹, Monica Calkins¹, Kosha Ruparel¹, Adon Rosen¹, Rastko Ciric¹, Angel Garcia de la Garza¹, Russell Shinohara², Simon Vandekar², Daniel Pine³, Ellen Leibenluft³, Cobb Scott^{1,4}, Edna Foa¹, Mark Elliott⁵, Efstathios Gennatas¹, David Roalf¹, Daniel Wolf¹, John Detre^{5,6}, Raquel Gur^{1,5}, Ruben Gur^{1,5,4}, Theodore Satterthwaite¹
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- 3154 Feedback Negativity in Arithmetic Task Distinguishes Dimensions of ODD**
Monica Ly¹, Timothy Michaels¹, Peter Molfese¹, Chi-Ming Chen¹, Lihong Wang², Jeffrey Burke¹
¹University of Connecticut, Storrs, CT, ²University of Connecticut Health Center, Farmington, CT
- 3156 Decreased right cerebellar volumes predict symptom severity and motor deficits in boys with ADHD.**
Jina Pakpoor^{1,2}, Deana Crocetti³, Stewart Mostofsky⁴
¹Kennedy Krieger Institute, Baltimore, MD, ²Johns Hopkins University, Baltimore, MD, ³Kennedy Krieger Institute, Baltimore, United States, ⁴Kennedy Krieger Institute & Johns Hopkins University, Baltimore, MD
- 3157 Increased Brain Asymmetry is Associated with Attention-Deficit/Hyperactivity Disorder**
Cintya Larios¹, Pamela Douglas¹
¹University of Central Florida, Orlando, FL
- 3158 Dissociable Meta-Analytic Networks Contribute to Post-Traumatic Stress Disorder (PTSD)**
Julio Yanes¹, Meredith Reid², Jennifer Robinson²
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DISORDER OF THE NERVOUS SYSTEM

Parkinson's Disease and Movement Disorders

- 3159 White Matter Damage and Systemic Inflammation in Parkinson's Disease**
Pi-Ling Chiang¹, Hsiu-Ling Chen¹, Cheng-Hsien Lu¹, Pei-Chin Chen¹, Meng-Hsiang Chen¹, I-Hsiao Yang¹, Nai-Wen Tsai¹, Wei-Che Lin¹
¹Kaohsiung Chang Gung Memorial Hospital, and Chang Gung University College of Medicine, Taiwan, Kaohsiung, Taiwan
- 3160 Thalamic CBF predicts disease severity and cognitive deficits in patients with Huntington's Disease.**
Hannah Furby¹, James Ralph¹, Anne Rosser¹, Kevin Murphy¹, Richard Wise¹, Jessica Steventon¹
¹Cardiff University, Cardiff, United Kingdom
- 3161 The Effects of Pharmacological Treatment on Brain Functional Connectome in Early-Stage PD**
Xueling Suo¹, Du Lei¹, Fuqin Chen¹, Nannan Li², Lan Cheng², Meiyun Wang³, Rong Peng², Qiyong Gong¹
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- 3162 Connectivity of the cingulate bundle relates to future cognitive decline in Multiple Sclerosis**
Katherine Koenig¹, Erik Beall², Jian Lin¹, Ken Sakaie¹, Lael Stone¹, Stephen Rao¹, Micheal Phillips¹, Mark Lowe¹
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- 3163 Impaired semantic fluency in Parkinson's disease with mild cognitive impairment: a fMRI study**
Ji Hyun Yang¹, Katie McMahon², David Copland³, Gerard Byrne⁴, Alexandra Toff¹, Leander Mitchell⁵, Nadeeka Dissanayaka¹
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- 3164 Attention network in Parkinson's disease with mild cognitive impairment: an event-related fMRI study**
Ji Hyun Yang^{1,2,3}, Katie McMahon⁴, David Copland^{5,6}, Gerard Byrne^{7,2,6,8}, Alexandra Toff⁹, Leander Mitchell¹⁰, Nadeeka Dissanayaka^{9,6,11}
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- 3165 Anxiety influences the neural correlates associated with freezing of gait in Parkinson's disease**
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- 3166 Brain Connectivity Changes Induced by Long-Term Dopaminergic Therapy in Parkinson's Disease**
Tommaso Ballarini¹, Filip Růžička², Karsten Mueller¹, Ondřej Bezdíček², Tomáš Sieger², Evžen Růžička², Jan Roth², Josef Vymazal³, Matthias Schroeter^{1,4,5}, Robert Jech²
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- 3167 Mean and variance of Dynamic Functional Connectivity in Parkinson's dDiseas**
Katherine Baquero^{1,2}, Pieter Guldenmund², Maud Rouillard¹, Frederique Depierreux^{1,2,3}, Evelyne Balteau², Christophe Phillips⁴, Mohamed Bahri², Gaëtan Garraux^{1,2,3}
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- 3168 Apathy in prodromal HD and Caudate head functional connectivity**
Maria Misiura¹, Elizabeth Fall¹, Vince Calhoun², Jeremy Bockholt³, Jeffrey Long⁴, Hans Johnson³, Jennifer Ciarochi¹, Jatin Vaidya³, Jane Paulsen³, Jessica Turner¹
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- 3169 Exploring the dynamics of resting-state networks in PD using co-activation pattern analysis**
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¹Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, NV, ²University of Colorado Boulder, Boulder, CO
- 3170 Dopamine effects on intra- and inter-network functional connectivity in Parkinson's disease**
Huiling Hu¹, Wanqun Yang², Miao Zhong¹, Biao Huang², Yuan He¹, Xiong Zhang³, Lixiang Chen¹, Lijuan Wang³, Shufei Zhang¹, Ruiwang Huang¹
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- 3171 Mild Cognitive Impairment and Brain Connectivity Changes in Parkinsons dDiseas**
Tommaso Ballarini¹, Ondřej Bezdiček², Filip Růžicka², Karsten Mueller¹, Tomáš Sieger², Evžen Růžicka², Jan Roth², Josef Vymazal³, Robert Jech², Matthias Schroeter^{1,4,5}
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- 3173 Combining two meta-analytical algorithms to identify atrophy in progressive supranuclear palsy**
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- 3174 Identifying early signs of Fragile X-associated Tremor/Ataxia Syndrome: a cross sectional fMRI study**
Stephanie Brown¹, Heather Whalley¹, Shinjini Basu¹, Peter Kind¹, Andrew Stanfield¹
¹University of Edinburgh, Edinburgh, United Kingdom
- 3175 Multimodal quantitative MRI to access the damage in Progressive Supranuclear Palsy**
Rahul Gaurav¹, Nadya Pyatigorskaya², Claire Ewencyk³, Cecile Gallea¹, Romain Valabregue⁴, Fatma Gargouri¹, Eric Bardin¹, Isabelle Arnulf⁵, Cyril Poupon⁶, Marie Vidailhet³, Stephane Lehericy¹
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- 3176 Motor- and cognitive-related network activity in Parkinson's disease: a FDG and H2O PET study**
Shichun Peng¹, Yilong Ma¹, Chris Tang¹, Phoebe Spetsieris¹, Vijay Dhawan¹, David Eidelberg¹
¹The Feinstein Institute for Medical Research, Manhasset, NY
- 3177 Motor- and cognitive-related network modulation by levodopa in Parkinson's disease: A PET/ fMRI study**
Yilong Ma¹, Shichun Peng¹, An Vo¹, Phoebe Spetsieris¹, Vijay Dhawan¹, David Eidelberg¹
¹The Feinstein Institute for Medical Research, Manhasset, NY
- 3178 Brain Network Alternation in Parkinsons dDiseas Measured by Eigenvector Centrality Mapping**
Zhengshi Yang¹, Ryan Walsh¹, Virendra Mishra¹, Karthik Sreenivasan¹, Xiaowei Zhuang¹, Sarah Banks¹, Dietmar Cordes¹
¹Cleveland Clinic Lou Ruvo Center for Brain Health, LAS VEGAS, NV
- 3179 Within- and across-network alterations of the sensorimotor network in Parkinson's disease**
Julian Caspers¹, Simon Eickhoff², Felix Hoffstaedter³, Christian Rubbert¹, Martin Südmeyer⁴, Christian Hartmann¹, Benjamin Sigl¹, Joel Aissa¹, Bernd Turowski¹, Alfons Schnitzler¹, Christian Mathys¹
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- 3180 Parkinson's disease Motor and non-Motor symptoms are related to Insular Connectivity Dysfunction**
Christian La¹, Kai Zhang¹, Jeehyun Kim¹, Vinod Menon¹, Kathleen Poston¹
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- 3181 Specific Metabolic Brain Networks Associated with Two Clinical Subtypes of Multiple System Atrophy**
Ping Wu¹, Shichun Peng², Jian Wang³, Jianjun Wu³, Chengfeng Jiang¹, Jingjie Ge¹, David Eidelberg², Yilong Ma², Chuantao Zuo¹
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- 3182 MRI-based Brain Networks of Perfusion and Volume in Cerebellar Variant of Multiple System Atrophy**
Jingjie Ge¹, Shichun Peng², Ping Wu¹, Jian Wang³, Jianjun Wu³, Chengfeng Jiang¹, David Eidelberg², Chuantao Zuo¹, Yilong Ma²
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- 3183 Striatal Neurodegeneration Patterns in Parkinsons dDiseas Identified using PET Imaging and PCA**
Ivan Klyuzhin¹, Jessie Fu¹, Nikolay Shenkov¹, Nasim Vafai¹, Elham Shahinfard¹, Jess McKenzie¹, Nicole Neilson¹, Katherine Dinelle¹, Matthew Sacheli¹, Jon Stoessl¹, Arman Rahmim², Vesna Sossi¹
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- 3184 Resting-State hypoperfusion of left premotor areas correlates with limb kinetic apraxia in Parkinson**
Stefanie Kuebel¹, Katharina Stegmayer², Tim Vanbellinghen¹, Bruno Weder³, Sebastian Walther², Stephan Bohlhalter⁴
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- 3185 Data-driven diagnosis of Parkinson's disease based on resting-state inter-network connectivity**
Christian Rubbert¹, Christian Mathys¹, Simon Eickhoff², Felix Hoffstaedter³, Martin Südmeyer⁴, Christian Hartmann¹, Benjamin Sigl¹, Bernd Turowski¹, Alfons Schnitzler¹, Julian Caspers¹
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- 3186* Resting State Functional Connectivity in Parkinsonian Monkeys**
Joonas Autio¹, Takayuki Ose¹, Tanki Nobuyoshi¹, Jun Takahashi², Takuya Hayashi¹
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- 3187 Association of Arterial Spin Labeling MRI with Neurophysiological Test Scores in Parkinson's Disease**
Dilek Betül Arslan¹, Sevim Cengiz¹, Ani Kicik^{2,3}, Emel Erdogan⁴, Seda Buker⁵, Zeynep Tufekcioglu⁵, Aziz Mufit Ulug^{1,6}, Basar Bilgic⁵, Hasmet Hanagasi⁵, Hakan Gurvit⁶, Tamer Demiralp^{2,7}, Esin Ozturk-Isik¹
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- 3188* High intensity focused ultrasound subthalamotomy modulates metabolic networks in Parkinson's disease**
Rafael Rodriguez-Rojas¹, Jose A. Pineda-Pardo¹, Raul Martinez-Fernandez¹, Carlos A. Sanchez-Catasus², Jose A. Obeso¹
¹Centro Integral de Neurociencias A.C., HM Hospitales- Puerta del Sur, CEU-San Pablo University, Madrid, Spain, ²Department of Nuclear Medicine and Molecular Imaging, University Medical Center Groningen, Groningen, Netherlands
- 3189 Neural Patterns of Cognitive Stability and Flexibility in Parkinson's Disease**
Ima Trempler^{1,2,3}, Ellen Binder⁴, Nadiya El-Sourani^{1,4}, Anne-Marika Schiffer⁵, Paul Reker⁴, Gereon Fink^{4,2}, Ricarda Schubotz^{1,4,3}
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- 3190 Impact of treated Parkinson's disease on the reward system relative to normal aging**
Stefan Du Plessis¹, Meija Bossert², Matthijs Vink³, Leigh Van den Heuvel¹, Soraya Barden¹, Robin Emsley¹, Chanelle Buckle¹, Soraya Seedat¹, Jonathan Carr¹
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- 3191 Prefrontal network dysfunction in prodromal and manifest Parkinson's disease**
Johannes Klein¹, Ludovica Griffanti², Thomas Barber³, Fahd Baig³, Claudio Ruffmann³, Clare Mackay⁴, Michele Hu³
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- 3192 Long-term changes in sensorimotor cortical response to botulinum toxin therapy of cervical dystonia**
Petr Hluštík¹, Martin Nevrlý², Pavel Otruba¹, Pavel Hok¹, Michaela Kaiserová², Zbyněk Tüdös², Petr Kaňovský¹
¹Palacký University Olomouc, Olomouc, Czech Republic, ²Faculty Hospital Olomouc, Olomouc, Czech Republic
- 3193 Different spinocerebellar ataxias subtypes have different signatures of degeneration**
Carlos Hernandez-Castillo¹, Juan Fernandez-Ruiz², Jorn Diedrichsen¹
¹Western University, London, Canada, ²Universidad Nacional Autonoma de Mexico, CDMX, Mexico
- 3194 Investigating cognitive functioning in Friedreich's Ataxia: an RS-fMRI study**
Camilla Russo¹, Sirio Cocozza¹, Teresa Costabile¹, Agnese Liguori¹, Filomena Abate¹, Francesca Paciello¹, Enrico Tedeschi¹, Mario Quarantelli², Francesco Saccà¹, Arturo Brunetti¹
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- 3195 Possible neural correlates of reaction time performance deficits in Lewy body dementia: a VBM study**
Julia Schumacher¹, Peter Gallagher¹, Marcus Kaiser², Andrew Blamire³, Luis Peraza¹, John-Paul Taylor¹
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- 3196 Abnormal intrinsic brain activity in early Parkinson's disease with mild cognitive impairment**
Zhijiang Wang¹, Xiuqin Jia², Peipeng Liang², Huali Wang¹
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- 3197 Abnormal dynamics of intrinsic brain functional networks in Parkinson's disease**
Jinhee Kim^{1,2}, María Díez Cirarda^{1,2}, Marion Criaud^{1,2}, Sang-Soo Cho^{1,2}, Alexander Mihaescu^{1,2}, Mikael Valli^{1,2}, Christine Ghadery^{1,2}, Sarah Coakeley^{1,2}, Antonio Strafella^{1,2,3}
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- 3198 The relationship between DTI and motor symptom severity in Parkinson's Disease**
Lisa Ohlhauser¹, Chantel Mayo², Jodie Gawryluk¹
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- 3199 White matter microstructure and changes in response inhibition after DBS in Parkinson's Disease**
Kendra Hinton¹, Andrew Plassard¹, Maxim Turchan¹, Bennett Landman¹, David Zald¹, Daniel Claassen¹, Nelleke van Wouwe¹, Scott Wylie²
¹Vanderbilt University, Nashville, TN, ²University of Louisville, Louisville, KY

- 3200 Functional connectivity changes at different stages of cognitive decline in Parkinson's disease**
Emel Erdogan¹, Ani Kicik^{2,3}, Seda Buker⁴, Zeynep Tufekcioglu⁴, Dilek Betul Arslan⁵, Sevim Cengiz⁶, Esin Ozturk-Isik⁶, Basar Bilgic⁴, Hasmet Hanagasi⁴, Aziz Mufit Ulug^{6,7}, Canan Basar Eroglu¹, Tamer Demiralp², Hakan Gurvit⁴
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- 3201 Circulating microRNAs shows correlation with specific gray matter atrophy in Parkinson's disease**
Chiunchieh Yu¹, Hsiu-Ling Chen¹, Meng-Hsiang Chen¹, Yung-Cheng Huang¹, Yueh-Cheng Chen¹, Pi-Ling Chiang¹, Nai-Wen Tsai¹, Shau-Hsuan Li¹, Cheng-Hsien Lu¹, Wei-Che Lin¹
¹Kaohsiung Chang Gung Memorial Hospital, and Chang Gung University College of Medicine, Taiwan, Kaohsiung, Taiwan
- 3202 Cortical Atrophy via Intrinsic Brain Networks in Early Parkinson Disease**
Yvonne Yau¹, Yashar Zeighami¹, Travis Baker², Kevin Larcher¹, Mahsa Dadar¹, Vladimir Fonov¹, Louis Collins¹, Bratislav Mistic¹, Alain Dagher¹
¹Montreal Neurological Institute, Montreal, QC, ²Rutgers University, Union, NJ
- 3203 Reproducible nigral volume loss in Parkinson's disease: Validation in two cohorts**
Jason Langley¹, Daniel Huddleston², Stewart Factor², Xiaoping Hu³
¹University of California Riverside, Riverside, CA, ²Emory University, Atlanta, GA, ³UC Riverside, Riverside, CA
- 3204 Multivariate Analysis of Brain Deformation related to Clinical Measures in Parkinson's Disease**
Yashar Zeighami¹, seyed-mohammad fereshtehnejad², Mahsa Dadar¹, Vladimir Fonov¹, Louis Collins³, Bratislav Mistic⁴, Alain Dagher⁵
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- 3205 Botulinum toxin versus pallidal stimulation: Network activity in adult-onset idiopathic dystonia**
Andrea Greuel¹, K Amande M Pauls¹, Gereon Fink¹, Lars Timmermann², Carsten Eggers²
¹University Hospital Cologne, Cologne, Germany, ²University Hospital of Gießen and Marburg, Marburg, Germany
- 3206 The atrophy of subcortical nuclei underlies motor deficits in cerebral small vessel disease**
Xinyu Liang¹, Feifei Zhai^{2,3}, Ning Su^{2,3}, Feng Tian⁴, Shuyang Zhang^{5,6}, Zhengyu Jin^{7,8}, Yi-Cheng Zhu^{2,3}, Gaolang Gong¹
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- 3207 Microstructural white matter changes predict disease severity in Parkinson's disease**
Tobias Baumeister¹, Sue-Jin Lin², Martin McKeown³
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- 3208 Altered topology of brain function in Parkinson's disease: the effects of motor dysfunction severity**
Karthik Sreenivasan¹, Virendra Mishra¹, Christopher Bird¹, Xiaowei Zhuang¹, Zhengshi Yang¹, Sarah Banks¹, Dietmar Cordes¹, Ryan Walsh¹
¹Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, NV
- 3209 Dopamine depletion impairs gait automaticity by altering cortico-striatal and cerebellar processing**
Moran Gilat¹, Peter Bell², Kaylena Ehgoetz Martens³, Matthew Georgiades³, Julie Hall⁴, Courtney Walton⁴, Simon Lewis⁴, James Shine⁴
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- 3210 Distinctive topological organization of brain networks in early Parkinson's disease (PD) subjects**
Virendra Mishra¹, Karthik Sreenivasan¹, Xiaowei Zhuang¹, Zhengshi Yang¹, Christopher Bird¹, Dietmar Cordes¹, Ryan Walsh¹
¹Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, NV
- 3211 Altered hierarchical modularity in Parkinson's disease (PD) subjects**
Virendra Mishra¹, Karthik Sreenivasan¹, Xiaowei Zhuang¹, Zhengshi Yang¹, Christopher Bird¹, Dietmar Cordes¹, Ryan Walsh¹
¹Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, NV
- 3212* Network Atrophy in Early Stage Predicts Longitudinal Rate of Progression in Parkinson's Disease**
Seyed-Mohammad Fereshtehnejad¹, Yashar Zeighami², Ronald Postuma³, Alain Dagher⁴
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- 3213 Progressive Brain Atrophy Over 2-Years in Friedreich Ataxia: the IMAGE-FRDA study**
Ian Harding¹, Cathlin Sheridan², Louisa Selvadurai², Louise Corben³, Martin Delatycki³, Monique Stagnitti², Elsdon Storey², Gary Egan², Nellie Georgiou-Karistianis²
¹Monash University, Melbourne, VIC, ²Monash University, Melbourne, Victoria, ³Murdoch Childrens Research Institute, Melbourne, Victoria
- 3214 Multicontrast investigation of Parkinson's disease related changes in substantia nigra pars compacta**
Jason Langley¹, Daniel Huddleston², Naying He³, Stewart Factor², Xiaoping Hu¹
¹University of California Riverside, Riverside, CA, ²Emory University, Atlanta, GA, ³Ruijin Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China

- 3215 Anatomical connectivity of the septal nucleus - hippocampal network in Parkinson's disease**
Fatma Gargouri^{1,2}, Cécile Gallea^{3,2,4}, Marie Mongin^{3,2,4}, Nadya Pyatigorskaya^{5,2,4,6}, Romain Valabregue^{7,2}, Marie Vidailhet^{3,4,4}, Stephane Lehericy^{1,2,4,6}
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- 3216 Dopaminergic Modulation of Working Memory Reaction Time and Brain Activation in Parkinson's Disease**
Kai Zhang¹, Matthew Ua Cruadhlaioich¹, Sophie YorkWilliams², Vinod Menon¹, Kathleen Poston¹
¹Stanford University, Palo Alto, CA, ²University of Colorado - Boulder, Boulder, CO
- 3217 Structural Network Characterization of Parkinson's Disease: Substantial Role of Dopaminergic Deficit**
Nooshin Abbasi^{1,2}, Bahram Mohajer³, Amirhussein Abdolizadeh³, Sima Abbasi⁴
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- 3218 Individualized Tractography-Based Parcellation of the GPI at 7T in PD Patients prior to DBS Surgery**
Rémi Patriat¹, Yuval Duchin¹, Christophe Lenglet¹, Jacob Niederer¹, Joshua Aman¹, Scott Cooper¹, Jerrold Vitek¹, Noam Harel¹
¹University of Minnesota, Minneapolis, MN

DISORDERS OF THE NERVOUS SYSTEM

Stroke

- 3219 Predictors of Response to Robotic + Task Practice in Chronic Stroke: A New Clinical Trial**
George Wittenberg¹, Elsa Ermer², Michael Dimyan¹, Amy Boos², Susan Conroy¹, Jill Whitall², Hegang Chen²
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- 3220 Effects of the Cortical Damage on Cognitive Function after Stroke**
Sungju Jee¹, Kyu-ho Lee²
¹Chungnam National University Hospital, Daejeon, Korea, Republic of, ²Chungnam National University Hospital, Daejeon, Korea, Republic of
- 3221 Body regional dimorphism in association between qEEG and motor recovery in post-stroke patients**
Eun Kyoung Kang¹, Wanjoo Park², Young Kee Min¹, Laehyun Kim²
¹Kangwon National University College of Medicine, Kangwon National University Hospital, Chuncheon, Korea, Republic of, ²Korea Institute of Science and Technology, Seoul, Korea, Republic of

- 3222 Neural compensation in the recovery of a saccade selection bias after unilateral stroke in macaques**
Ramina Adam¹, Kevin Johnston¹, Kelly Shen², Stefan Everling¹
¹University of Western Ontario, London, Ontario, ²Rotman Research Institute, Baycrest Centre, Toronto, Ontario 220002
- 3223 Modulating residual vision in cortically blind patients using real-time fMRI neurofeedback.**
Yury Koush¹, Sebastian Baez², Arnaud Saj², Frank Scharnowski³, Dimitri Van De Ville⁴, patrik vuilleumier⁵
¹Yale University, New Haven, United States, ²University of Geneva, Geneva, Switzerland, ³University of Zürich, Lausanne, Switzerland, ⁴Ecole Polytechnique Fédérale de Lausanne, Lausanne, Vaud, ⁵unige, Geneva, Geneva
- 3224 Contribution of inhibition from M1 & non-M1 regions in people with upper limb impairment post stroke**
Kathryn Hayward^{1,2}, Jason Neva¹, Katlyn Brown¹, Cameron Mang^{1,3}, Lara Boyd¹
¹University of British Columbia, Vancouver, Canada, ²Florey Institute of Neuroscience and Mental Health, Melbourne, Australia, ³University of Calgary, Calgary, Canada
- 3225 Abnormalities of anatomy and function in ischemic stroke patients: a multi-modal MRI study**
Wei Wei^{1,2}, Hua Di³, Yu-Feng Zang^{1,2}, Yating Lv^{1,2}, Zhongxiang Ding⁴
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- 3226 Can cerebellar tDCS influence hemispheric asymmetry after stroke? A proof of concept study.**
Sarah Zandvliet¹, Carel Meskers^{1,2}, Andreas Daffertshofer³, Jan Munck⁴, Gert Kwakkel^{1,2,5}, Erwin Wegen¹
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- 3227 Interhemispheric Motor Functional Connectivity Is Associated With Outcomes of Lacunar Infarction**
Nai-Fang Chi¹, Hsiao-Lun Ku¹, David Yen-Ting Chen¹, Chaur-Jong Hu¹
¹Shuang Ho Hospital, Taipei Medical University, New Taipei City, Taiwan
- 3228 Corticospinal Tract Diffusion Properties and Robotic Reaching in Hemiparetic Children**
Andrea Kuczynski¹, Jacquie Hodge², Helen Carlson², Catherine Lebel³, Sean Dukelow⁴, Jennifer Semrau⁴, Adam Kirton¹
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- 3229 Corticospinal Tract as a Biomarker in Stroke: Which Method Optimally Reflects Tract Integrity?**
Samantha Feldman¹, Lara Boyd^{1,2}, Jason Neva¹, Sue Peters¹, Kathryn Hayward^{1,3,4}
¹University of British Columbia, Vancouver, BC, ²Djavad Mowafaghian Centre for Brain Health, Vancouver, Canada, ³Florey Institute of Neuroscience and Mental Health, Melbourne, Australia, ⁴NHMRC Centre of Research Excellence in Stroke Rehabilitation and Brain Recovery, Melbourne, Australia

3230 Segmentation of Interhemispheric Motor Regions on the Corpus Callosum in StrokeJessica Baird¹, Geetanjali Pathak¹, Ste2ve Cramer², Jill Stewart¹¹University of South Carolina, Columbia, SC, ²UC Irvine, Orange, CA**3231 Lesion Neuroanatomy of Set-Switching in a Large Sample of Acute Stroke Patients**Andreja Varjacic¹, Dante Mantini^{1,2,3}, Jacob Levenstein¹, Nele Demeyere^{*1}, Céline Gillebert^{*1,2}¹University of Oxford, Oxford, United Kingdom, ²University of Leuven, Leuven, Belgium, ³ETH Zurich, Zurich, Switzerland**3232 Decreased Interhemispheric Functional Connectivity During Action Observation after Stroke**Kaori Ito¹, KATHLEEN GARRISON², Panthea Heydari¹, Mona Sobhani³, Julie Werner⁴, Hanna Damasio¹, Carolee Winstein¹, Lisa Aziz-Zadeh¹, Sook-Lei Liew¹¹University of Southern California, Los Angeles, CA, ²Yale School of Medicine, New Haven, CT,³University of California, Los Angeles, Los Angeles, CA, ⁴Children's Hospital Los Angeles, Los Angeles, CA**3233 Neural Correlates for Central Post-Stroke Pain after Thalamic Intracerebral Hemorrhage**Nayoung Kim¹, Hyoun Soo Kim¹, Yong Wook Kim¹¹Department and Research Institute of Rehabilitation Medicine, Yonsei university college of medicine, Seoul, Korea, Republic of**3234 The Temporal Dynamics of Attentional Engagement following Right Hemisphere Stroke.**Méadhbh Brosnan^{1,2,3}, Glyn Humphreys⁴, Paul Dockree¹, Jacob Levenstein⁴, Siobhan Harty², Redmond O'Connell¹, Ian Robertson¹, Nele Demeyere⁴¹The University of Dublin, Trinity College, Dublin, Ireland, ²Oxford University, Oxford, United Kingdom,³Monash University, Melbourne, Australia, ⁴University of Oxford, Oxford, United Kingdom**3235 Relationship between white matter tracts from SMA and ataxia in patients with supratentorial stroke**Bo-Ram Kim¹, Seunghwan Lee¹, Wonjin Moon¹, Jongmin Lee¹¹Konkuk University Medical Center, Seoul, Korea, Republic of**3236 Resting state activity and connectivity in post-stroke depression**Natalia Egorova¹, Toby Cumming¹, Chris Shirbin¹, Michele Veldsman², Emilio Werden¹,Amy Brodtmann³¹Florey Institute of Neuroscience and Mental Health, University of Melbourne, Melbourne, Australia,²University of Oxford, Oxford, United Kingdom, ³Florey Institute of Neuroscience and Mental Health, Melbourne, Victoria**3237 Covert Lesion Volume Relates to Motor and Cognitive Outcomes in Chronic Stroke Patients**Angela Auriat¹, Beatrice Francisco¹, Sandra Black², Lara Boyd³¹University of British Columbia, Vancouver, BC, ²Sunnybrook Research Institute, Toronto, ON,³University of British Columbia, Vancouver, Canada**3238 Prediction of Recovery at 3 Months Post-stroke Using Lesion Network Analysis in Stroke Patients**Jungsoo Lee¹, Eunhee Park², Ahee Lee³, Won Hyuk Chang², Dae-Shik Kim¹, Yun-Hee Kim⁴¹Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of, ²SamsungMedical Center, Seoul, Korea, Republic of, ³Sungkyunkwan University, Seoul, Korea, Republic of,⁴Samsung Medical Center, Sungkyunkwan University, Seoul, Korea, Republic of**3239 Motor Network Plasticity According to Impairment Severity after Stroke**Jungsoo Lee¹, Eunhee Park², Ahee Lee³, Won Hyuk Chang², Dae-Shik Kim¹, Yun-Hee Kim⁴¹Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of, ²Samsung Medical Center, Seoul, Korea, Republic of, ³Sungkyunkwan University, Seoul, Korea, Republic of, ⁴Samsung Medical Center, Sungkyunkwan University, Seoul, Korea, Republic of**3240 White matter microstructure in transient ischemic attack: a longitudinal DTI study**Jennifer Ferris¹, Jodi Edwards², Jennifer Ma¹, Lara Boyd¹¹University of British Columbia, Vancouver, BC, ²University of Toronto, Toronto, ON**3241 Frontal Lobe Tracts in isolated Apraxia of Speech: a tractography case study**Claudia Cramer¹, Stephanie Forkel¹, Naianna Robertsson¹, Henrietta Howells¹, Laura Goldstein², Nina Dronkers^{3,4}, Marco Catani¹¹NATBrainLab, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, United 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Corticospinal Tract Biomarkers for Stroke Recovery.**Victor Borges¹, Cathy Stinear¹, Peter Barber¹, Suzanne Ackerley¹, Marie-Claire Smith¹, Matthew Petoe², James Coxon³, Winston Byblow¹¹The University of Auckland, Auckland, New Zealand, ²The Bionics Institute, Melbourne, Australia,³Monash University, Melbourne, Australia**3245 Reinforcing neural circuits of motor execution during motor imagery using decoded fMRI-neurofeedback**Theo Marins^{1,2}, Erika Rodrigues^{2,3}, Rodrigo Babilio², Jorge Moll², Fernanda Tovar-Moll^{2,1}¹Federal University of Rio de Janeiro, Rio de Janeiro, Brazil, ²D'Or Institute for Research and Education (IDOR), Rio de Janeiro, Brazil, ³Augusto Motta University (Unisuam), Rio de Janeiro, Brazil**3246 A machine learning approach to identify acute stroke patients within 4.5 h or 6 h from symptom onset**Hyunna Lee¹, Sungwon Ham², Eun-Jae Lee³, Namkug Kim³, Dong-Wha Kang³¹University of Ulsan College of Medicine, Seoul, Korea, Republic of, ²Asan Medical Center, Seoul, Korea, Republic of, ³Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea, Republic of

- 3247 The Role of Contralesional Motor Areas in the First Days after Stroke – an fMRI-guided TMS-Study.**
Lukas Hensel¹, Caroline Tscherpel^{1,2}, Jana Freytag¹, Stella Ritter¹, Mattias Vollmer¹, Lukas Volz³, Gereon Fink^{1,2}, Christian Grefkes^{1,2}
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- 3248 Vascular cognitive impairment subgroups show distinct aspects of preserved cognition**
Derek Beaton¹, Robert Bartha², Sandra Black³, Leanne Casaubon⁴, Dar Dowlatshahi⁵, Ayman Hassan⁶, Donna Kwan², Brian Levine¹, Jennifer Mandzia², Paula McLaughlin², Joseph Orange², Alicia Peltsch², Joel Ramirez⁷, Angela Roberts⁸, Demetrios Sahlas⁹, Gustavo Saposnik¹⁰, Rick Swartz⁷, Sean Symons⁷, Angela Troyer¹, Stephen Strother¹, ONDRI Investigators¹¹
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- 3249 Improved detection of ischemic stroke with diffusion tensor imaging using multiple nonzero b value**
Chunxiang Jiang¹, Chao Zou¹, Xiaojing Long¹, Hang Zhang¹, Lijuan Zhang¹
¹Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China
- 3250 Chronic sensory stroke with central pain is associated with spinal cord atrophy**
Patrick Freund¹, Gergely David¹, Gaia Bonetti¹, Jochen Fiebach², Thomas Krause², Jan Jungehülsing³, Agnes Floeel², Arno Villringer⁴, Kersten Villringer²
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- 3251 Against the Plateau in Chronic Aphasia**
Thomas Hope¹, Philipp Ludersdorfer¹, Alex Leff¹, Zula Haigh¹, Rachel Bruce¹, Cathy Price¹
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- 3252 Effect of Ipsilesional Anodal tDCS with Contralesional Low-frequency rTMS for Motor Recovery**
Yun-Hee Kim^{1,2}, Ahee Lee², Eunhee Park¹, Hee Goo Kim², Won Hyuk Chang¹
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- 3253 Combining TMS and EEG – a new tool to assess motor system integrity after stroke**
Caroline Tscherpel^{1,2}, Sebastian Dern¹, Stephan Bender³, Florian Müller-Dahlhaus^{4,5}, Ulf Ziemann^{4,5}, Gereon Fink^{1,2}, Christian Grefkes^{1,2}
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- 3254 Interhemispheric cortical connectivity in post-stroke motor recovery: a TMS-EEG investigation**
Jacqueline Palmer¹, Lewis Wheaton², Puneeth Guruprasad², Michael Borich¹
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- 3255 Mapping developmental reorganization of the motor network in children with perinatal stroke**
Kayla Grab¹, Helen Carlson², Adam Kirton²
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DISORDERS OF THE NERVOUS SYSTEM

Traumatic Brain Injury

- 3256 Structural connectome analyses reveal disconnection syndrome in traumatic brain injury patients.**
Helena Verhelst¹, Catharine Vander Linden², Guy Vingerhoets¹, Karen Caeyenberghs³
¹Ghent University, Ghent, Belgium, ²Ghent University Hospital, Ghent, Belgium, ³Australian Catholic University, Melbourne, Australia
- 3257 Ipsilateral Motor Weakness in Patients with Traumatic Brain Injury – Case Report**
Sook Joung Lee¹, Sang Beom Kim¹, Min Kyu Park¹, Jin Gee Park¹
¹Dong-A University Hospital, Busan, Korea, Republic of
- 3258 Patterns of progressive brain volume loss after moderate-severe traumatic brain injury**
James Cole¹, Amy Jolly¹, Greg Scott¹, Ewan Ross¹, Sara de Simoni¹, David Sharp¹
¹Imperial College London, London, United Kingdom
- 3259 Stuck in a state of inattention? Functional and structural changes in adolescents after mTBI**
Angela Martina Muller¹, Naznin Virji-Babul²
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- 3260 Testosterone and resting state correlations following deployment-related mild traumatic brain injury**
Kristine Knutson¹, Jeffrey Lewis^{2,1}, Stephen Gotts³, Eric Wassermann¹
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- 3261 Exploring the Impact of Dizziness on Resting State Functional Connectivity in Chronic mTBI Patients**
Dominic Nathan^{1,2}, Marcy Pape¹, Paula Kodosky¹, John King¹, Louis French¹, Wei Liu^{1,2}, Grant Bonavia¹, Gerard Riedy¹, John Ollinger¹
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- 3262* Mapping neuroplasticity associated with reduced depressive symptoms after cognitive training for TBI**
Kihwan Han¹, David Martinez¹, Sandra Chapman¹, Daniel Krawczyk^{1,2}
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- 3263 Resting state functional connectivity alteration in asymptomatic high-school female soccer athletes**
Pratik Kashyap¹, Ikbeom Jang¹, Kausar Abbas¹, Diana Svaldi¹, Thomas Talavage¹
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- 3264 Diagnostic sensitivity of traumatic axonal injury of the spinothalamic tract**
Hyeok Gyu Kwon¹, Sung Ho Jang², Mi Young Lee³, Ju Sang Kim³
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- 3265 Diffusion tensor findings differ in adolescents with acute versus subacute symptomatic concussion**
Ai Wern Chung¹, Réjean Guerriero², Marie Drott¹, Kiho Im¹, William Meehan III.³, Rebekah Mannix⁴, P. Ellen Grant¹
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- 3266 Single-subject Voxel-based Analysis for mTBI using Multi-shell Diffusion MRI**
Xia Li¹, Chitresh Bhushan¹, Asha Singanamalli¹, Ek Tan¹, Jonathan Sperl², Sumit Niogi³, John Tsiouris³, Pratik Mukherjee⁴, Joseph Masdeu⁵, Teena Shetty⁶, Luca Marinelli¹
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- 3267 A systematic review of brain biomarkers in paediatric mild traumatic brain injury**
Julia Schmidt^{1,2}, Kathryn Hayward^{1,3}, Katlyn Brown¹, Jill Zwicker^{1,4}, Shelina Babul^{1,4}, Jennie Ponsford⁵, Paul van Donkelaar¹, Lara Boyd¹
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- 3268 Longitudinal Analysis of Subcortical Pathologies in Severe Traumatic Brain Injury**
Evan Lutkenhoff¹, Julia Crone¹, Jeffrey Chiang¹, Paul Vespa¹, Martin Monti¹
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- 3269 Quantitative Susceptibility Mapping of Hockey Players Soon After Mild Traumatic Brain Injury**
Anna Pukropski¹, Alexander Weber², Christian Kames², Michael Jarrett³, Shiroy Dadachanji², David Li², Jack Taunton², Alexander Rauscher⁴
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- 3270 Predictor Identification for White Matter Integrity in Football Athletes using Stepwise Regression**
Ikbeom Jang¹, Sumra Bari¹, Eric Nauman¹, Thomas Talavage¹
¹Purdue University, West Lafayette, IN
- 3271 Diffusion Entropy of Fractional Anisotropy Values in White Matter in Mild Traumatic Brain Injury**
Alexander Weber¹, Michael Jarrett², Shiroy Dadachanji¹, David Li¹, Jack Taunton¹, Alexander Rauscher³
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- 3272 Evaluation of a new n-back fMRI task in children with and without post-concussion symptoms**
Aneesh Khetani^{1,2}, Sophie Hu³, Christiane Rohr^{4,5,6}, Frank MacMaster^{7,8,9,10,4,6}, Signe Bray^{5,4,6}, Karen Barlow^{11,6,12}
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- 3273 Evaluation of Myelin Damage in Diffuse Traumatic Brain Injury using ViSta-MWI**
Joon Yul Choi¹, Ji-Won Baek¹, Jongho Lee¹, Junghoon Kim²
¹Seoul National University, Seoul, Korea, Republic of, ²CUNY School of Medicine, The City College of New York, New York, NY
- 3274 Neuroimaging-based classification of MCI following TBI during youth: A case study**
John Van Horn¹, Andrei Irimia², Carinna Torgerson², Zachary Jacokes², Rand McClain³, Robert Harding³
¹University of Southern California, Los Angeles, CA, ²University of Southern California, Los Angeles, United States, ³Performance Sports and Rejuvenation Medicine, Santa Monica, CA
- 3275 Longitudinal recovery of local neuronal activity and consciousness level in acquired brain injury**
Qihong Zou¹, Xuehai Wu², Jin Hu², Weijun Tang², Ying Mao², Jianhong Zhu², Lu Lu³, Yao Zhang³, Jia-Hong Gao¹
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- 3276 Investigation of D2/D3 receptors after traumatic brain injury and their relationship to depression**
Amy Jolly¹, James Cole¹, Alex Whittington¹, Greg Scott¹, Vanessa Raymont¹, Sara de Simoni¹, Roger Gunn¹, David Sharp¹
¹Imperial College London, London, United Kingdom
- 3277 Abnormality of the dorsal attentional network in memory impairment after traumatic brain injury**
Emma-Jane Mallas¹, Sara de Simoni¹, Greg Scott¹, Marc Zentar¹, Amy Jolly¹, Lucia Li¹, Ewan Ross¹, Karl Zimmerman¹, Claire Feeney¹, Joel Raffel¹, Stuart Roberts¹, Nikos Gorgoraptis¹, David Sharp¹
¹Imperial College London, London, United Kingdom
- 3278 Axonal damage and global hyperconnectivity persist 3-months after concussion in young hockey players**
Kathryn Manning¹, Robert Bartha¹, Gregory Dekaban¹, Lisa Fischer², Christy Barreira¹, Tim Doherty¹, Douglas Fraser³, Arthur Brown¹, Ravi Menon¹
¹The University of Western Ontario, London, Ontario, ²Fowler Kennedy Sports Medicine, London, Ontario, ³London Health Sciences Centre, London, Ontario

- 3279 Differentiating features of white matter damage following traumatic brain injury**
Niall Bourke¹, Maria Yanez-Lopez¹, James Cole¹, Peter Lally¹, Sara de Simoni¹, Peter Jenkins¹, David Sharp¹
¹Imperial College London, London, United Kingdom
- 3280 A Multicenter Resting-State fMRI Study of Mild Traumatic Brain Injury using the Connectivity Domain**
Armin Iraj¹, Jiachen Zhuo², Natalie Wiseman¹, Rao Gullapalli², Mark Haacke¹, Zhifeng Kou¹
¹Wayne State University, Detroit, Michigan, United States, ²University of Maryland School of Medicine, Baltimore, Maryland, United States
- 3281 Evidence of sub-concussive impairment after a season of ice hockey**
Shaun Fickling¹, Gabriela Pawlowski², Sujoy Ghosh Hajra¹, Careesa Liu¹, Kyle Farrell³, Janelle Jorgensen³, Xiaowei Song^{1,4}, Aynsley Smith³, Ryan D'Arcy^{1,4}
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- 3282 Post-traumatic stress disorder in US military members with mTBI: A subcortical shape analysis**
Artemis Zavaliangos-Petropulu^{1,2}, Emily Dennis³, Anjanibhargavi Ragothaman¹, Christopher Ching^{1,4}, Dmitry Isaev¹, Boris A. Gutman¹, Benjamin Wade⁵, Jeffrey Lewis⁶, Gerald York⁷, Paul M. Thompson¹, David Tate^{8,9}
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- 3283 Frequency Specific Abnormal MEG Brain Rhythms in Individuals with Blast Mild Traumatic Brain Injury**
Charles Huang¹, Jeffrey Huang², Ashley Robb Swan¹, Annemarie Angeles Quinto¹, Sharon Nichols¹, Dewleen Baker¹, Roland Lee¹, Mingxiong Huang¹
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- 3284 Resting- state functional connectivity in concussed symptomatic pediatric patients.**
Eva Palacios¹, NhuNhu Nguyen¹, Pratik Mukherjee¹
¹University of California, San Francisco, San Francisco, CA, United States
- 3285 BDNF Val66Met polymorphism effects on neuropsychological function in asymptomatic concussed athletes**
Christelle Beaulieu¹, Frédérique Carrier-Toutant¹, Alexandre Turcotte-Giroux¹, Louis De Beaumont^{1,2}
¹Université du Québec à Trois-Rivières, Trois-Rivières, Canada, ²Centre de recherche de l'Hôpital du Sacré-Coeur de Montréal, Montréal, Canada
- 3286 Cortical GABA is elevated in the frontal lobe following adolescent sport concussion**
Jeffrey Ojemann¹, Andrew Poliakov², Christopher Budech², David Breiger², Thomas Jinguji², Brian Krabak², David Coppel¹, Tressa Mattioli Lewis², Samuel Browd², Seth Friedman²
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- 3287 Neuroimaging of Military Traumatic Brain injury**
Gerard Riedy¹, Wei Liu¹, Dominic Nathan¹, Ping-Hong Yeh¹, John Ollinger¹
¹National Intrepid Center of Excellence, Walter Reed National Military Medical Center, Bethesda, MD
- 3288 Effects of micro-hemorrhages upon white matter connectivity in older adults with brain injury**
Andrei Irimia¹, Sheng-Yang Goh¹, Carinna Torgerson¹, John Van Horn²
¹University of Southern California, Los Angeles, CA, ²University of Southern California, Los Angeles, WA
- 3289 How do dynamics of functional connectivity change during recovery from severe brain injury?**
Julia Crone¹, Evan Lutkenhoff¹, Paul Vespa¹, Martin Monti¹
¹UCLA, Los Angeles, CA
- 3290 Concussion affects intrinsic resting-state networks across multiple spectral coupling modes**
Benjamin Dunkley¹, Leodante Da Costa², Allison Bethune², Karolina Urban³, Elizabeth Pang⁴, Margot Taylor⁵
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- 3291 Cerebral blood flow is correlated with symptoms at acute concussion**
Nathan Churchill¹, Michael Hutchison², Tom Schweizer³
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GENETICS

Genetic Association Studies

- 3292 Genetic Variation of Neuropeptide Y and its effects on Neural Function**
Katherine Warthen¹, Benjamin Sanford², Kendal Walker², Shana Black¹, Mike Angstadt², Chandra Sripada², Robert Welsh¹, Jon-Kar Zubieta¹, Margit Burmeister², Brian Mickey¹
¹University of Utah, Salt Lake City, UT, ²University of Michigan, Ann Arbor, MI
- 3293 Interaction by polymorphism of FKBP5 and positive parenting affects brain structure in children**
Izumi Matsudaira¹, Kentaro Oba², Hikaru Takeuchi³, Atsushi Sekiguchi⁴, Yoshie Kikuchi⁵, Hiroaki Tomita⁵, Ryuta Kawashima⁶, Yasuyuki Taki⁷
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3294* Multi-modal Imaging Disease Progression Scores as Quantitative Traits in GWAS of the ADNI CohortMarzia Scelsi¹, Marco Lorenzi^{1,2}, Jonathan Schott³, Sebastien Ourselin¹, Andre Altmann¹¹University College London, Translation Imaging Group, Centre for Medical Imaging Computing, London, United Kingdom, ²Asclepios Research Group, INRIA, Université Côte d'Azur, Antibes, France, ³University College London, Dementia Research Centre, London, United Kingdom**3295 Linked Imaging-Genetic Patterns Reveals Schizophrenia-Associated Pathways in a Large Chinese Dataset**Na Luo^{1,2}, Jiayu Chen³, fuquan zhang⁴, Lin Tian⁴, Bing Liu^{1,2}, Ming Song^{1,2}, Yue Cui^{1,2}, Fanfan Zheng^{1,2}, Jingyu Liu^{3,5}, Vince D. Calhoun^{3,5}, Zhenyi Yang^{1,2}, Yong Liu^{1,2}, Nianming Zuo^{1,2}, Linzhong Fan^{1,2}, Jin Li^{1,2}, Jun Chen⁶, Hua Guo⁷, Yunchun Chen⁸, Peng Li^{9,10}, Lin Lu^{9,10,11}, Luxian Lv^{12,13}, Ping Wan⁷, Huaning Wang⁸, Huiling Wang¹⁴, Kaibin Xu^{1,2}, Shengfeng Liu¹, Hao Yan^{9,10}, Jun Yan^{9,10}, Hongxing Zhang^{12,13,15}, Dai Zhang^{9,10,16}, Tianzi Jiang^{1,11,17,18}, Jing Su^{1,2,3,18}¹Brainnetome Center, Institute of Automation, Chinese Academy of Sciences, Beijing, China,²National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, Beijing, China, ³The Mind Research Network & LBERI, Albuquerque, United States, ⁴Wuxi Mental Health Center, wuxi, China, ⁵Department of Electrical Engineering, University of New Mexico, Albuquerque, United States, ⁶Department of Radiology, Renmin Hospital of Wuhan University, Wuhan, China, ⁷Zhumadian Psychiatric Hospital, Zhumadian, China, ⁸Department of Psychiatry, Xijing Hospital, The Fourth Military Medical University, Xi'an, China, ⁹Peking University Sixth Hospital /Institute of Mental Health, Beijing, Beijing, ¹⁰Key Laboratory of Mental Health, Ministry of Health (Peking University), Beijing, China, ¹¹Queensland Brain Institute, University of Queensland, Brisbane, Australia, ¹²Henan Mental Hospital, The Second Affiliated Hospital of Xinxiang Medical University, Xinxiang, China, ¹³Henan Key Lab of Biological Psychiatry, Xinxiang Medical University, Xinxiang, China, ¹⁴Department of Psychiatry, Renmin Hospital of Wuhan University, Wuhan, China, ¹⁵Department of Psychology, Xinxiang Medical University, Xinxiang, China, ¹⁶Center for Life Sciences / PKU-IDG/McGovern Institute for Brain Research, Peking University, Beijing, China, ¹⁷Key Laboratory for NeuroInformation of Ministry of Education, School of Life Science and Technology, University of Electronic Science and Technology of China, Chengdu, China, ¹⁸CAS Center for Excellence in Brain Science and Intelligence Technology, Institute of Automation, Chinese Academy of Sciences, Beijing, China**3296 Genome-Wide Analysis of Hippocampal Volume Decline Identifies Variants on CROCC Gene**Raiyan Khan¹, Leigh Christopher², Andre Altmann³, Michael Greicius⁴¹Stanford University, Stanford, CA, ²Stanford, Palo Alto, CA, ³University College London, London, [Select a State], ⁴Department of Neurology & Neurological Sciences, FIND lab, Stanford University, Stanford, CA**3297 Brain morphology in the lateral hypothalamus and VTA predicts insulin receptor substrate**Delia-Lisa Feis¹, Corina Melzer¹, Marcel Scharge¹, Martin Hess¹, Thomas Mühleisen², Sven Cichon², Katrin Amunts², Svenja Caspers², Jens Brining¹, Marc Tittgemeyer¹¹MPI for Metabolism Research, Cologne, Germany, ²Research Centre Jülich, Jülich, Germany**3298 Association Between Common Genetic Variation and an Imaging-Cognitive Phenotype in Preterm Infants**Harriet Cullen¹, Piergiorgio Salvan¹, Michelle Krishnan¹, Zi Wang², Paul Aljabar², Serena Counsell¹, Giovanni Montana², David Edwards¹¹Department of Perinatal Imaging and Health, Kings College, London, United Kingdom, ²Biomedical Engineering Department, Kings College, London, United Kingdom**3299 Peripheral miR-1202 correlates with changes brain activity and connectivity**Fabricio Pereira¹, Juan Pablo Lopez², Stéphane Richard-Devantoy², Marcelo Berlim², Eduardo Chachamovich², Laura Fiori², Gustavo Turecki², Fabrice Jollant¹¹CHU-Nimes, Nimes, France, ²McGill Group for Suicide Studies, Department of Psychiatry, Douglas Mental Health University, Montréal, Canada**3300 Stress and the serotonin transporter gene variant modulate neural activity in memory recognition**Shijia Li¹, Oliver Wolf², Christiane Thiel³, Xiuyan Guo¹¹East China Normal University, Shanghai, China, ²Ruhr-University Bochum, Bochum, Germany,³University Oldenburg, Oldenburg, Germany**3301 GRIN2B Gene Modulates Cerebellar Gray Matter Density in a Prodromal Huntington Disease Cohort**Jingyu Liu¹, Jennifer Ciarochi², Jeremy Bockholt³, Jane Paulsen³, Jeffrey Long³, Hans Johnson³, Vince Calhoun¹, Jessica Turner²¹The Mind Research Network & LBERI, Albuquerque, NM, United States, ²Georgia State University, Atlanta, GA, United States, ³University of Iowa, Iowa City, IA, United States**3302 Genetic Modulation of Grey Matter Volume and Resting Brain Activation in Chinese Adults**Chao Wu¹, Zonglei Zhen², Lijie Huang², Jia Liu¹¹School of Psychology, Beijing Normal University, Beijing, China, ²School of Brain and Cognitive sciences, Beijing Normal University, Beijing, China**3303 Genetic influences on ischemic deep and periventricular white matter hyperintensities**Nicola Armstrong¹, Karen Mather², Paul Nyquist³, Wei Wen⁴, Perminder Sachdev⁴, ENIGMA Consortium⁵, CHARGE Consortium⁶¹Murdoch University, Perth, WA, ²UNSW Australia, Sydney, NSW, ³Johns Hopkins School of Medicine, Baltimore, MD, ⁴University of New South Wales, Randwick, Australia, ⁵USC, Marina del Rey, CA, ⁶Boston University, Boston, MA**3304 Interactive effects of FOXP2 and CNTNAP2 on speech production ability and brain white matter volume**Xiaochen Sun¹, Hua Shu¹, Gaolang Gong¹¹State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China**3305 Genetic analysis of the hemodynamic response function in motor areas in 680 subjects**Fabrizio Pizzagalli¹, Joshua Faskowitz¹, Peter Kochunov², Paul M. Thompson¹, Neda Jahanshad¹¹Imaging Genetics Center, University of Southern California, Los Angeles, CA, ²Maryland Psychiatric Research Center, Baltimore, MD**3306 FGWAS: Functional Genome Wide Association Analysis**Chao Huang¹, Hongtu Zhu², Paul Thompson³¹University of North Carolina at Chapel Hill, Chapel Hill, NC, ²University of Texas MD Anderson Cancer Center, Houston, TX, ³Imaging Genetics Center, University of Southern California, Marina Del Rey, CA**3307 A neuroimaging based phenome-wide association study of COMT on brain morphology in neurodevelopment**Lu Zhao¹, Kristi Clark¹, Carl Kesselman¹, Mike D'Arcy¹, Clio Gonzalez-Zacarias¹, Ian Foster², Ivo Dinov³, Farshid Sepehrband¹, Arthur Toga¹¹University of Southern California, Los Angeles, CA, ²University of Chicago and Argonne National Laboratory, Chicago, United States, ³University of Michigan, Ann Arbor, United States

GENETICS

Genetic Modeling and Analysis Methods

3308 Acceleration of imaging genetic analyses using graphical processing unit (GPU) in SOLAR-Eclipse

Brian Donohue¹, Habib Ganjgahi², Thomas Nichols³, Neda Jahanshad⁴, Paul Thompson⁴, Anderson Winkler⁵, David Glahn⁶, John Blangero⁷, Peter Kochunov⁸

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3309 A Set-Based Mixed Effect Model for Gene-Environment Interaction and its Application to Neuroimaging

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3310 A novel method to detect gene isoforms expressed at different stages of brain development.

Marie Forest^{1,2}, Anita Thambirajah^{3,2}, Alain Bateman^{4,1,2}, Celia Greenwood^{1,4,5,6,2}, Claudia Kleinman^{1,4,2}

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3311 Deciphering the Association between Polygenic Risk for Schizophrenia and Hippocampal Function

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3312 Fast and Powerful Mixed effect model for Genome-wide Association Analysis of Neuroimaging data

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3313 Genetic clustering of the human functional connectome

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GENETICS

Genetics Other

3314 Genetic relatedness of axial and radial diffusivity in late middle age: a bivariate twin analysis.

Sean Hatton¹, Matthew Panizzon¹, Eero Vuoksima², Donald Hagler¹, Christine Fennema-Notestine¹, Daniel Rinker³, Lisa Eyler¹, Carol Franz¹, Michael Lyons⁴, Michael Neale⁵, Ming Tsuang¹, Anders Dale¹, William Kremen¹

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3315 Thickness and contrast in 16p11.2 CNVs

John Lewis¹, Clara Moreau², Sandra Martin-Brevet^{3,4}, Borja Rodriguez-Herreros^{2,3}, Aurélie Pain³, Anne Maillard^{3,5}, Claudia Modenato^{3,4}, Bogdan Draganski⁴, Sébastien Jacquemont^{2,3}, Alan Evans¹, the 16p11.2 European Consortium³, the Simons Variation in Individuals Project Consortium⁶

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3316 Altered subcortical diffusivity in 16p11.2 CNVs

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3317 Neural correlates of genetic variant rs16969968 of the nicotinic receptor subunit alpha 5

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GENETICS

Neurogenetic Syndromes

- 3318 Subcortical shape and volumetric findings from the ENIGMA 22q11.2 Working Group (N=778)**
Christopher Ching^{1,2}, Julio Villalon², Xiaoping Qu², Boris A. Gutman², Anjanibhargavi Ragothaman², Dmitry Isaev², Artemis Zavaliangos-Petropulu², Daqiang Sun^{3,4}, Rachel K. Jonas^{3,4}, Amy Lin^{3,4}, Leila Kushan^{3,4}, Therese van Amelsvoort⁵, Geor Bakker⁵, Wendy R. Kates⁶, Linda E. Campbell^{7,8}, Kathryn L. McCabe^{7,9}, Eileen Daly^{10,11,12}, Maria Gundbrandsen^{10,11,12}, Clodagh Murphy^{10,11,12}, Declan Murphy^{10,11,12}, Michael Craig^{10,11,12}, Liz Gras¹³, Jacob Vorstman¹³, Ania Fiksinski¹³, Kosha Ruparel¹⁴, David Roalf¹⁴, Raquel Gur¹⁴, J. Eric Schmitt^{14,15}, Tony J. Simon⁹, Naomi J. Goodrich-Hunsaker¹⁶, Anne S. Bassett^{17,18,19,20,21}, Eva W. C. Chow^{17,22}, Nancy Butcher¹⁷, Paul M. Thompson^{2,23}, Carrie E. Bearden^{3,4}, ENIGMA 22q11.2 Working Group²
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- 3319 Brain white matter volumes in Charcot-Marie-Tooth disease patients in MFN2, GJB1, and NEFL mutations**
Eun-Young Kim¹, Chang-hyun Park², Mina Lee³, Hyeon Jin Kim², Yun Seo Choi², Byung-Ok Choi⁴, Hyang Woon Lee³
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- 3320* Diffusion Tensor Imaging in 22q11.2 Deletion Syndrome: ENIGMA working group meta-analysis findings.**
Julio Villalon¹, Christopher Ching², Xiaoping Qu³, Neda Jahanshad¹, Deydeep Kothapalli⁴, Conor Corbin⁴, Leila Kushan⁵, Maria Jalbrzikowski⁶, Therese van Amelsvoort⁷, Geor Bakker⁷, Linda E. Campbell⁸, Kathryn L. McCabe⁸, Tony J. Simon⁹, Naomi J. Goodrich-Hunsaker¹⁰, Kosha Ruparel¹¹, David Roalf¹², Raquel Gur¹¹, J. Eric Schmitt¹¹, Wendy R. Kates¹³, zora kikinis¹⁴, Martha Shenton¹⁵, Paul Thompson³, Carrie E. Bearden⁵
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- 3321 Correlating sMRI and neuropsychological measures in 22q11.2 Deletion and Duplication Syndrome**
Amy Lin¹, Christopher Ching², Ariana Vajdi³, Daqiang Sun⁴, Rachel K. Jonas¹, Maria Jalbrzikowski⁵, Leila Kushan-Wells¹, Laura Pacheco Hansen¹, Emma Krikorian³, Boris A. Gutman⁶, Gerhard Helleman¹, Paul M. Thompson⁶, Carrie E. Bearden¹
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GENETICS

Transcriptomics

- 3322 Resting-state Functional Network and Spatial Transcriptional Pattern in Marmoset Brain**
Hiromi Ishii¹, Misato Seki¹, Takashi Inoue², Yuji Komaki², Sumitaka Hase¹, Koji Jimura¹, Erika Sasaki², Yasubumi Sakakibara¹
¹Keio University, Yokohama, Japan, ²Central Institute for Experimental Animals, Kawasaki, Japan
- 3323 MR imaging from the transcriptomic perspective**
Leon French¹, Spiro Pantazatos², Jacob Ritchie³
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- 3324 Hierarchical organization of cortical circuit specialization captured by human myelin map topography**
Joshua Burt¹, William Eckner¹, Murat Demirtas¹, Jiawei Wang¹, Natasha Navejar², Lisa Ji¹, Alberto Bernacchia³, Alan Anticevic¹, John Murray¹
¹Yale University, New Haven, CT, ²Tulane University, New Orleans, LA, ³University of Cambridge, Cambridge, United Kingdom

3325 The expression of schizophrenia risk genes and abnormal white matter integrity in schizophrenia

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HIGHER COGNITIVE FUNCTIONS

Decision Making

3326 Inhibitory Intolerance to Uncertainty Relates to Processing of Implicit Risk in a Modified fMRI BART

Christopher Smith¹, Jaime Castrellon¹, Aaron Tetreault¹, Daniel Katz¹, Miki Wilkinson², Kendra Hinton¹, Megan Ichinose¹, David Zald¹

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3327 Reappraisal of incidental emotions decreases DLPFC activity during risky decision making

Carmen Morawetz¹, Peter Mohr¹, Hauke Heekeren¹

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3328 P300 scaling: Value, average reward, and the framing effect

Cameron Hassall¹, Chad Williams¹, Olave Krigolson¹

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3329 The neural basis of unconscious thought in social decision making

Tetsuya Kageyama¹, Kelssy H. dos S. Kawata¹, Ryuta Kawashima^{2,3}, Motoaki Sugiura^{1,4}

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3330 Should You Buy that Clothes?: Neural Correlates of Shopping Decisions

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3331 The Neural Basis of Non-Reinforced Learning: fMRI Findings with Cue-Approach Task with faces

Tom Salomon¹, Rotem Botvinik-Netzer¹, Tom Schonberg¹

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3332 A naturalistic driving simulation paradigm for probing cognitive function

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3333 Reward Sensitivity Varies by Smoking Status in Major Depressive Disorder

Shengchuang Feng^{1,2}, Vanessa Brown^{1,2}, John Wang^{1,2}, Zhuoya Cui¹, Brooks King-Casas^{1,2}, Pearl Chiu^{1,2}

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3334 Neural correlates of abstract category learning in humans: an fMRI study

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3335 Decoding choice during intertemporal decision making from brain activity

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3336 Neural Correlates of Valuative Processing in Adults with ADHD During Decision-Making

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3337 Neuronal correlates of pre-meal planning

Hege Maïke^{1,2}, Ralf Veit^{1,2,3}, Peter Rogers⁴, Jeff Brunstrom⁴, Stephanie Kullmann^{1,2}, Andreas Fritsche^{1,5,2}, Hubert Preissl^{1,5,6,7,2}

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3338 The neural correlates of escalating monetary sacrifice: an fMRI study in football fans

Miguel Castelo-Branco¹, Catarina Duarte¹, Joao Castelano², Gonçalo Coelho¹

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3339 Imaging decision-making during goal-directed navigation

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3340 Entropy of action values and the exploration-exploitation dilemma during reinforcement-based timing

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3341 Effects of home environment on the neural correlates of risk processing in adolescents

Nina Lauharatanahirun^{1,2}, Dominique Maciejewski², Jungmeen Kim-Spoon², Pearl Chiu^{1,2}, Brooks King-Casas^{1,2,3}

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3342 Causal neural networks underlying social norm compliance

Marius Moisa¹, Giuseppe Ugazio¹, Marcus Grueschow¹, Christopher Hill¹, Ernst Fehr¹, Christian Ruff¹

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3343 Neurocomputational mechanisms of adaptive learning in social exchanges.

Polina Vanyukov¹, Alexandre Dombrovski¹, Katalin Szanto¹, Mauricio Delgado²

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- 3344 Serotonergic effects on impulsive decision-making under uncertainty**
David Cole¹, Lionel Rigoux², Andreea Diaconescu³, Christoph Mathys⁴, Zoltan Nagy⁵, Daniel Müller⁶, Boris Quednow⁷, Klaas Enno Stephan⁸
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- 3345 Mapping the brain structures involved in supramodal decision formation**
Natalie Steinemann¹, Joshua Balsters², Clare Kelly³, Redmond O'Connell⁴, Simon Kelly⁵
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- 3346 Developmental changes in the effects of emotion and prediction errors on reinforcement-based timing**
Michael Hallquist¹, Alexandre Dombrovski², Kai Hwang³, Beatriz Luna²
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- 3347 Oscillatory EEG-Signatures of Postponed Somatosensory Decisions in Different Response Contexts**
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- 3348 Brain activation during changes in action intention in obsessive-compulsive disorder**
Sarah Garnaat¹, Patrick Bédard¹, Benjamin Greenberg¹, Jerome Sanes¹
¹Brown University, Providence, RI
- 3349 Dissociating the roles of insula and dorsal anterior cingulate cortex in risk evaluation**
Mark Orloff¹, Dongil Chung², Xiaosi Gu³, Zhixian Gao⁴, Shuai Xu⁴, Xingchao Wang⁴, Brooks King-Casas², Pearl Chiu²
¹Virginia Tech, Roanoke, VA, ²Virginia Tech Carilion Research Institute, Roanoke, VA, ³University of Texas at Dallas, Dallas, TX, ⁴Beijing Tiantan Hospital affiliated to Capital Medical University, Beijing, China
- 3350 Subjective value for high calorie foods predicts subsequent weight gain in the first year students**
Selin Neseliler¹, Alain Dagher²
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HIGHER COGNITIVE FUNCTIONS

Executive Function

- 3351 Structural Brain Correlates of Cognitive Inhibition in Non-Demented Elders**
Teal Eich¹, Yaakov Stern¹
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- 3352 What is the neural basis of excellent performance in the electronic-sports?**
Zhou Xing¹, Nan Qiu¹, Xin Fan¹, Diankun Gong¹
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- 3353 Neural correlates of cognitive flexibility across the lifespan**
Dina Dajani¹, Paola Odriozola², Lucina Uddin¹
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- 3354 Being an expert reflected by structural connectivity: A tractography study on mathematical expertise**
Ulrike Kuhl¹, Angela Friederici¹, Hyeon-Ae Jeon^{2,3}
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²Daegu Gyeongbuk Institute of Science and Technology, Daegu, Korea, Republic of, ³Partner Group of the Max Planck Institute for Human Cognitive and Brain Sciences at the Department for Brain and Cognitive Sciences, DGIST, Daegu, Korea, Republic of
- 3355* Characterization of sub-networks within an extended Multiple Demand Network**
Julia Camilleri^{1,2}, Veronika Müller^{2,1}, Peter Fox³, Angela Laird⁴, Felix Hoffstaedter^{1,2}, Simon Eickhoff^{2,1}
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- 3356 Sex, age, and intelligence in whole-brain functional connectivity during inhibitory control**
Yu Sun Chung¹, Michael Stevens^{1,2}
¹Olin Neuropsychiatry Research Center, Hartford, CT, ²Yale University, Department of Psychiatry, New Haven, CT
- 3357 Altered Neural Bases of Memory, Reward, and Executive Function in Obese Adolescents**
Alaina Pearce¹, J. Brad Cherry¹, Alex Olson², Xiaozhen You², Eleanor Mackey², Evan Nadler², Chadan Vaidya¹
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- 3358 Fractionating the Frontoparietal Control Network**
mat dixon¹, Kalina Christoff¹
¹UBC, vancouver, BC
- 3359* Fractioning frontoparietal brain networks using neuroadaptive Bayesian optimization**
Romy Lorenz¹, Ines Violante¹, Ricardo Monti¹, Giovanni Montana², Adam Hampshire¹, Robert Leech¹
¹Imperial College London, London, UK, ²King's College London, London, UK
- 3360 A split-brain case study on the hemispheric lateralization of response inhibition**
Nicholas D'Alberto¹, Margaret Funnell², Bader Chaarani³, Philip Spechler³, Kelsey Hudson³, Catherine Orr³, Matthew Albaugh⁴, Nicholas Allgaier³, Scott Mackey³, Brittany Fair³, Robert Althoff³, Hugh Garavan³
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- 3361 Resting state brain network associated with impulsive trait and behavioral inhibition**
Youngmin Huh¹, Yu Kyeong Kim², Youngjo Lee¹, Dong Soo Lee², Hyejin Kang¹
¹Seoul National University, Seoul, Korea, Republic of, ²Seoul National University College of Medicine, Seoul, Korea, Republic of
- 3362 Contextual and Dispositional Variations in the Neural Architecture of Cognitive Control**
Raluca Petrican¹, Cheryl Grady²
¹Rotman Research Institute, Toronto, Ontario, ²Rotman Research Institute, Baycrest, Toronto, Ontario
- 3363 Neuroplasticity after emotional Stroop learning: enhanced cortical coupling to medial frontal cortex**
Helene van Ettinger-Veenstra¹, India Morrison¹
¹CSAN, Linköping University, Linköping, Sweden
- 3364 Eye fixation-related EEG reflect memory retrieval process**
Pei-Yi Tsai¹, Hsiao-Ching She¹, Sheng-Chang Chen¹, Li-Yu Huang¹, Wen-Chi Chou², Jeng-Ren Duann³, Tzyy-Ping Jung⁴
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- 3365 Modulatory role of emotion in cognitive control over memory**
Małgorzata Wierzbą¹, Monika Riegel¹, Marek Wybuch¹, Katarzyna Jednoróg², Anna Grabowska², Artur Marchewka¹
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- 3366 Acute Effects of Aerobic Exercise on Executive Functions and Brain Activation in Adult ADHD Patients**
Aylin Mehren¹, Alexandra Lam^{1,2}, Jale Özyurt², Christiane Thiel², Mirko Brandes³, Alexandra Philipsen¹
¹Department of Psychiatry and Psychotherapy – University Hospital, University of Oldenburg, Oldenburg, Germany, ²Biological Psychology Lab, Department of Psychology, University of Oldenburg, Oldenburg, Germany, ³Leibniz Institute for Prevention Research and Epidemiology - BIPS, Bremen, Germany
- 3367 Brain GABAergic system associated with impulsive trait and behavioral inhibition**
Hyejin Kang¹, Youngmin Huh¹, Youngjo Lee¹, Dong Soo Lee²
¹Seoul National University, Seoul, Korea, Republic of, ²Seoul National University College of Medicine, Seoul, Korea, Republic of
- 3368 Procrastination, impulsivity, punishment and executive control - monetary Go/No-go fMRI study**
Marek Wybuch¹, Jarosław Michałowski², Dawid Drożdżel¹, Magda Bania², Michał Szczepanik¹, Artur Marchewka¹
¹Laboratory of Brain Imaging, Neurobiology Center, Nencki Institute of Experimental Biology, PAS, Warsaw, Poland, ²University of Warsaw, Faculty of Psychology, Warsaw, Poland
- 3369 Parallel Conflicts Processing among Multiple Frames of Reference: An ERP Study**
Weizhi Nan^{1,2,3}, Yanlong Sun², Hongbin Wang², Qi Li¹, Xun Liu^{1,3}
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- 3370 Neural Correlates of Valence Flexibility**
Jennifer Britton¹, Shengkai Sun¹, Travis Evans¹, Danielle Dellarco¹, Katherine Walukevich¹
¹University of Miami, Coral Gables, FL
- 3371 Multimodal neural correlates of cognitive control in the Human Connectome Project**
Dov Lerman-Sinkoff¹, Jing Sui², Srinivas Rachakonda², Sridhar Kandala¹, Vince Calhoun², Deanna Barch¹
¹Washington University in St. Louis, Saint Louis, MO, ²The Mind Research Network, Albuquerque, NM
- 3372 Frontal beta power increase in scalp EEG as a signature of outright stopping of action**
Johanna Wagner¹, Jan Wessel², Ayda Ghahremani^{3,4}, Adam Aron¹
¹Psychology Department, University of California San Diego, San Diego, CA, ²Department of Psychological and Brain Sciences, University of Iowa, Iowa City, IA, ³Krembil Research Institute, Toronto, Canada, ⁴Institute of Medical Science, University of Toronto, Toronto, Canada
- 3373 More than inhibition. Diverse brain structures and cognitive tests associate with body weight.**
Uku Vainik^{1,2}, Travis Baker³, Bratislav Misić¹, Mahsa Dadar¹, Yashar Zeighami¹, Jose Alanis⁴, Louis Collins¹, Alain Dagher¹
¹McGill University, Montreal, QC, ²University of Tartu, Tartu, Estonia, ³Rutgers University, Union, NJ, ⁴Philipps-Universität Marburg, Marburg, Germany
- 3374 Meditation, resting state connectivity, and sustained attention: An RCT in middle school children**
Clemens Bauer¹, Camila Caballero¹, Ethan Scherer², Martin West², Susan Whitfield-Gabrieli¹, John Gabrieli¹
¹Massachusetts Institute of Technology, Cambridge, MA, ²Harvard Graduate School of Education, Cambridge, MA
- 3375 Behavioral and Neural Interactions Between Working Memory and Stop-Signal Inhibition**
Patrick Bissett¹, Mac Shine², Joke Durnez¹, Jamie Li¹, Krzysztof Gorgolewski¹, Oscar Esteban¹, Ross Blair¹, Russell Poldrack¹
¹Stanford University, Stanford, CA, USA, ²Brain and Mind Centre, University of Sydney, Bateau Bay, New South Wales
- 3376 Dissecting the neural circuits of cognitive control in children reading and arithmetic skills**
Ting-Ting Chang¹, Pei-Hong Lee¹, Arron Metcalfe²
¹National Chengchi University, Taipei City, Taiwan, ²University of Toronto, Toronto, Taiwan

HIGHER COGNITIVE FUNCTIONS

Higher Cognitive Functions Other

- 3377 The Role of the Basal Ganglia in Memory and Motor Stopping: Meta-Analysis & Dynamic Causal Modelling**
Yuhua Guo¹, Taylor Schmitz¹, Catarina Ferreira², Michael Anderson¹
¹MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom, ²University of Birmingham, Birmingham, United Kingdom

- 3378 Strengthening of Emotion- and Memory-associated Callosal Fibers Following Short-term MBSR Training**
Chang-Le Chen¹, Yao-Chia Shih², Tzung-Kuen Wen³, Shih-Chin Fang⁴, Da-Lun Tang⁵, Si-Chen Lee⁶, Wen-Yih Tseng^{1,7,8}
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- 3379* Human ECoG reveals dissociable calculations for perceptual decisions and confidence judgments**
Megan Peters¹, Thomas Thesen^{2,3}, Yoshiaki Ko⁴, Brian Maniscalco⁴, Chad Carlson², Matt Davidson⁴, Werner Doyle², Ruben Kuzniecky⁵, Orrin Devinsky⁶, Eric Halgren³, Hakwan Lau¹
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- 3380 Delineating the neural substrates for the motor and language components of agraphia**
Haobo Chen^{1,2}, Xiaoping Pan¹, Wai-Ling Bickerton³, Johnny Lau⁴, Beinan Zhou⁵, Lara Harris⁶, Glyn Humphreys⁵, Pia Rotshtein²
¹Guangzhou First People's Hospital, Guangzhou, China, ²University of Birmingham, Birmingham, United Kingdom, ³University of Birmingham, Birmingham, United Kingdom, ⁴University of Reading, Reading, United Kingdom, ⁵University of Oxford, Oxford, United Kingdom, ⁶King's College London, London, United Kingdom
- 3381 The fusiform and beyond: Responding to face race in children and adults**
Gizelle Anzures¹, Catherine Mondloch², Frank Haist³
¹Florida Atlantic University, Boca Raton, FL, ²Brock University, St. Catharines, Ontario, ³University of California, San Diego, San Diego, CA
- 3382 Canonical Microcircuits Constitute Structure Building Computations in Cognitive Functions**
Tim Kunze¹, Andre Peterson², Jens Hauelsen³, Thomas Knösche¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²Department of Medicine, University of Melbourne, Melbourne, Australia, ³Ilmenau University of Technology, Ilmenau, Germany
- 3383 Transient Effects of Short-term MBSR Training on White Matter Tract Integrity**
Chang-Le Chen¹, Yao-Chia Shih², Tzung-Kuen Wen³, Shih-Chin Fang⁴, Da-Lun Tang⁵, Si-Chen Lee⁶, Wen-Yih Tseng^{1,7,8}
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- 3384 Is the pre-stimulus default mode network state predictive of cognitive task performance?**
Tabea Kamp¹, Bettina Sorger¹, Caroline Benjamins¹, Lars Hausfeld¹, Rainer Goebel¹
¹Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, Netherlands
- 3385 High gamma activity modulated by the theta rhythm in the human anterior thalamus at rest**
Catherine Sweeney-Reed¹, Tino Zaehle¹, Jürgen Voges¹, Friedhelm Schmitt¹, Lars Buentjen¹, Viola Borchardt², Martin Walter³, Hermann Hinrichs¹, Hans-Jochen Heinze¹, Michael Rugg⁴, Robert Knight⁵
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- 3386 Concentration and working memory show different deactivation patterns within the DMN**
Irena Schouwenaars¹, Miek de Dreu¹, Geert-Jan Rutten¹, Nick Ramsey², Martijn Jansma¹
¹Department of neurosurgery, Elisabeth-TweeSteden Hospital, Tilburg, Netherlands, ²Brain Center Rudolf Magnus, Department of neurology and neurosurgery, UMC Utrecht, Utrecht, Netherlands
- 3387 Blink-related oscillations and their relationship with awareness: Resting state vs mental arithmetic**
Careesa Liu¹, Sujoy Ghosh Hajra², Teresa Cheung³, Xiaowei Song⁴, Ryan D'Arcy⁵
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- 3388 MEG characterization of language and orientation for brain vital signs application**
Sujoy Ghosh Hajra¹, Careesa Liu², Shaun Fickling³, Teresa Cheung⁴, Xiaowei Song¹, Ryan D'Arcy⁵
¹Simon Fraser University, Surrey, British Columbia, ²Simon Fraser University, SURREY, BC, ³Simon Fraser University, Coquitlam, British Columbia, ⁴Simon Fraser University, Vancouver, British Columbia, ⁵Simon Fraser University, Burnaby, British Columbia
- 3389 Familiarity processing strength the coupling between core and extended face system areas**
María Bobes¹, Marlis Ontiveiro¹, Yusniel Santos¹, Mitchell Valdes-Sosa¹
¹Cuban Neuroscience Center, Havana, Cuba
- 3391 The factors and their impact on Human adaptive function in Neurobehavior and Brain connectivity**
Soyong Eom¹, Chongwon Pae², Hae-Jeong Park^{1,2,3}
¹Epilepsy Research Institute, Yonsei University College of Medicine, Seoul, Korea, Republic of, ²Brain Korea 21 PLUS Project for Medical Science, Seoul, Korea, Republic of, ³Department of Nuclear Medicine, Radiology and Psychiatry, Yonsei University College of Medicine, Department of Cognitive Neuroscience, Seoul, Korea, Republic of
- 3392 Regional Changes of White Matter Microstructure in Healthy Aging: A Longitudinal Investigation**
Jessica Oschwald¹, Susan Mérillat¹, Franziskus Liem¹, Vincent Koppelmans², Rachael Seidler², Lutz Jäncke^{1,3}
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HIGHER COGNITIVE FUNCTIONS

Imagery

- 3393 Differential Connectivity in Children Processing Stories in Audio, Illustrated and Animated Format**
John Hutton¹, Jonathan Dudley², Tzipi Horowitz-Kraus³, Thomas DeWitt², Scott Holland²
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- 3394 The effect of visual imagery on the N400 semantic congruity of Chinese stroke sequence in elderly**
Sam Chi Chung Chan¹, Tom Chun Wai Tsoi¹
¹Hong Kong Polytechnic University, Hong Kong, Hong Kong
- 3395 Perceived vividness of MI is associated with variation of neural patterns within the motor system**
Adam Zabicki¹, Benjamin de Haas², Karen Zentgraf³, Jörn Munzert⁴, Britta Krueger⁴
¹Institute for Sports Science, Giessen, Germany, ²University College London, London, United Kingdom, ³University of Muenster, Muenster, Germany, ⁴Justus Liebig University, Giessen, Germany
- 3396 Practice makes perfect: Task familiarity modulates motor imagery-based regional brain activity**
Sarah Kraeutner¹, JungWoo Lee¹, Timothy Bardouille², Shaun Boe¹
¹Dalhousie University, Halifax, Nova Scotia, ²IWK Health Centre, Halifax, Nova Scotia
- 3397 Common and Distinct Cortical Network Bases of Musical Perception and Imagery**
Yizhen Zhang¹, Zhongming Liu¹, Haiguang Wen¹, Kun-Han Lu¹
¹Purdue University, West Lafayette, IN
- 3398 Word-cued mental imagery: Pre-semantic cortical responses are correlated with reported vividness.**
Jonas Olofsson¹, Marta Zakrzewska¹, Elmeri Syrjänen¹, Andreas Wartel¹, Maria Larsson¹
¹Stockholm University, Stockholm, Sweden
- 3399 Motor imagery versus congruent combination of motor imagery and action observation: fMRI pilot study**
Soha Saleh¹, Zhigou Jiang¹, David Cunningham¹, Didier Allexandre¹, Guang Yue¹
¹Human Performance and Engineering Research, Kessler Foundation, West Orange, NJ
- 3400 Divergent thinking relates to structural and functional organization of the medial temporal lobe**
Mark Lauckner¹, Johannes Golchert¹, Sabine Oligschläger¹, Blazej Baczowski¹, Janis Reinelt¹, Julia Huntenburg¹, Melissa Ellamil¹, Elizabeth Jefferies², Jonathan Smallwood², Daniel Margulies¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²The University of York, York, United Kingdom

HIGHER COGNITIVE FUNCTIONS

Music

- 3401 The Multiple-demand System is Involved in Musical Improvisation: An fMRI Study**
Jing Lu¹, Hua Yang², Hui He¹, Changyue Hou¹, Dezhong Yao¹
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- 3402 Temporal synchronization with and without auditory feedback during musical playing**
Shu-Chi Pai¹, Ying-Hua Chu¹, Jo-Fu Lin¹, Hui-Chuan Chang²
¹Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan, ²College of Humanities and Social Sciences, Taipei Medical University, Taipei, Taiwan
- 3403 An fMRI study of the Effects of Attentional Load during Improvisation by Jazz Musicians**
Karl Helmer¹, Frederick Bianchi², Ronny Preciado¹, Richard Falco²
¹Massachusetts General Hospital, Boston, MA, ²Worcester Polytechnic Institute, Worcester, MA
- 3404 Playing music is key to keeping our brain young and sharp.**
Nicolas Cherbuin¹, Marnie Shaw¹, Kaarin Anstey¹
¹Australian National University, Canberra, Australia
- 3405 Inferior colliculus activity correlates with subjective unpleasantness of dissonant music**
Seung-Goo Kim¹, Thomas Fritz^{1,2}, Jöran Lepsien¹, Karsten Mueller¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²Institute for Psychoacoustics and Electronic Music, University of Ghent, Ghent, Belgium
- 3406 Tracking individual differences in behaviour and neural responses to music**
Anthony McIntosh¹, Andrea McCulloch¹, Tanya Brown¹, Sarah Carpentier¹, Eline Bekkers², Zheng Wang¹, Valorie Salimpoor¹, Kelly Shen¹
¹Rotman Research Inst - Baycrest, Univ of Toronto, Toronto, Ontario, ²Institute for Interdisciplinary Studies, Univ of Amsterdam, Amsterdam, Netherlands
- 3407 Cortical sensitivity to guitar note melody: EEG entrainment to repetition and key**
David Bridwell¹, Emily Leslie¹, Dakarai McCoy², Sergey Plis³, Vince Calhoun⁴
¹Mind Research Network, Albuquerque, United States, ²University of New Mexico, Albuquerque, United States, ³The Mind Research Network, ECE Dept. University of New Mexico, Albuquerque, NM, ⁴The Mind Research Network & LBERI, Department of Electrical and Computer Engineering, UNM, Albuquerque, NM
- 3408 Quantification of Functional Connectivity when Listening to familiar and unfamiliar Music selections**
Christof Karmonik¹, Anthony Brandt², Elliott Silverman³, John Vopli⁴, Todd Frazier⁴
¹Houston Methodist Research Institute, Houston, TX, ²Rice University, Houston, TX, ³Tufts University School of Medicine, Boston, TX, ⁴Houston Methodist Hospital, Houston, TX
- 3409 Fronto-temporal connectivity reflects accompaniment changes in Mozart variations KV 265**
Chan Hee Kim¹, Jaeho Seol², Seung-Hyun Jin³, Chun Kee Chung^{1,3,4,5}
¹Interdisciplinary Program in Neuroscience, Seoul National University College of Natural Science, Seoul, Korea, Republic of, ²Seoul National University, Seoul, Korea, Republic of, ³Neuroscience Research Institute, Seoul National University College of Medicine, Seoul, Korea, Republic of, ⁴Department of Brain and Cognitive Science, Seoul National University College of Natural Science, Seoul, Korea, Republic of, ⁵Department of Neurosurgery, Seoul National University College of Medicine, Seoul, Korea, Republic of

3410 Now you like it, now you don't: Modulation of musical reward sensitivity with TMSErnest Mas Herrero¹, Alain Dagher¹, Marcel Farrés Franch¹, Robert Zatorre²¹Montreal Neurological Institute, Montreal, Canada, ²McGill University, Montreal, Canada**3411 Surprise-related activity in the Nucleus Accumbens associates with music-induced pleasantness**Ofir Shany^{1,2}, Neomi Singer^{3,4,2}, Nori Jacoby⁵, Talma Hendler^{3,4,2,6}, Roni Y. Granot⁷¹Functional Brain Center, Wohl Institute for Advanced Imaging, Tel Aviv Sourasky Medical Center, Tel-Aviv, Israel, ²School of Psychological Sciences, Tel Aviv University, Tel Aviv, Israel, ³Functional Brain Center, Wohl Institute for Advanced Imaging, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel, ⁴Sagol school of Neuroscience, Tel Aviv University, Tel Aviv, Israel, ⁵The Center for Science and Society, Columbia University, New York, NY, ⁶Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel, ⁷Musicology Department, Hebrew University of Jerusalem, Jerusalem, Israel**3412 Neural correlates of emotion to music**Sarah Carpentier¹, Andrea McCulloch¹, Tanya Brown¹, Eline Bekkers², Zheng Wang¹, Valorie Salimpoor¹, Kelly Shen³, Anthony McIntosh¹¹Rotman Research Inst - Baycrest, Univ of Toronto, Toronto, Ontario, ²Social & Behaviour Sci, Univ Utrecht, Utrecht, Netherlands, ³Rotman Research Institute, Baycrest, Toronto, Ontario**3413 The effects of LSD on music-evoked brain activity and emotion**Mendel Kaelen¹, Romy Lorenz², Leor Roseman¹, Andre Santos-Ribeiro¹, Frederick Barrett³, Amanda Feilding⁴, David Nutt¹, Robin Carhart-Harris¹, Robert Leech⁵¹Imperial College London, London, United Kingdom, ²Imperial College London, London, UK, ³Johns Hopkins, Baltimore, MD, ⁴The Beckley Foundation, Oxford, United Kingdom, ⁵Imperial College London, London, [Select a State]

HIGHER COGNITIVE FUNCTIONS

Reasoning and Problem Solving

3414 Neural correlates of analogical representation and transferJeffrey Chiang¹, Yujia Peng¹, Hongjing Lu¹, Keith Holyoak¹, Martin Monti¹¹UCLA, Los Angeles, CA**3415 Uncovering the Neural Substrates of Physics Problem Solving: A New Paradigm with Behavior Correlates**Jessica Bartley¹, Michael Riedel¹, Taylor Salo¹, Emily Boeving¹, Rosalie Odean¹, Elsa Bravo¹, Robert Laird¹, Shannon Pruden¹, Eric Brewster², Matthew Sutherland¹, Angie Laird¹¹Florida International University, Miami, FL, ²Drexel University, Philadelphia, PA**3416 Cortical morphology of the figural creativity based on Torrance Tests of Creative Thinking**Jarang Hahm¹, Kwang Ki Kim¹, Sun-Hyung Park²¹Department of Neurology, Dongguk University Ilsan Hospital, Goyang-si, Korea, Republic of, ²Department of Education, Dongguk University, Seoul, Korea, Republic of**3417 Functional connectivity for the figural creativity based on Torrance Tests of Creative Thinking**Jarang Hahm¹, Kwang Ki Kim¹, Sun-Hyung Park²¹Department of Neurology, Dongguk University Ilsan Hospital, Goyang-si, Korea, Republic of, ²Department of Education, Dongguk University, Seoul, Korea, Republic of

Space, Time and Number Coding

3418 Spatial arrangement and set size influence the coding of non-symbolic quantities in the IPSJohannes Bloechle^{1,2}, Julia Dietrich¹, Johannes Rennig³, Elise Klein¹, Silke Bieck¹, Manuel Ninaus¹, Korbinian Moeller¹, Stefan Huber¹¹Leibniz Institut für Wissensmedien, Neurocognition Lab, Tübingen, Germany, ²Centre of Neurology, Division of Neuropsychology, Hertie-Institute for Clinical Brain Research, Tübingen, Germany, ³Department of Neurosurgery, Baylor College of Medicine, Houston, TX**3419 Multi-method brain imaging reveals impaired representations and altered connectivity in dyscalculia**Jessica Bulthé¹, Jellina Prinsen¹, Jolijn Vanderauwera¹, Stefanie Duyck¹, Nicky Daniels¹, Céline Gillet¹, Dante Mantini¹, Bert De Smedt¹, Hans Op de Beeck¹¹KU Leuven, Leuven, Belgium**3420 Navigation-related functional connectivity changes of the entorhinal cortex in taxi drivers**Ling-Li Zeng¹, Limin Peng¹, Hui Shen¹, Dewen Hu¹¹National University of Defense Technology, Changsha, Hunan**3421 General mechanisms for magnitude estimation in humans**Virginia Flanagan¹, Anja Ries², Christopher Roppelt¹, Kay Thurley³¹Klinikum der Universität München, Munich, Germany, ²Technical University Munich, Munich, Germany, ³Ludwig-Maximilians-Universität, Munich, Germany**3422 Better Numerosity Estimation Associated with Thinner Superior Parietal Cortex in College Students**Bi Zhu¹, Chuansheng Chen², Qi Dong¹, Chongde Lin¹¹Beijing Normal University, Beijing, China, ²University of California, Irvine, Irvine, United States**3423 Ventrolateral-Dorsomedial Specialization of Human Posterior Cingulate Cortex in Spatial Processing**Ford Burles^{1,2,3}, Edward Slone^{1,2,3}, Alberto Umiltà^{1,2,3}, Liam McFarlane^{1,2,3}, Kendra Potocki^{1,2,3}, Giuseppe Iaria^{1,2,3}¹University of Calgary, Calgary, Canada, ²Hotchkiss Brain Institute, Calgary, Canada, ³Alberta Children's Hospital Research Institute, Calgary, Canada**3424 Brain functional connectivity alterations in dyscalculia.**Roger Mateu Estivil¹, Alejandra Camacho¹, Carlos Luces¹, Sergi Grau², Ana Sanguinetti³, Anna López-Sala³, Carles Falcón^{4,5}, Xavier Caldú^{1,6}, Roser Colomé³, Cristina Boix³, Anna Sans³, Ana Adan^{1,6}, Sussana Forné⁷, Núria Bargalló⁸, Josep M Serra-Grabulosa^{1,6,9}¹Department of Clinical Psychology and Psychobiology, University of Barcelona, Barcelona, Spain, ²Data and Signal Processing Research Group UScienceTech UVic - Central University of Catalunya, Vic, Spain, ³Department of Neurology, Hospital Sant Joan de Deu, Barcelona, Spain, ⁴BarcelonaBeta Brain Research Center, Pasqual Maragall Foundation, Barcelona, Barcelona, Spain, ⁵CIBER_BBN, Barcelona, Spain, ⁶Institute of Neurosciences, University of Barcelona, Barcelona, Spain, ⁷Department of Psychiatry and Legal Medicine, Universitat Autònoma de Barcelona, Barcelona, Spain, ⁸Centre de Diagnòstic per la Imatge Hospital Clinic de Barcelona (CDIC), Barcelona, Spain, ⁹Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain**3425 Plastic effects of lifelong & short-term visual deprivation on the human brain's navigation network**Shachar Maidenbaum¹, Daniel Chebat², Amir Amedi³¹Hebrew University, Jerusalem, Israel, ²Ariel University, Ariel, Israel, ³The Hebrew University, Jerusalem, Israel

- 3426 Symbolic and Nonsymbolic Magnitude Processing, the Neural Distance Effect, and Math Achievement**
Eric Wilkey¹, Gavin Price¹
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- 3427 The effect of fearful faces on the timing mechanisms of the brain**
Emre Kale¹, Sertaç Üstün², Farhad Nassehi¹, Tansu Birsoy¹, Metehan Çiçek^{3,1}
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- 3428 Examining Egocentric Spatial Representations Referenced to Head and Body in the Healthy Brain**
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- 3429 Neuronal mechanisms of Gestalt perception in visual quantification**
Johannes Rennig^{1,2,3}, Johannes Bloechle^{2,3,4}, Stefan Huber², Elise Klein², Julia Bahnmüller^{2,4}, Korbinian Moeller^{2,4}
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IMAGING METHODS

Anatomical MRI

- 3430 Cortical Thinning in Psychopath Offenders**
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- 3431* Planum temporale variation with Heschl's gyrus duplication, association with cognitive abilities**
Nathalie Tzourio-Mazoyer¹, Bernard Mazoyer²
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- 3432 Robustness and reliability of cortical surface reconstruction in CIVET and FreeSurfer**
Lindsay Lewis¹, Claude Lepage¹, Najmeh Khalili-Mahani¹, Mona Omidyeganeh¹, Seun Jeon¹, Patrick Bermudez¹, Alex Zijdenbos², Robert Vincent¹, Reza Adalat¹, Alan Evans¹
¹McGill Centre for Integrative Neuroscience, Montreal Neurological Institute, McGill University, Montreal, Quebec, Canada, ²Biospective, Inc., Montreal, Quebec, Canada
- 3433 Reliability of surface-based cortical thickness and cortical surface area asymmetry evaluation.**
Sophie Maingault¹, Nathalie Tzourio-Mazoyer¹, Bernard Mazoyer¹, Fabrice Crivello¹
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- 3434 Is the Planum Temporale a marker of language lateralization?**
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- 3435 Structural Brain Aberrations Associated with Dissociation following Childhood Trauma**
Ilona Croy¹, Anna Schulz², Anja Symmank², Julia Schellong², Peter Joraschky², Kersten Diers², Kerstin Weidner¹, Judith Daniels³
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- 3436 Composition analysis and probabilistic segmentation of the cortical layers using IR-MRI**
Omri Tomer¹, Ittai Shamir¹, Shany Ben Amitay¹, Nadav Mark¹, Yaniv Assaf¹
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- 3437 Gray matter density as mediator in the association between intelligence and emotion regulation**
Tongran Liu¹, Rui Li²
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- 3438 Impact of polygenic risk for Schizophrenia on cortical thickness: a general population study (n=842)**
Emma Neilson¹, Xueyi Shen¹, Simon Cox¹, Ella Wigmore¹, Jude Gibson¹, Lianne Reus², Stephen Lawrie¹, Andrew McIntosh¹, Heather Whalley¹
¹University of Edinburgh, Edinburgh, United Kingdom, ²VU University Medical Center, Amsterdam, Netherlands
- 3439 Shared Differences Across Cortical Morphometry Features Associated with Autism Spectrum Disorder**
Derek Andrews¹, Alberto Llera², Eileen Daly¹, Andre Marquand^{2,1}, Clodagh Murphy^{1,3}, Meng-Chuan Lai^{4,5,6}, Michael Lombardo^{5,7}, Amber Ruigrok⁵, MRC AIMS Consortium¹, Steven Williams¹, Edward Bullmore⁸, John Suckling⁹, Simon Baron-Cohen⁵, Michael Craig^{1,3}, Christian Beckmann^{2,10}, Declan Murphy^{1,3}, Christine Ecker^{11,1}
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- 3440 Optimization of Brain Segmentation: Local or Global Partial Volume Estimation?**
Mona Omidyeganeh¹, Alison Ross¹, Arnaud Voyer¹, Robert Vincent¹, Claude Lepage¹, Lindsay Lewis¹, Seun Jeon¹, Patrick Bermudez¹, Reza Adalat¹, Alex Zijdenbos², Najmeh Khalili-Mahani¹, Alan Evans¹
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- 3441 Evaluation of False Positive Rates in Surface-based Anatomical Analysis**
Douglas Greve¹, Bruce Fischl²
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3442 Assessing healthy brain maturation with structural MRIJacob Levman^{1,2,3,4}, Patrick MacDonald¹, Ashley Ruyan Lim¹, Emi Takahashi^{1,2,3}¹Division of Newborn Medicine, Boston Children's Hospital, Boston, MA, ²Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Boston, MA, ³Harvard Medical School, Boston, MA, ⁴Department of Mathematics, Statistics and Computer Science, St. Francis Xavier, Antigonish, NS, Canada**3443 Relationships between Heschl's Gyrus duplication, dyslexia and reading performance**Damien Marie¹, Cathy Price², Narly Golestani¹¹University of Geneva, Geneva, Switzerland, ²University College London, London, United Kingdom**3444 Down Syndrome is accompanied by significantly reduced cortical grey/white matter tissue contrast**Anke Bletsch¹, Caroline Mann¹, Eileen Daly², Giles Tan², Derek Andrews², Declan Murphy², Christine Ecker^{1,2}¹Department of Child and Adolescent Psychiatry, Psychosomatics and Psychotherapy, Goethe-University, Frankfurt, Germany, ²Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, United Kingdom**3445 Structural Abnormalities in Autism Spectrum Disorder: A Meta-analytic and Network-based Study**Donato Liloia¹, Andrea Nani², Jordi Manuella², Tommaso Costa², Ugo Vercelli², Sergio Duca², Franco Cauda²¹University of Turin, Turin, Italy, ²GCS fMRI, Koelliker Hospital and University of Turin, Turin, Italy**3446 Using different head coils - impact on derived cortical thickness and morphometric volumes**Ross Mair^{1,2}, Andre van der Kouwe²¹Harvard University, Cambridge, MA, ²Massachusetts General Hospital, A.A. Martinos Center for Biomedical Imaging, Charlestown, MA**3447 Decreased regional grey matter volume in chronic whiplash: relationships with cognition and pain**Iris Coppieters¹, Robby De Pauw¹, Karen Caeyenberghs², Lieven Danneels¹, Jeroen Kregel^{1,3}, Mira Meeus^{1,4}, Barbara Cagnie¹¹Ghent University, Ghent, Belgium, ²Australian Catholic University, Melbourne, Australia, ³Free University Brussels, Brussels, Belgium, ⁴University of Antwerp, Antwerp, Belgium**3448 Investigating the intra- and inter-vendor reproducibility of T1 relaxation time maps at 3T**Yoojin Lee^{1,2}, Martina Callaghan³, Zoltan Nagy²¹Institute of Biomedical Engineering, ETH Zürich, Zürich, Switzerland, ²Laboratory for Social and Neural Systems Research, University of Zürich, Zürich, Switzerland, ³The Wellcome Trust Centre for Neuroimaging, University College London, London, United Kingdom**3449 Repairing the brain with physical exercise: cortical thickness and behavioral outcomes analysis.**Kamila Szulc¹, Eric Bouffet¹, Suzanne Laughlin¹, Brian Timmons², Cynthia de Medeiros¹, Jovanka Skocic¹, Jason Lerch¹, Donald Mabbott¹¹Hospital for Sick Children, Toronto, Canada, ²McMaster University, Hamilton, Canada**3450 A meta-analytical study of neuropathological signatures on the insula. A clustering approach**Jordi Manuella¹, Marcello Ferrara², Andrea Nani³, Tommaso Costa³, Ugo Vercelli³, Karina Tatu³, Sergio Duca³, Franco Cauda³¹GCS fMRI, Koelliker Hospital and University of Turin, Turin, Italy, Torino, Italy, ²FOCUS Lab, Department of Psychology, University of Turin, Turin, Italy, ³GCS fMRI, Koelliker Hospital and University of Turin, Turin, Italy**3451 Alteration to hippocampal volume and shape in cannabis dependence: A multisite study**Yann Chye¹, Chao Suo¹, Nadia Solowij², Albert Batalla^{3,4}, Janna Cousijn⁵, Anna Goudriaan⁶, Mark Jenkinson⁷, Rocio Martin-Santos⁴, Sarah Whittle⁸, Valentina Lorenzetti^{9,1}, Murat Yücel¹¹Brain and Mental Health Laboratory, School of Psychological Sciences, Monash University, Clayton, Victoria, Australia, ²School of Psychology and Illawarra Health and Medical Research Institute, University of Wollongong, Wollongong, New South Wales, Australia, ³Radboud University Medical Centre, Nijmegen, Netherlands, ⁴Department of Psychiatry and Clinical Psychobiology, University of Barcelona, Barcelona, Spain, ⁵Department of Developmental Psychology, University of Amsterdam, Amsterdam, Netherlands, ⁶Department of Psychiatry, Academic Medical Centre, University of Amsterdam, Amsterdam, Netherlands, ⁷FMRIB - Oxford University, Oxford, United Kingdom, ⁸Melbourne Neuropsychiatry Centre, Department of Psychiatry, The University of Melbourne, Carlton, VIC, ⁹School of Psychology, Institute of Psychology Health and Social Sciences, University of Liverpool, Liverpool, England**3452 Quality control analysis of structural MRI volumes acquired for the GENDAAR Research Collaboration**Zach Jacokes¹, Carinna Torgerson¹, Christina Chen¹, Andrei Irimia¹, John Van Horn², GENDAAR Research Consortium³¹University of Southern California, Los Angeles, CA, ²University of Southern California, Los Angeles, WA, ³George Washington, Washington, DC**3453* Separating positive and negative susceptibility sources in quantitative susceptibility mapping (QSM)**Jingu Lee¹, Yoonho Nam², Joon Yul Choi¹, Taehyun Hwang¹, Jongho Lee¹¹Department of Electrical and Computer Engineering, Seoul National University, Seoul, Korea, Republic of, ²Department of Radiology, Seoul St. Mary's Hospital, College of Medicine, Seoul, Korea, Republic of**3454 Evaluating cortical thickness estimations of FreeSurfer and the CAT12 toolbox for SPM**Rene Seiger¹, Andreas Hahn¹, Sebastian Ganger¹, Siegfried Kasper¹, Rupert Lanzenberger¹¹Medical University of Vienna, Vienna, Austria**3455 Grey's Anatomy – how the pill shapes the structure of the female brain**Verena Schuster^{1,2}, Peer Herholz^{1,2}, Chantal Schröder^{1,2}, Jens Sommer^{2,3}, Andreas Jansen^{1,2,3}¹Laboratory for Multimodal Neuroimaging, Marburg, Germany, ²University of Marburg, Marburg, Germany, ³Core Facility Brainimaging, Marburg, Germany**3456 A pediatric study of volume outcomes: comparison of longitudinal and cross-sectional streams**Martha Holmes¹, Allison Moreau², Francesca Little¹, Barbara Laughton³, Ernesta Meintjes¹, Andre van der Kouwe²¹University of Cape Town, Cape Town, South Africa, ²Massachusetts General Hospital, Charlestown, MA, USA, ³Stellenbosch University, Cape Town, South Africa**3457 RELN polymorphism affects to superior temporal sulcus thickness in typically developing individuals**hiroki sato¹, Mitsunari Abe², Hikaru Takeuchi², Hiroaki Tomita³, Ryuta Kawashima⁴, Yasuyuki Taki⁵¹Department of Pediatrics, Tohoku University School of Medicine, Sendai, Japan, ²Division of Developmental Cognitive Neuroscience, IDAC, Tohoku University, Sendai, Japan, ³Department of Disaster Psychiatry, International Research Institute of Disaster Science, Tohoku Univ, Sendai, Japan, ⁴Department of Functional Brain Imaging, Institute of Development, Aging, and Cancer, Tohoku University, Sendai, Japan, ⁵Department of Nuclear Medicine & Radiology, Institute of Development, Aging, and Cancer, Tohoku Univ, Sendai, Japan

- 3458 How games affect brain structure - a voxel-based morphometric and diffusion tensor imaging study**
Natalia Kowalczyk¹, Aneta Brzezicka¹, Feng Shi², Paweł Dobrowolski³, Maciej Skorko³, Bartosz Kossowski^{4,5}, Artur Marchewka⁴, Małgorzata Kossut⁶
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- 3459 Origin of Cerebral Asymmetry: Testing the Hippocampal Hypothesis**
Akaysha Tang¹, Johan Mårtensson², Yunqing Hua¹, Johan Eriksson³
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- 3460 Modelling white matter hyperintensities distribution within a population using Bayesian Inference**
Vaanathi Sundaresan¹, Ludovica Griffanti¹, Giovanna Zamboni¹, Mark Jenkinson¹
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- 3461 APOE genotype affects volume but not iron content of subcortical structures in the UK Biobank study**
Verena Heise^{1,2}, Fidel Alfaro-Almagro³, Sana Suri^{1,2}, Karla Miller³, Mark Jenkinson³, Klaus Ebmeier¹, Stephen Smith³, Clare Mackay^{1,2}
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- 3462 Manual intervention in FreeSurfer for detecting cortical thinning in persons at risk for depression**
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- 3463 Comparing different analysis methods in longitudinal MRI study**
Bo-Hyun Kim¹, Yong-Ho Choi¹, Jong-Min Lee¹
¹Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of
- 3464 Optimal modulation for voxel-based morphometry and similar analyses**
Aleix Solanes¹, Erick Canales-Rodríguez¹, Anton Albajes-Eizaguirre¹, Raymond Salvador¹, Edith Pomarol-Clotet¹, Joaquim Radua²
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- 3466 Towards optimization of fNIRS optode placement using functional and vascular MRI**
Amaia Benitez^{1,2}, Dima Ivanov^{1,2}, Rainer Goebel^{1,2}, Bettina Sorger^{1,2}
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- 3467 A scalable method to improve outer gray matter boundary segmentation at ultra high field MRI.**
Omer Faruk Gulban¹, Marian Schneider¹, Federico De Martino¹
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- 3468 Cerebellar Volume Correlates of Clinical and Cognitive Status in Primary Progressive MS.**
Sirio Cocozza¹, Enricomaria Mormina¹, Maria Petracca¹, Kornelius Podranski¹, Lazar Fleyshe¹, Niels Oesingmann², Monika Heinig¹, Fred Lublin¹, Matilde Inglese¹
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- 3469 Disentangling the effects of sex and puberty on grey matter volume and cognition**
Catherine Orr¹, Matthew Albaugh², Nicholas Allgaier¹, Bader Chaarani¹, Tobias Banaschewski³, Rudiger Bruhl⁴, Arun Bokde⁵, Uli Bromberg⁶, Christian Büchel⁷, Anna Cattrell⁸, Patricia Conrod⁹, Sylvane Desrivieres⁸, Herta Flor³, Vincent Frouin¹⁰, Jürgen Gallinat¹¹, Robert Goodman¹², Penny Gowland¹³, Yvonne Grimmer³, Andreas Heinz¹⁴, Viola Kappel¹⁵, Jean-Luc Martinot¹⁶, Marie-Laure Paillère Martinot¹⁷, Frauke Nees³, Dimitri Papadopoulos Orfanos¹⁸, Jani Penttilä¹⁹, Luise Poustka³, Tomas Paus²⁰, Michael Smolka²¹, Maren Struve³, Henrik Walter²², Robert Whelan²³, Gunter Schumann⁸, Alexandra Potter², Hugh Garavan¹
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- 3470 Structural Brain Correlates of Personality Traits and Sex Differences**
Brittany Fair¹, Philip Spechler¹, Bader Chaarani¹, Robert Althoff¹, Hugh Garavan¹
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- 3471 Language Laterality in Tuberous Sclerosis Complex and Autism Spectrum Disorders**
Banu Ahtam¹, Rutvi Vyas¹, Rudolph Pienaar², Mustafa Sahin³, Kiho Im¹, P. Ellen Grant^{1,4}
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- 3472 Differential Gene Expression Associated with Frontal and Occipital Asymmetries of the Human Brain**
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- 3473 Quantifying optimal contrast for medial temporal substructures in high resolution ex vivo MRI**
Emma Boyd¹, Jean Augustinack^{1,2}, Kelsey Bittner¹, Ani Varjabedian¹, Allison Moreau¹, Lee Tirrell¹, Andrew Hoopes¹, Allison Stevens¹, Matthew Frosch³, Bruce Fischl^{1,2,4}, Andre van der Kouwe^{1,2}
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- 3474 Cortical Thickness and ASD in 22q11.2 Deletion Syndrome; an international collaboration**
Maria Gudbrandsen¹, Eileen Daly², Clodagh Murphy³, Leila Kushan⁴, Daqiang Sun⁵, Declan Murphy⁶, Christine Ecker⁷, Carrie E. Bearden⁴, Michael Craig³
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- 3475 An Improved Probabilistic Atlas of the Dentate Nucleus Derived with QSM**
Naying He¹, Jason Langley², Daniel Huddleston³, Huawei Ling¹, Hongmin Xu¹, Chunlei Liu⁴, Fuhua Yan⁵, Xiaoping Hu²
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- 3476 Plasticity in visual brain induced by central and peripheral visual field loss**
Nicolae Sanda¹, Leonardo Ceriani², Colas Authié³, Norman Sabbah³, José-Alain Sahel³, Christophe Habas³, Avinoam Safran³, Michel Thiebaut de Schotten⁴
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- 3477 Development of a histologically validated segmentation protocol for the hippocampal body**
Trevor Steve¹, Clarissa Yasuda², Roland Coras³, Moh Lail¹, Ingmar Blumcke³, Daniel Livy¹, Nikolai Malykhin¹, Donald Gross¹
¹University of Alberta, Edmonton, Alberta, ²University of Campinas, Campinas, Brazil, ³University of Erlangen, Erlangen, Germany
- 3478 Trail making test part B completion time correlates with anterior cortical thinning**
Christopher Bird¹, Virendra Mishra¹, Dietmar Cordes¹, Sarah Banks¹
¹Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, NV
- 3479 Classification of conduct disorder from healthy controls using machine learning and structural MRI**
Bingsheng Huang¹, Jianing Zhang¹, Shuqiao Yao², Weixiang Liu¹, Yali Jiang², Jing Zhang²
¹Shenzhen University, Shenzhen, Guangdong, ²Second Xiangya Hospital of Central South University, Changsha, China
- 3480 Mapping magnetic susceptibility of motor cortex: agreement across repeated measurements**
Mauro Costagli¹, Graziella Donatelli², Elena Caldarazzo Ienco², Michela Tosetti¹, Mirco Cosottini²
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- 3481 A natural coordinate system for the central nervous system**
Katja Heuer¹, Roberto Toro²
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²Institut Pasteur, Paris, France
- 3482 Widespread Cortical Thickness Associations with Neurosteroid Levels**
Rajendra Morey¹, Sarah Davis¹, Courtney Haswell², Jennifer Naylor¹, Jason Kilts¹, Steve Szabo¹, Larry Shampine³, Delin Sun¹, Chelsea Swanson⁴, Henry Wagner¹, Christine Marx^{1,5}
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- 3483 BrainBrowser, a distributed, web-based neurological data visualization tool.**
Natacha Beck¹, Robert Vincent¹, Lindsay Lewis¹, Jonathan Lurie¹, Marc-Etienne Rousseau¹, Reza Adalat¹, Alan Evans¹
¹McGill Centre for Integrative Neuroscience, Montreal, Quebec
- 3484 Direct comparisons between quantitative magnetic resonance imaging measures in the human brain**
Md Nasir Uddin¹, Kevin Solar¹, Anwar Shatil¹, Susan Courtney², Chase Figley¹
¹University of Manitoba, Winnipeg, Manitoba, ²Johns Hopkins University, Baltimore, MD
- 3485 Small vessels disease and white matter hyperintensity: Is the corticospinal tract more affected?**
Pierre Jaquet^{1,2,2}, Antoine Grigis³, Cyril Poupon⁴, Alexis Amadon⁵, Jean-Robert Deverre², Eric Jouvent⁶, Lucie Hertz-Pannier⁷, Michel Bottlaender⁸
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- 3486 Cortical Thickness Relates to Mathematical Ability in Children and Youth**
Katherine White¹, Jennifer Ferris¹, Julia Schmidt¹, Lara Boyd¹
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- 3487 Brian maps reflected in different imaging modalities**
Yul-Wan Sung¹, Daehun Kang¹, Yousuke Kawachi¹, Seiji Ogawa¹
¹Tohoku Fukushi University, Sendai, Japan
- 3488 Independent Neurostructural Effects of Age and Serostatus in Treated HIV Infection**
Thomas Zeffiro¹, Erin O'Connor², Felix Renard³, Timothy Zeffiro¹, James Becker⁴
¹Neurometrika, Potomac, MD, ²University of Maryland, Baltimore, MD, ³Université Grenoble Alpes, Grenoble, France, ⁴University of Pittsburgh, Pittsburgh, PA
- 3489 Changes in structural volume covariance following environmental enrichment**
Yohan Yee^{1,2}, Dulcie Vousden^{1,2}, Alexander Friesen¹, Lily Qiu¹, Rylan Allemang-Grand^{1,2}, Jan Scholz¹, Jason Lerch^{1,2}
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IMAGING METHODS

EEG

3490 Functional Connectivity and Quantitative Analysis of the Electroencephalogram in DeafblindnessFernando Rivero- Martínez¹¹Hospital Gral. Carlos Manuel de Cespedes, Bayamo, Cuba**3492 Neural Correlates of Sequential Decision Making**He A. Xu¹, Michael H. Herzog¹¹Laboratory of Psychophysics, Brain Mind Institute, École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland**3493 Age-related changes in resting-state EEG activity in Attention Deficit/Hyperactivity Disorder**Katarzyna Gieruga¹, Marta Zakrzewska², Maksymilian Bielecki³, Ewa Racicka⁴, Anita Cybulska-Kłosowicz¹, Małgorzata Kossut¹¹Laboratory of Neuroplasticity Nencki Institute of Experimental Biology of Polish Academy of Sciences, Warsaw, Poland, ²Stockholm University, Stockholm, Sweden, ³Faculty of Psychology, University of Social Sciences and Humanities, Warsaw, Poland, ⁴Department of Child Psychiatry, Medical University of Warsaw, Warsaw, Poland**3494 Neural Correlates of Perceptual Sensory Weights Emerge Early during Audio-visual Integration**Stephanie Boyle¹, Stephanie Kayser¹, Christoph Kayser¹¹Institute of Neuroscience and Psychology, University of Glasgow, Glasgow, United Kingdom**3495 Neurophysiological Correlates of the Rubber hand Illusion in Evoked and Oscillatory Responses**Isa Rao¹, Christoph Kayser²¹Institute of Neuroscience and Psychology, Glasgow, United Kingdom, ²Institute of Neuroscience and Psychology, GLASGOW, United Kingdom**3496 Automated Classification of Epileptics Spikes in icEEG Recorded during Simultaneous fMRI Acquisition**Niraj Sharma¹, Carlos Pedreira², Maria Centeno¹, Umair Chaudhary¹, Tim Wehner¹, Don Yadee¹, Lucas Franca¹, Teresa Murta¹, Marco Leite¹, Sjoerd Vos³, Beate Diehl¹, Louis Lemieux¹¹University College London, Institute of Neurology, London, United Kingdom, ²University of Oxford, Experimental Psychology, Oxford, United Kingdom, ³University College London, Centre for Medical Image Computing, London, United Kingdom**3497 Road safety: Older adults display reduced error processing and response in continuous tracking task**Robert Trska¹, Francisco Colino², Harvey Howse³, Angela Norton¹, Anthony Pluta¹, Todd Handy⁴, Olave Krigolson¹¹University of Victoria, Victoria, British Columbia, ²University of Victoria, Victoria, BC - British Columbia, ³University of Victoria, Victoria, Canada, ⁴University of British Columbia, Vancouver, British Columbia**3498 EEG resting-state functional connectivity predicted by structural connectivity measures**
Emeline Mullier¹, Alessandra Griffa², Jean-Francois Knebel³, Micah Murray³, Christoph Michel⁴, Patric Hagmann²¹Department of Radiology, Lausanne University Hospital and University of Lausanne, Lausanne, Switzerland, ²Department of Radiology, Lausanne University Hospital and Signal Processing Lab 5, EPFL, Lausanne, Switzerland, ³Laboratory for Investigate Neurophysiology Lausanne University Hospital, EEG Brain Mapping Core CIBM, Lausanne, Switzerland, ⁴Neuroscience Depart. of the Medical Faculty and Center for Biomedical Imaging, University of Geneva, Geneva, Switzerland**3499 Direction-independent cortical event-related responses to naturalistic vestibular stimulations**
Matthias Ertl¹, Marie Woller¹, Ümit Mayadali², Rainer Boegle³, Peter zu Eulenburg⁴, Marianne Dieterich¹¹Department of Neurology, Ludwig-Maximilian University, Munich, Germany, Munich, Germany, ²Graduate School of Systemic Neuroscience, Ludwig-Maximilian University, Munich, Germany, Munich, Germany, ³German Center for Vertigo and Balance Disorders, Ludwig-Maximilian University, Munich, Germany, munich, Germany, ⁴German Center for Vertigo and Balance Disorders, Ludwig-Maximilian University, Munich, Germany, Munich, Germany**3500 Frequency-dependent connectivity analysis using high-density EEG**Quanying Liu¹, Marco Marino¹, Nicole Wenderoth¹, Dante Mantini²¹ETH Zurich, Zurich, Switzerland, ²KU Leuven, Leuven, Belgium**3501* A computational trial-by-trial EEG analysis of hierarchical prediction errors**Sara Tomiello¹, Dario Schöbi¹, Lilian Aline Weber¹, Katharina Wellstein¹, Helene Haker¹, Sandra Iglesias¹, Klaas Enno Stephan^{1,2,3}¹Translational Neuromodeling Unit (TNU), UZH & ETH Zurich, Zurich, Switzerland, ²Wellcome Trust Centre for Neuroimaging, Institute of Neurology, University College London, London, United Kingdom, ³Max Planck Institute for Metabolism Research, Cologne, Germany**3502 Movement endpoint evaluation and human learning systems**Francisco Colino¹, Olave Krigolson¹¹University of Victoria, Victoria, British Columbia**3503 Examination of the relationship between brain activity and eye movement during emotional stimulation**Hiroshi Wada¹, Satoru Hiwa¹, Tomoyuki Hiroyasu²¹Doshisha University, Kyotanabe-shi, Kyoto, Japan, ²Doshisha University, Kyotanabe-Shi, Kyoto, Japan**3504 Functional Mapping during Alerting, Orienting and Executive Control: An EEG study**Binghao ZHAO¹, Di ZHENG¹, Xiaoyu SONG¹, Xueru LIU¹, tiaotiao liu¹, Xin TIAN¹¹Tianjin Medical University, Tianjin, China**3505 EEG microstates and their relation to conscious processing of spontaneous thoughts**Anna Custo¹, Dimitri Van De Ville², Christoph Michel³¹University of Geneva, Geneva, Switzerland, ²Ecole Polytechnique Fédérale de Lausanne, Lausanne, Vaud, ³Neuroscience Depart. of the Medical Faculty and Center for Biomedical Imaging, University of Geneva, Geneva, Switzerland**3506 Altered EEG Cortico-Cortical Coherence Correlates with MRI Changes in Amyotrophic Lateral Sclerosis**Bahman Nasseroleislami¹, Stefan Dukic¹, Michael Broderick¹, Kieran Mohr¹, Christina Schuster¹, Brigid Gavin¹, Russell McLaughlin¹, Mark Heverin¹, Alice Vajda¹, Parameswaran Iyer¹, Niall Pender², Peter Bede¹, Edmund Lalor¹, Orla Hardiman¹¹Trinity College Dublin, the University of Dublin, Dublin, Ireland, ²Beaumont Hospital, Dublin, Ireland

- 3507 Spatiotemporal brain dynamics in an esthetic judgment task.**
Francisco Muñoz-Muñoz¹, Pilar Casado¹, Laura Jimenez-Ortega¹, Sabela Fondevila², David Hernández-Gutiérrez², Javier Espuny², Manuel Martín-Loeches¹
¹Center UCM-ISCIII for Human Evolution and Behavior & Psychobiology Department-UCM, Madrid, Spain, ²Center UCM-ISCIII for Human Evolution and Behavior, Madrid, Spain
- 3508 Resting EEG microstates reveal the relationship between human brain networks**
Filippo Zappasodi¹, Pierpaolo Croce¹, Paolo Capotosto²
¹Gabriele D'Annunzio University, Chieti-Pescara, Chieti, Italy, ²ITAB, Chieti, Italy
- 3509 Correlation Between EEG Delta Activity and Heart Rate Spectral Powers in Preterm Infants**
Rathinaswamy Govindan¹, Sarah Mulkey¹, Srinivas Kota¹, Nickie Andescavage¹, Tareq Al-Shargabi¹, Christopher Swisher¹, Caitlin Cristante¹, Adre du Plessis¹
¹Children's National Health System, Washington, DC
- 3510 Signal Complexity Indicators of Health Status in Clinical-EEG**
Kelly Shen¹, Alison McFadden^{1,2}, Anthony McIntosh^{1,2}
¹Rotman Research Institute, Baycrest, Toronto, Canada, ²University of Toronto, Toronto, Canada
- 3511 Factors determining temporal reliability of ongoing EEG responses to naturalistic music**
Blair Kaneshiro¹, Duc Nguyen¹, Jacek Dmochowski², Anthony Norcia¹, Jonathan Berger¹
¹Stanford University, Stanford, United States, ²City College of New York, New York, United States
- 3512 A Validation of a Low-Cost Portable EEG System**
Angela Norton¹, Chad Williams¹, Cameron Hassall¹, Bruce Wright¹, Francisco Colino¹, Olave Krigolson¹
¹University of Victoria, Victoria, British Columbia
- 3513 Age-dependent changes of default mode network connectivity: An eLORETA study**
Seung-Hyun Jin¹, Seung Wan Kang², Youngwoo Pae¹
¹iMediSyn Inc., Seoul, Korea, Republic of, ²Seoul National University College of Nursing, Seoul, Korea, Republic of
- 3514 EEG dynamics reflects students' cognitive process at different levels of cognitive conflict events**
Hsiao-Ching She¹, Chuan-Cheng Shih², Li-Yu Huang³
¹Institute of Education, National Chiao Tung University, Hsinchu, Taiwan, ²Institute of Education, National Chiao Tung University, Hsinchu, Taiwan, ³Institute of Education, National Chiao-Tung University, Hsinchu, Taiwan
- 3515 Using Event Related Potentials to Assess Fatigue: An analysis of the P300 and Reward Positivity.**
Harvey Howse¹, Bruce Wright¹, Olave Krigolson¹
¹University of Victoria, Victoria, British Columbia
- 3516 Perception of Emotional Faces at the Periphery: Do Outer Faces Impact Crowd Perception?**
Sara Driskell¹, Aina Puce¹
¹Indiana University, Bloomington, IN
- 3517 EEG dynamics of abductive reasoning process involving genetic concepts**
Li-Yu Huang¹, Hsiao-Ching She²
¹Institute of Education, National Chiao-Tung University, Hsinchu, Taiwan, ²Institute of Education, National Chiao Tung University, Hsinchu, Taiwan
- 3518 How does complex versus simple Go/NoGo training improve motor inhibitory control? An EEG study**
Marie Simonet¹, Jérôme Barral¹
¹University of Lausanne, Lausanne, Switzerland
- 3519 To what extent does the EEG montage density impact on the accuracy of source localization?**
Ilaria Mazzonetto¹, Quanying Liu^{2,3}, Alessandra Bertoldo¹, Dante Mantini^{3,2,4}
¹University of Padova, Padova, Italy, ²ETH Zurich, Zurich, Switzerland, ³KU Leuven, Leuven, Belgium, ⁴Oxford University, Oxford, United Kingdom
- 3520 The Impact of Concussion in Neural Learning Systems**
Steffanie Fisher¹, Shannon Fitzpatrick¹, Steve Martin^{1,2}, Olave Krigolson¹
¹University of Victoria, Victoria, BC, ²University of Victoria Health Services and Varsity Athlete Services, Victoria, BC
- 3521 High Resolution Micro-ECOG Studies of Human Sensorimotor Cortex during Finger Movements**
Chao-Hung Kuo^{1,2}, Devapratim Sarma¹, Timothy Blakely¹, Jing Wu¹, Jeremiah Wander¹, Jared Olson¹, Kelly Collins¹, David Caldwell¹, Jeneva Cronin¹, Kaitlyn Casimo¹, Rajesh Rao¹, Jeffrey Ojemann^{1,3}
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- 3522 Chanting Amitofo increases slow-wave brain activities: an EEG component cluster analysis**
Junling Gao¹, Hang Kin Leung¹, Bonnie Wu¹, Hin Hung Sik¹
¹Centre of Buddhist Studies, The University of Hong Kong, Hong Kong, Hong Kong
- 3523 Mindfulness Meditation Decreases EEG Functional Connectivity**
Jiewei Li¹, Shing Chow Chan¹, Xubin Zheng¹, Zhiguo Zhang², Jiafei Wu¹, Chunqi Chang², Hin Hung Sik³, Junling Gao³
¹HKU, Hong Kong, Hong Kong, ²Shenzhen University, Shenzhen, China, ³Centre of Buddhist Studies, The University of Hong Kong, Hong Kong, Hong Kong
- 3524 Anticipation Process for Voice is Faster than Anticipation Process for Rhythmic Sound**
Yoshimi Ohgami¹, Yasunori Kotani¹, Nobukiyo Yoshida², Shigeru Kiryu², Yusuke Inoue³
¹Tokyo Institute of Technology, Tokyo, Japan, ²The University of Tokyo, Tokyo, Japan, ³Kitasato University, Kanagawa, Japan
- 3525 Age-related effects in the alpha and beta bands during acquisition of a bimanual task**
Laura Rueda Delgado¹, Kirstin-Friederike Heise¹, Andreas Daffertshofer², Dante Mantini¹, Stephan Swinnen¹
¹KU Leuven, Leuven, Belgium, ²Faculty of Behavioural and Movement Sciences, Vrije Universiteit, Amsterdam, Netherlands
- 3526 Interhemispheric Asymmetry is Decreased in Children Who Have ADHD and Mirror Overflow**
Danielle McAuliffe¹, Ajay Pillai¹, Kathryn Hirabayashi¹, Ben Dirlikov¹, Stewart Mostofsky², Joshua Ewen¹
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- 3527 A method for detecting statistically significant differences in EEG data**
Nuno Fachada¹, Janir Ramos da Cruz², Michael H. Herzog³, Patrícia Figueiredo⁴, Agostinho Rosa¹
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- 3528 An EEG Study on Mental Fatigue Evaluation**
Tong Zou¹, Yuqiu Liu¹, Jingwan Fang¹, Feiyan Chen¹
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- 3529 Are there EEG Changes One Hour After Induction of Exogenous Ketosis (BHB & C8)?**
Rustin Berlow¹
¹ABSC Brain, DEL MAR, CA
- 3530 An EEG study on visually induced self-motion illusion in virtual reality environment**
Jeong Hye Park¹, Sung Kwang Hong², Se Jik Park², Hyo Jeong Lee², Hyung Jong Kim², Han Jae Jeon³, Chang Geun Song³, Seon Woo Lee⁴
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- 3531 State-dependent recruitment of sharp wave-ripple episodes in the human hippocampus**
Tomas Ossandon¹, Pablo Billeke², Gabriel Wainstein³, Jean-Philippe Lachaux⁴, Pablo Fuentealba¹
¹Pontificia Universidad Católica de Chile, Santiago, Chile, ²Universidad del Desarrollo, Santiago, Region Metropolitana, ³Pontificia Universidad Católica de Chile, Santiago, metropolitana, ⁴INSERM, CRNL, Lyon, France
- 3532 Stimulus Presentation Decreases EEG trial-to-trial Power Variability in Healthy Humans**
Sukhmanjit Ghuman¹, Russell Butler¹, Kevin Whittingstall¹
¹Université de Sherbrooke, Sherbrooke, Canada

IMAGING METHODS

Imaging Methods Other

- 3533 A sulcus-based alignment framework to study the relationship between U-fibers and cortical folding.**
Nicole Labra¹, Jessica Lebenberg¹, Guillaume Auzias², Pamela Guevara³, Denis Rivière¹, Cyril Poupon⁴, Jean-François Mangin⁵
¹UNATI, Neurospin, DRF, CEA, Paris Saclay University, Gif-sur-Yvette, France, ²CNRS, INT, Marseille, France, ³University of Concepcion, Concepcion, Chile, ⁴UNIRS, Neurospin, DRF, CEA, Paris Saclay University, Gif sur Yvette, France, ⁵UNATI, Neurospin, DRF, CEA, Paris Saclay University, Gif sur Yvette, France
- 3534 Ex-vivo Brain Quantitative Susceptibility Mapping**
Arnold Evia Jr.¹, Aikaterini Kotrotsou¹, Robert Dawe^{1,2,3}, Sue Leurgans^{2,4}, Julie Schneider^{2,4,5}, David Bennett^{2,4}, Konstantinos Arfanakis^{1,2,3}
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- 3535 Image Segmentation with Post-processing Approach in Brain MRI**
Peifang Guo¹
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- 3536 Echo time optimization for T1-weighted/T2-weighted ratio mapping in the human brain at 3 T**
Md Nasir Uddin¹, Susan Courtney², Chase Figley¹
¹University of Manitoba, Winnipeg, Manitoba, ²Johns Hopkins University, Baltimore, MD
- 3537* The ratio T1w/T2w is not a marker of myelin content**
Michael Jarrett¹, Alexander Rauscher¹
¹University of British Columbia, Vancouver, BC
- 3538 Ammonia influenced chemical exchange saturation transfer MR imaging in hepatic encephalopathy**
Helge Zöllner^{1,2}, Markus Butz¹, Gerald Kircheis³, Dieter Häussinger³, Wittsack Hans-Jörg², Alfons Schnitzler¹
¹Institute of Clinical Neuroscience and Medical Psychology, Heinrich Heine University Düsseldorf, Düsseldorf, Germany, ²Department of Diagnostic and Interventional Radiology, Heinrich Heine University Düsseldorf, Düsseldorf, Germany, ³Department of Gastroenterology, Hepatology and Infectiology, Heinrich Heine University Düsseldorf, Düsseldorf, Germany
- 3539 Clinical Acute Stroke Imaging of Motor Deficits using VLSM and White Matter Track Based Analyses**
Jacob Levenstein^{1,2}, Andreja Varjacic¹, Dante Mantini³, Céline Gillebert³, Peter Bandettini², Charlotte Stagg¹, Nele Demeyere¹
¹University of Oxford, Oxford, United Kingdom, ²Section of Functional Imaging Methods, National Institute of Mental Health, Bethesda, MD, ³KU Leuven, Leuven, Belgium
- 3540 Evaluation of Physiological Noise Cleaning Methods at High-Resolution across Cortical Depth**
Andrew Hall¹, Laurentius Huber², Daniel Handwerker³, Javier GonzalezCastillo⁴, Natasha Topolski⁵, Peter Bandettini⁶
¹NIH/NIMH, Bethesda, MD, ²NIMH, WASHINGTON, United States, ³NIMH, Bethesda, MD, ⁴National Institutes of Health, Bethesda, MD, ⁵National Institute of Mental Health, Bethesda, MD, ⁶Section of Functional Imaging Methods, National Institute of Mental Health, Bethesda, MD
- 3541* Deriving quantitative susceptibility maps from dynamic multi-shot echo-planar imaging**
Vanessa Wiggermann¹, Enedino Hernández-Torres¹, Christian Kames¹, Alexander Rauscher²
¹University of British Columbia, Vancouver, Canada, ²University of British Columbia, Vancouver, BC
- 3542 Iron loss occurs in the deep gray matter of multiple sclerosis patients**
Enedino Hernandez-Torres¹, Vanessa Wiggermann², David Li¹, Lindsay Machan¹, Dessa Sadovnick¹, Anthony Traboulsee², Simon Hametner³, Alexander Rauscher¹
¹University of British Columbia, Vancouver, BC, ²University of British Columbia, Vancouver, Canada, ³Medical University of Vienna, Vienna, Austria
- 3543 Hydration status produces regional changes in quantitative T1: Implications for volumetric analyses**
Sofia Chavez¹, Nancy Lobaugh¹
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- 3544 DLPFC activity as a control signal in a fully implanted Brain Computer Interface**
Max van den Boom¹, Elmar Pels¹, Mariana Branco¹, Erik Aarnoutse¹, Sacha Leinders¹, Zachary Freudenburg¹, Mariska Vansteensel¹, Nick Ramsey¹
¹UMC Utrecht, Utrecht, Netherlands
- 3545* Imaging Brain Tissue with Ultra Short T2 Relaxation Times**
Christoph Rettenmeier¹, V. Andrew Stenger²
¹University of Hawaii, Honolulu, HI, ²John A. Burns School of Medicine, University of Hawaii, Honolulu, HI

IMAGING METHODS

Imaging of CLARITY

- 3546 A computational framework for analysis, sharing, and visualization of 3D brain microscopy data**
Jason Stein¹, Guorong Wu¹, Vladimir Ghukasyan¹, Mike Conway², Erik Scott², Giulia Fragola¹, Shaoyu Wang¹, Mark Zylka¹, Benjamin Philpot¹, Garret Stuber¹, Ashok Krishnamurthy²
¹University of North Carolina at Chapel Hill, Chapel Hill, NC, ²Renaissance Computing Institute, Chapel Hill, NC

IMAGING METHODS

MEG

- 3547 Comparing spatial and temporal resolution of different MEG source estimate methods with fMRI**
Li Zheng¹, Jingwei Sheng¹, Yaoyu Zhang¹, Jia-Hong Gao¹
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- 3548 Hyperalignment of dynamic responses using MEG**
Tijl Grootswagers^{1,2}, Erika Contini¹, Thomas Carlson²
¹Macquarie University, Sydney, Australia, ²University of Sydney, Sydney, Australia
- 3549 Using Reliability to Provide Patient-Specific Processing of Neuroimaging Data**
Sarah McLeod¹, Timothy Bardouille², Steven Beyea²
¹Dalhousie University, Halifax, Nova Scotia, ²IWK Health Centre, Halifax, Nova Scotia
- 3550 Dynamic functional connectivity graph in early gamma emotional processing in depression**
Kun Bi^{1,2}, Shui Tian^{1,2}, Si-qi Zhang^{1,2}, Rui Yan³, Hao Tang³, Zhi-jian Yao^{3,4}, Qing Lu^{1,2}
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- 3551 Speech entrainment across time scales: differential effects on low-frequency and beta oscillations.**
Peter Donhauser¹, Maryse Thomas¹, Benjamin Morillon², Vincent Gracco^{1,3}, Sylvain Baillet¹
¹McGill University, Montreal, Canada, ²Aix-Marseille University, Marseille, France, ³Haskins Laboratory, New Haven, CT
- 3552 Characteristics of the spatial distribution of MEG data using self-organizing map**
Yuichi Takei¹, Ayaka Kosuda², Minami Tagawa¹, Masato Kasagi¹, Yataka Kato^{3,1}, Noriko Sakurai¹, Masato Fukuda¹, Yoichi Seki²
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- 3553 Spatiotemporal Oscillatory Dynamics of Visual Selective Attention during a Flanker Task**
Timothy McDermott¹, Alex Wiesman¹, Amy Proskovec², Elizabeth Heinrichs-Graham¹, Tony Wilson¹
¹University of Nebraska Medical Center, Omaha, NE, ²University of Nebraska Omaha, Omaha, NE

- 3554 Estimating axonal conduction delays and directionality in humans using transfer entropy.**
Mark Drakesmith¹, Krish Singh¹, Derek Jones¹
¹Cardiff University, Cardiff, United Kingdom
- 3555 The effects of emotional stimuli on associative learning and gamma activity**
Dong Woo Shin^{1,2}, Taekeun Yoon^{1,2}, Sang Won Lee³, Bumseok Jeong^{1,2}
¹Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of, ²KAIST Institute for Health Science and Technology, Daejeon, Korea, Republic of, ³Department of Psychiatry, Kyungpook National University School of Medicine, Daegu, Korea, Republic of
- 3556 Source connectivity analysis using multivariate autoregressive models of MEG signals**
Jae-Hyun Cho¹, Ümit Aydin^{2,3}, Carsten Wolters², Thomas Knösche¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²Institute for Biomagnetism and Biosignalanalysis, University of Münster, Münster, Germany, ³Department of physics, Concordia University, Montreal, Canada
- 3557 EasyMEG: an easy-to-use toolbox for MEG analysis**
Yingnan Nie¹, Chunlan Yang¹, Wan Li¹, Xin Zhang¹
¹Beijing University of Technology, Beijing, China
- 3558 Rejecting tACS artefacts from MEG data using ICA and mutual information**
Omid Abbasi^{1,2}, Vanessa Krause¹, Lena Storzer¹, Bettina Pollok¹, Alfons Schnitzler¹, Markus Butz¹
¹Heinrich Heine University Düsseldorf, Düsseldorf, Germany, ²Ruhr-Universität Bochum, Bochum, Germany
- 3559 A Cs-based High-sensitivity Optically-pumped Magnetometer and Preliminary Results**
Jingwei Sheng¹, Shuangai Wan², Yifan Sun¹, Yuhao Guo², Rongshe Dou², Kequan Wei², Jie Qin², Jia-Hong Gao¹
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- 3560 Information Flow in the White Matter During a Motor Task: A Structural Connectivity Driven Approach**
Guillermo Gallardo¹, Demian Wassermann¹, Rachid Deriche¹, Maxime Descoteaux², Samuel Deslauriers-Gauthier²
¹Université Côte d'Azur, Antibes, France, ²Université de Sherbrooke, Sherbrooke, Canada
- 3561 Spontaneous baseline activity as a mediator of age-related declines in sensory gating**
Rachel Spooner¹, Alex Wiesman¹, Amy Proskovec², Elizabeth Heinrichs-Graham¹, Tony Wilson¹
¹University of Nebraska Medical Center, Omaha, NE, ²University of Nebraska Omaha, Omaha, NE
- 3562 Detecting mindfulness state from MEG/EEG functional connectivity**
Alexander Zhigalov^{1,2}, Erkka Heinilä³, Tiina Parvianen³, Lauri Parkkonen², Aapo Hyvärinen^{1,4}
¹University of Helsinki, Helsinki, Finland, ²Aalto University, Espoo, Finland, ³University of Jyväskylä, Jyväskylä, Finland, ⁴University College London, London, United Kingdom

- 3563 Atypical Inter-Hemispheric Phase Locking During Auditory Steady State Response in Down Syndrome.**
Tahira Tejpar¹, Nicholas Peatfield², Angela Wen³, Careesa Liu⁴, Vasily Vakorin⁵, Daniel Bosnyak⁶, Diana Harasym⁷, Ryan D'Arcy⁸, Larry Roberts⁶, Arlene Young⁹, Alexandra Talpalaru¹⁰, Sam Doesburg¹¹, Teresa Cheung¹¹
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- 3564 Oscillatory Dynamics in the Dorsal and Ventral Attention Networks during Attentional Reorienting**
Amy Proskovec¹, Elizabeth Heinrichs-Graham², Alex Wiesman², Timothy McDermott², Tony Wilson²
¹University of Nebraska at Omaha, Omaha, NE, ²University of Nebraska Medical Center, Omaha, NE
- 3565 Mapping critical language hubs in children performing verb generation in MEG**
Vahab Yousofzadeh¹, Darren Kadis¹
¹Cincinnati Children's Hospital Medical Center, Cincinnati, OH
- 3566* Memento malum: Negative prediction errors boost episodic encoding via theta band synchrony**
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- 3567 Cortical and Sub-cortical Oscillatory Dynamics during Spatial Working Memory**
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- 3568 TDCS Modulates Behavior and the Neural Oscillatory Dynamics serving Visual Selective Attention**
Timothy McDermott¹, Mackenzie Mills¹, Rachel Spooner¹, Nathan Coolidge¹, Alex Wiesman¹, Amy Proskovec², Elizabeth Heinrichs-Graham¹, Tony Wilson¹
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- 3569 Receptive language mapping with MEG under sedation: Pediatric brain tumor in Language area**
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- 3570 Altering Attention: Frequency Specific Modulation of Visuospatial Attention Networks using tDCS**
Alex Wiesman¹, Mackenzie Mills¹, Timothy McDermott¹, Rachel Spooner¹, Nathan Coolidge¹, Tony Wilson¹
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- 3571 Improving MEG signal-to-noise ratio via weighted averaging in cases of substantial head movements**
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- 3572 Comparing the location of sources reconstructed from MEG data**
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- 3573 Physical exercise impacts functional connectivity in paediatric brain tumour survivors.**
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- 3574 Detection of cervical somatosensory evoked fields using a single optically-pumped magnetometer**
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- 3575 Frequency performance of optically pumped magnetometers in comparison to typical MEG SQUID sensors**
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- 3576 Testing the effectiveness of Dummy MRIs in place of actual MRI's when doing co-registration with MEG**
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IMAGING METHODS

MR Spectroscopy

- 3577 Simultaneous edited MR spectroscopy of glutathione and macromolecule-suppressed GABA**
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- 3578 Cervical spinal cord proton spectroscopy and impairment in spinal cord injury at 3T**
Patrik Wyss^{1,2,3,4}, Eveline Huber⁵, Patrick Freund^{5,6,7,8}, Desiree Beck⁵, Armin Curt⁵, Spyros Kollias⁴, Anke Henning^{1,3,9}
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- 3579 Magnetic resonance spectroscopy in dyslexic adults**
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- 3580 The Impact of Aerobic Endurance Training on Hippocampal Metabolites in Schizophrenia Patients**
Boris-Stephan Rauchmann¹, Farhad Ghaseminejad², Daniel Keeser¹, Katriona Keller-Varady³, Thomas Schneider-Axmann³, Temmuz Karali³, Gunther Helms⁴, Peter Dechent⁵, Andrea Schmitt³, Hasan Alkomiet³, Thomas Wobrock⁶, Birgit Ertl-Wagner¹, Peter Falkai³, Berend Malchow³
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- 3581 Determination of metabolic map in post operated glioma**
Samira raminfar¹, Mohammad Ali Oghabian², Seyed Amir Hossein Batouli¹, Hamid Reza Haghighatkah³, Seyed Meysam Alimohammadi⁴, Ali Yoonessi¹
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- 3582 Changes in GABA and Improvements in Quality of Life Following Intensive Pain Rehabilitation**
Jillian Vinall¹, Melanie Noel¹, Nivez Rasic¹, Kerry Carter¹, Vi Riddell Pain Team², Signe Bray¹, David Lythgoe³, Gareth Barker³, Ashley Harris¹
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- 3583 Effect of coffee consumption on in vivo GABA Magnetic Resonance Spectroscopy**
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- 3584 Correlation of MRSI based biomarkers and neuropsychological test scores in Parkinson's disease at 3T**
Sevim Cengiz¹, Dilek Betul Arslan¹, Ani Kicik^{2,3}, Emel Erdogan⁴, Seda Buker⁵, Zeynep Tufekcioglu⁵, Aziz Mufit Ulug^{1,6}, Basar Bilgic⁵, Hasmet Hanagasi⁵, Hakan Gurvit⁵, Tamer Demiralp^{2,7}, Esin Ozturk-Isik¹
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- 3585 Correlation of Arterial Spin Labeling MRI and MR Spectroscopic Imaging in Parkinsons dDiseas at 3T**
Sevim Cengiz¹, Dilek Betul Arslan¹, Ani Kicik^{2,3}, Emel Erdogan⁴, Seda Buker⁵, Zeynep Tufekcioglu⁵, Aziz Mufit Ulug^{1,6}, Basar Bilgic⁵, Hasmet Hanagasi⁵, Hakan Gurvit⁵, Tamer Demiralp^{2,7}, Esin Ozturk-Isik¹
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- 3586 Striatal structure and its association with N-Acetylaspartate and glutamate in ASD and OCD**
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- 3587 Glutamate and Choline Levels Predict Individual Differences in Reading Ability**
Einar Mencil^{1,2}, Stephen Frost¹, Douglas Rothman², Fumiko Hoefft³, Kayleigh Rhyer⁴, Nicole Landi^{4,1}, Peter Molfese⁴, Elena Grigorenko⁵, Leslie Jacobsen², Mark Seidenberg^{6,1}, Robert Fulbright², Kenneth Pugh^{1,2,4}
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- 3588 Meta-analysis of membrane phospholipid metabolites in schizophrenia**
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IMAGING METHODS

NIRS

- 3589 Analyzing Hand Preference in Self-Guided Tactile Stimulation for FM patients: an fNIRS Study**
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- 3590 Neural Synchronization in lovers**
Yuhang Long¹, Xialu Bai¹, Lifen Zheng², Hui Zhao², Wenda Liu², Chunming Lu¹
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- 3591 Investigate the Visual Merchandising of a Fashion Store Using Brain Scientific Approach**
Xiaolong Liu¹, Keum-Shik Hong¹
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- 3592 Using PPI analyses with fNIRS neuroimaging to predict children's reading abilities**
Kaja Jasinska^{1,2}, Lan Shuai², Airey Lau^{3,2}, Nicole Landi^{4,2,5}, Kenneth Pugh^{2,4,5}
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- 3593 Network Integrity in Chronic Concussion Patients - A Functional Near-Infrared Spectroscopy Study**
Lia Hocke¹, Chris Duszynski¹, Chantel Debert¹, Jeffrey Dunn¹
¹University of Calgary, Calgary, Canada
- 3594 Distinguishable fNIRS brain-imaging upon different thermal sensations**
Hoang-Dung Nguyen¹, Keum-Shik Hong²
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- 3595 Evaluation of a GLM analysis with adaptive hemodynamic response function on a visual stimulus task**
Saki Ikeda¹, Satoru Hiwa¹, Tomoyuki Hiroyasu¹
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- 3596 Dynamical Changes in NIRS data can be Visualized and Quantified with Recurrence Plots**
Masako Sugai¹
¹Tokyo Denki University, Tokyo, Japan
- 3597 Decoding of noxious and innocuous stimulation in human somatosensory cortex using fNIRS**
Muhammad Raheel Bhutta¹, Keum-Shik Hong², Seong-Woo Woo², Muhammad Atif Yaqub²
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- 3598 Effective connectivity on fNIRS: how to apply Dynamic Causal Modelling on infant data**
Chiara Bulgarelli¹, Anna Blasi¹, Simon Arridge², Gareth Baker³, Stephen Wastling³, Barbara Manini⁴, Victoria Southgate⁵, Clare Elwell⁶, Mark Johnson¹, Sungho Tak⁷, Antonia Hamilton⁸
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- 3599 Mapping the brain during KINARM robotic assessment: a functional Near Infrared Spectroscopy study**
Chris Duszynski¹, Lia Hocke¹, Brian Benson², Jeffrey Dunn¹
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- 3600 Functional connectivity analysis of brain activity during cooperative behavior using fNIRS**
Megumi Mizuno¹, Satoru Hiwa¹, Tomoyuki Hiroyasu¹
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- 3601 Frontoparietal hemodynamics during cognitive control is associated with everyday cognitive failures**
Jonas de Paula¹, Danielle Costa¹, Rickson Mesquita², Débora Miranda¹, Marco Romano-Silva¹
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- 3602 Developing a model of functional connectivity in youth: exploring single and dual task paradigms**
Karolina Urban^{1,2}, Larissa Schudlo^{1,2}, Nick Reed^{1,2}, Tom Chau^{1,2}
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- 3603 Adaptive HRF analysis of fNIRS data**
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IMAGING METHODS

Non-BOLD fMRI

- 3604 Comparison of BOLD and CBV impulse-response in human visual system in the presence of Ferumoxytol**
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- 3605 Cortical depth-dependent fMRI signal can distinguish sensory motor tasks**
Laurentius Huber¹, Daniel Handwerker¹, Anrew Hall¹, David Jangraw¹, Javier GonzalezCastillo¹, Maria Guidi², Dimo Ivanov³, Benedikt Poser³, Peter Bandettini¹
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- 3606 Validating Arterial Spin Labelling Cerebral Blood Flow measure with perfusion phantom**
Andrea Federspiel¹, Roland Wiest², Dominik Obrist³, Claus Kiefer², Joerg Schneider⁴, Jan Gralla²
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- 3607 Early cortical maturation from 2 months to 3 years old : an MRI-ASL study of rest CBF in babies**
AUGE Pierre¹, Jean-Marc Tacchella¹, Hervé Lemaître², Ana Saitovitch¹, David Grevent¹, Raphael Calmon¹, Francis Brunelle¹, Nathalie Boddaert¹, Monica Zilbovicius¹
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- 3608 Measuring Cerebrovascular Reactivity Using a Novel Multiband Multiecho ASL/ BOLD Sequence**
Alexander Cohen¹, Yang Wang¹
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- 3609 Advanced statistical analysis of functional Arterial Spin Labelling data**
Aina Frau-Pascual^{1,2,3,4}, Thomas Perret¹, Salma Bougacha^{3,2}, Florence Forbes^{1,4}, Philippe Ciuciu^{3,2}
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IMAGING METHODS

PET

- 3610 Patterns of metabolic connectivity of the basal ganglia in healthy adults with [18F]FDG PET**
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- 3611 Spontaneous eye blink rate: A reliable proxy for dopamine function?**
Linh Dang¹, Gregory Samanez-Larkin², Jaime Castellon¹, Scott Perkins¹, Ronald Cowan³, Paul Newhouse³, David Zald¹
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- 3612 Automating quality control using group statistics in PET and MRI image processing**
Thomas Funck^{1,2}, Kevin Larcher¹, Paule Toussaint¹, Alain Dagher¹, Alan Evans¹, Alexander Thiel²
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IMAGING METHODS

Polarized light imaging (PLI)

- 3613* Diattenuation Imaging - A New Extension to 3D-Polarized Light Imaging**
Miriam Menzel¹, Julia Reckfort¹, Daniel Weigand², Hasan Köse¹, Katrin Amunts¹, Markus Axer¹
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LANGUAGE

Language Acquisition

- 3614 Bilingualism shapes word learning already at 18 months of age: a combined EEG and fNIRS study**
Sonja Rossi¹, Manfred Gugler¹
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- 3615 Learning a Novel Language with Reinforcements: A Preliminary Neural Investigation**
Chad Williams¹, Talise Lindenbach¹, Francisco Colino², Bruce Wright¹, Olave Krigolson¹
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- 3616 Temporal dynamics of brain plasticity during tactile reading training**
Jacek Matuszewski¹, Łukasz Bola², Anna Banaszkiewicz¹, Michał Szczepanik¹, Bartosz Kossowski¹, Marcin Szwed², Katarzyna Jednoróg³, Artur Marchewka¹
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- 3617 Time-course of semantic processing in hearing adults during Polish Sign Language acquisition**
Anna Banaszkiewicz¹, Jacek Matuszewski¹, Łukasz Bola^{2,1}, Michał Szczepanik¹, Bartosz Kossowski¹, Paweł Rutkowski³, Marcin Szwed², Karen Emmorey⁴, Katarzyna Jednoróg⁵, Artur Marchewka¹
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- 3618 Neuroanatomical correlates of reading in typically developing children.**
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LANGUAGE

Language Comprehension and Semantics

3619 Neural representations of semantic relations

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3620 Role of SMA in action language processing: a rTMS study

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3621 A meta-analysis of neuroimaging studies in English, Japanese, and Chinese visual semantic processing

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3622 Inter-individual variability of TMS responsiveness on semantic processing: a MRS/fMRI/cTBS study

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3623 Arousal and valence of emotional effects on the processing of words

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3624 Distinct Functions of Alpha and Beta Band Oscillations in Successful Sentence Encoding

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3625 Role of the Inferior and Middle Temporal Gyri and Dorsal Pathway in Auditory Comprehension

Jie Zhang¹, Ye Yao², Jinsong Wu¹, Edmund T. Rolls³, Thomas Nichols³, Junfeng Lu¹, Ching-Po Lin⁴, Qihao Guo⁵, Ying Mao¹, Jianfeng Feng⁶, Liangfu Zhou¹

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3626 Embodied emotions interact with syntax

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3627 Explicit retrieval of visual and non-visual properties of concrete entities

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3628 Online language processing and the hippocampus

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3629 Abnormal Semantic Processing of Emotional Words in Post Traumatic Stress and Panic Disorders

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3630 Influence of Theory of Mind and Empathy on language processing in children

Anna-Lisa Schuler¹, Gregor Kasprian¹, Ernst Schwartz¹, Rainer Seidl¹, Georg Langs¹, Daniela Prayer¹, Lisa Bartha-Doering¹

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3631 The cortical interaction of language and theory of mind processing: a continuous fMRI study

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3632* Dorsal and ventral pathways for words and sentences processing

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3633 Are there semantic audio-visual integration effects in language perception?

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3634 Modulatory effect of body-part related verbs and manner adverbs on sensory-motor system

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3635* Modality-independent individual item and categorial semantic encoding in the left parietal cortex

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- 3636 Distinct neural mechanisms underlying conceptual knowledge of manner and instrument verbs**
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- 3637 Age and Expertise in Language Comprehension Cortex**
Stephen Bailey¹, Katherine Aboud¹, Laurie Cutting¹
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- 3638 Semantic Hub or Convergence Zones? EEG/MEG Evidence for a Central Role of ATL in Semantic Processing**
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LANGUAGE

Language Other

- 3639 Are production, reading, and listening co-lateralized? fMRI investigation in 296 healthy individuals**
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- 3640 The Dorsal-ventral Visual Network in Self-paced Reading of Chinese Characters**
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- 3641 The P600 Potential Could Index Cognitive Costs in Sentence Processing**
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- 3642 Functional segregation of linguistic functions within fronto-parietal networks**
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- 3643 Study of the neural and behavioral correlates of pragmatic language using Mexican proverbs**
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- 3644 Multilingualism and subcortical structural plasticity - beyond bilingualism**
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- 3645 Functional Connectivity Asymmetries Underlying Language Lateralization**
Jeffrey Binder¹, Jed Mathis¹, Ferdaus Kawsar¹, VEENA NAIR², Megan Rozman¹, Taylor McMillan², Dace Almane², William Gross¹, Peter Kraegel¹, Gyujoon Hwang², Gengyan Zhao², Lisa Conant¹, Edgar DeYoe¹, Andrew Nencka¹, Rasmus Birn², Vivek Prabhakaran², Colin Humphries¹, Leonardo Fernandino¹, B. Ward¹, Rama Maganti², Bruce Hermann², Manoj Raghavan¹, Beth Meyerand²
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- 3646 The quasilinguistic cerebellum: an fMRI study**
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- 3647 The role of language-specific vs. domain-general systems in phonological working memory**
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LANGUAGE

Reading and Writing

- 3648 Mapping left ventral occipitotemporal dysfunction in dyslexia to cognitive theories of the disorder**
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- 3649 The Cerebellum's Role in Dyslexia: A Functional Connectivity Study**
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- 3650 Dissociating superior and inferior reading pathways within the left ventral occipito-temporal cortex**
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- 3651 Resting State Connectivity Following Intervention for Reading Disabilities**
Marita Partanen¹, Lynne Williams², Hong Cheol Kim², Kathy Kwan¹, Linda Siegel¹, Deborah Giaschi¹
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- 3652 Alterations of white matter pathways in Chinese developmental dyslexia**
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- 3653 A coupled fMRI and kinematics study of the impact of orthography on handwriting.**
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- 3654 The Overlapping Neural Mechanisms of Lexical and Sublexical Reading with Spatial Attention**
Chelsea Ekstrand¹, Marla Mickleborough¹, Layla Gould¹, Josh Neudorf¹, Ron Borowsky¹
¹University of Saskatchewan, Saskatoon, Canada
- 3655 Relationships between Brain Structure and Reading, IQ and SES in Typical and Dyslexic Children**
Gabrielle-Ann Torre¹, Guinevere Eden¹
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- 3656 Brief, Intensive Reading Intervention Alters White Matter Properties Throughout a Widespread Network**
Elizabeth Huber¹, Patrick Donnelly¹, Ariel Rokem¹, Jason Yeatman¹
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- 3657 Neural correlates of orthographic consistency effects on Chinese spoken word recognition**
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- 3658 Print and speech processing differ in beginning readers: dyslexic, typical and at risk of dyslexia**
Katarzyna Chyl¹, Agnieszka Dębska¹, Magdalena Łuniewska¹, Bartosz Kossowski², Marek Wypych², Artur Marchewka², Katarzyna Jednoróg¹
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- 3659 Developmental Difference in the Large-scale Brain Functional Network of Reading Tasks**
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- 3660 Writing ability modifies brain activation and connectivity pattern in reading Chinese**
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- 3661 Investigation of magno-cellular and parvo-cellular pathways in developmental dyslexia**
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- 3662 Functional connectivity alterations associated to reading difficulties**
Roger Mateu Estivill¹, Sussana Forné², Anna López-Sala³, Carles Falcón^{4,5}, Xavier Caldú^{1,6}, Roser Colomé³, Cristina Boix³, Anna Sans³, Ana Adan^{1,6}, Sergi Grau⁷, Núria Bargalló⁸, Josep M Serra-Grabulosa^{1,6,9}
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- 3663 Associations between reading fluency, reading accuracy, and fMRI responses in dyslexia**
Jasmine Greer¹, Baxter Rogers¹, Bennett Shaywitz², John Holahan², John Gore¹, Sally Shaywitz²
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- 3664 Neural Correlates of Handwriting**
Mahta Karimpoor¹, Nathan Churchill², Fred Tam³, Corinne Fischer², Tom Schweizer², Simon Graham¹
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- 3665 Functional characterization of ventro-occipito-temporal reading regions**
Garikoitz Lerma-Usabiaga¹, Manuel Carreiras^{1,2}, Pedro Paz-Alonso¹
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- 3666 Decoding of Individual Numbers and Letters in Overlapping Regions of Ventral Visual Cortex**
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¹National Institute of Mental Health, Bethesda, United States

LANGUAGE

Speech Perception

- 3667 The influence of familial risk and dyslexia on phonological processing – a longitudinal fMRI study**
Agnieszka Dębska¹, Magdalena Łuniewska¹, Katarzyna Chyl¹, Marek Wypych², Artur Marchewka², Katarzyna Jednoróg¹
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- 3668 Electrocorticography Demonstrates a Special Role for Foveal Visual Cortex in Speech Perception**
Muge Ozker^{1,2}, Daniel Yoshor², Michael Beauchamp²
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3669 An ERP Study on Categorical Perception of Mandarin lexical tone at age 8 and 10.Han Wu¹, Pengfei Qu²¹Department of Sociology, Tsinghua University, Beijing, China, ²Department of Political Sciences, Chinese Academy of Governance, Beijing, China**3670 Neural Correlates of Concurrent Speech Perception**Natasha Kawata¹, Teruo Hashimoto², Ryuta Kawashima¹¹Department of Functional Brain Imaging, IDAC, Tohoku University, Sendai, Japan, ²Division of Developmental Cognitive Neuroscience, IDAC, Tohoku University, Sendai, Japan**3671 Audio-visual perception of familiar and unfamiliar syllables: a MEG study**Orsolya Kolozsvári¹, Weiyong Xu¹, Jarmo Hämäläinen¹¹University of Jyväskylä, Jyväskylä, Finland**3672 Cortical Thickness of Planum Temporale Influences Word Tone Processing in Swedish Native Speakers**Mikael Novén¹, Andrea Schremm¹, Merle Horne¹, Mikael Roll¹¹Centre for Languages and Literature, Lund University, Lund, Sweden**3673 Evidence of different brain connectivity in lipreading words and pseudowords**Eunkyung Kim¹, Hyejin Kang², Dong Soo Lee¹, Yu Kyeong Kim¹, Youngjo Lee², Eunjo Kang³¹Seoul National University College of Medicine, Seoul, Korea, Republic of, ²Seoul National University, Seoul, Korea, Republic of, ³Kangwon National University, Chuncheon, Korea, Republic of**3674 New method for automatic surface-based segmentation of Heschl's gyrus**Josue Luiz Dalboni da Rocha¹, Roberta Santoro¹, Dimitri Van De Ville², Naryl Golestani¹¹University of Geneva, Geneva, Switzerland, ²Ecole Polytechnique Fédérale de Lausanne, Lausanne, Vaud**3675 Comparing BOLD responses and eye movements as predictors of multisensory speech perception**Johannes Rennig¹, Michael Beauchamp¹¹Department of Neurosurgery and Core of Advanced MRI, Baylor College of Medicine, Houston, TX**3676 Mouth and Voice: Linking Visual and Auditory Stimulus Selectivity in the Superior Temporal Sulcus**Lin Zhu¹, Michael Beauchamp¹¹Baylor College of Medicine, Houston, TX**3677 Early Developmental Change in Brain Responses to Speech Measured with Magnetoencephalography**Kambiz Tavabi¹, Alexis Bosseler¹, Patricia Kuhl¹¹University of Washington, Seattle, WA**3678 Intrinsic functional architecture of Wernicke's, Broca's, and Geschwind's areas of the human speech**Daniel Abrams¹, John Kochalka², Tianwen Chen², Sayuli Bhide¹, Tanya Evans², Srikanth Ryali², Vinod Menon²¹Stanford University, Stanford, CA, ²Stanford University, Palo Alto, CA**3679 Neural Sensitivity to Phonetic Competition in Connected Speech**Xin Xie¹, Emily Myers²¹University of Rochester, Rochester, NY, ²University of Connecticut, Storrs, CT

LANGUAGE

Speech Production

3680 Working Memory Facilitates The Detection and Correction of Feedback Errors in Vocal Pitch RegulationHanjun Liu¹, Zhiqiang Guo¹, Xuqin Wu¹, Jeffery Jones²¹Sun Yat-sen University, Guangzhou, China, ²Wilfrid Laurier University, Waterloo, Canada**3681 Right hemisphere structures predict language recovery of aphasia in stroke patients**Hyunna Lee¹, Kyesam Jung², Namkug Kim³, Sang Joon Kim³, Jae-Hong Lee³, Miseon Kwon³, Sungwon Ham³¹University of Ulsan College of Medicine, Seoul, Korea, Republic of, ²Yonsei University College of Medicine, Seoul, Korea, Republic of, ³Asan Medical Center, Seoul, Korea, Republic of**3682 Neural circuits underlying the production of speech and hand gestures, a connectivity analysis**Roma Siugzdaitė¹, Tim Bal¹, Daniele Marinazzo¹, Guy Vingerhoets¹¹University of Ghent, Ghent, Belgium**3683 Detecting inter-subject variability in brain activity while performing the same cognitive task**leonardo cerliani^{1,2}, Rajat Thomas³, Alberto Bizzi⁴, Michel Thiebaut de Schotten^{2,1,5,6}¹ICM Institute - INSERM U1127, Paris, France, ²Brain Connectivity and Behaviour Group, Paris, France, ³Department of Psychiatry, Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands, ⁴Neuroradiology Unit, Fondazione IRCCS Istituto Neurologico Besta, Milan, Italy, ⁵UPMC-Paris6, Paris, France, ⁶GH Pitié-Salpêtrière, Paris, France**3684 How the brain plans inner and overt speech production: A combined EEG and fNIRS study**Franziska Stephan¹, Henrik Saalbach¹, Sonja Rossi²¹University of Leipzig, Leipzig, Germany, ²Medical University of Innsbruck, Innsbruck, Austria**3685 Causal interactions between Broca's area, motor cortex and superior temporal gyrus in speech**Ali Moharramipour¹, Parham Mostame¹, Gholam- Ali Hossein-Zadeh¹, Abbas Babajani-Feremi^{2,3}¹School of ECE, College of Engineering, University of Tehran, Tehran, Iran, Islamic Republic of, ²University of Tennessee Health Science Center, Memphis, United States, ³Le Bonheur Children's Hospital, Memphis, TN**3686 Depression's Effect on Speaking: Probing the Neural Architecture of this Scalable Biomarker**Gregory Ciccirelli¹, Kevin Sitek², Mathias Goncalves³, Carlo de los Angeles³, Anissa Sridhar³, Thomas Quatieri¹, Satrajit Ghosh³¹MIT Lincoln Laboratory, Lexington, MA, ²Harvard, Cambridge, MA, ³MIT, Cambridge, MA**3687 High gamma ECoG phase synchrony in Broca's area, superior temporal gyrus, and motor cortex**Parham Mostame¹, Ali Moharramipour², Gholam-Ali Hossein-Zadeh², Abbas Babajani-Feremi^{3,4}¹School of ECE, College of Engineering, University of Tehran, tehran, Iran, Islamic Republic of, ²School of ECE, College of Engineering, University of Tehran, Tehran, Iran, Islamic Republic of, ³The University of Tennessee Health Science Center, Memphis, TN, ⁴Le Bonheur Children's Hospital, Memphis, TN

- 3688 Bi-hemispheric collaboration of brain areas in language: implications for pre-surgical planning**
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- 3689 Touchscreen-Based Speech Production Without the Vocal Tract**
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LEARNING AND MEMORY

Implicit Memory

- 3690 Functional connectivity changes as a function of motor procedural learning**
F. Isik Karahanoglu¹, Georgia Panagiotaropoulou¹, Bengi Baran¹, Robert Stickgold², Edwin M. Robertson³, Dara Manoach¹
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- 3691 Perceptual Priming and fMRI Repetition Suppression in a Symmetry Judgment Task**
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LEARNING AND MEMORY

Learning and Memory Other

- 3692 Have you been there before? Decoding recognition of spatial context from fMRI signals in precuneus**
Carsten Bogler¹, Chantal Miller², Andrea Zangrossi³, John-Dylan Haynes¹
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- 3693 Learning Without Feedback: Does the P300 ERP Component Encode an Implicit Prediction Error**
Stephen Luehr¹, Francisco Colino², Olave Krigolson³
¹University of Victoria, Victoria, BC, ²University of Victoria, Victoria, BC - British Columbia, ³University of Victoria, Victoria, British Columbia
- 3695 Altered neural encoding of novel spatial environments in older compared to younger adults**
Nadine Diersch¹, Jose Valdes-Herrera¹, Thomas Wolbers^{1,2}
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- 3696 Perceptual Learning: Working Memory versus Pitch Discrimination**
Philippe Albouy¹, Tamar Malinovitch², Robert Zatorre³, Merav Ahissar²
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- 3697 Developmental reduction of prefrontal grey matter is associated with improved instrumental learning**
Jana Tegelbeckers¹, Daniela Schneider¹, Björn Bonath¹, Carolin Breitling², Marc Guitart-Masip³, Kerstin Krauel¹, Matthew Betts⁴
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- 3698 Effects of emotional congruency and basic emotions on memory of emotional words within context**
Monika Riegel¹, Marek Wypych², Małgorzata Wierzbą³, Michał Szczepanik⁴, Katarzyna Jednoróg¹, patrik vuilleumier⁵, Artur Marchewka⁶
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- 3699 TMS to domain-general neural networks improves vocabulary learning**
Magdalena Sliwinska¹, Ines Violante¹, Richard Wise¹, Robert Leech¹, Joseph Devlin², Fatemeh Geranmayeh¹, Adam Hampshire¹
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- 3700 The influence of acoustic startle probes on the neural basis of fear memory**
Michelle de Haan^{1,2}, Sonja van Well³, Renée Visser⁴, Guido van Wingen⁵, Steven Scholte², Merel Kindt³
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- 3701 Arithmetic Learning modifies the intrinsic fronto-parietal network**
Hui Zhao^{1,2}, Yi Feng^{1,2}, Brian Butterworth³, Xiaoxi Li^{1,2}, Haijing Niu^{1,2}
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- 3702 Different Patterns of Activity for the Encoding and Short-Term Maintenance of Complex Scenes**
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LEARNING AND MEMORY

Long-Term Memory (Episodic and Semantic)

3703* Neural correlates of durable memories encoding and retrieval across the adult lifespan*Didac Vidal-Piñeiro¹, Markus Sneve¹, Kristine Walhovd¹, Anders Fjell¹*¹University of Oslo, Oslo, Norway**3704 Presynaptic dopamine uptake modulation of hippocampal function***Roberta Rasetti¹, Marquitta Winston¹, Catherine Hegarty¹, Angela Ianni¹, Philip Kohn¹, Joseph Callicott¹, Venkata Mattay², Daniel Weinberger², Daniel Eisenberg¹, Karen Berman¹*¹CTNB, NIMH, NIH, Bethesda, MD, ²Lieber Institute for Brain Development, Baltimore, MD**3705* Representation of temporal memory retrieval in the human precuneus***Qun Ye¹, Man Yi Yim², Kofi Appiah³, Yixuan Ku^{1,2}, Yi Hu¹, Sze Chai Kwok^{1,2}*¹East China Normal University, Shanghai, China, ²NYU-ECNU Institute of Brain and Cognitive Science at NYU Shanghai, Shanghai, China, ³Nottingham Trent University, Nottingham, United Kingdom**3706 Developmental amnesia: VBM and hippocampus subfield segmentation evidence of hippocampal damage***Josep M Serra-Grabulosa^{1,2,3}, Anna Sans⁴, Rosalia Dacosta-Aguayo^{5,6}, Joana Pereira⁷, Roser Colomé⁴, Anna López-Sala⁴, Cristina Boix⁴, Xavier Caldú^{2,3}, Roger Mateu-Estivill³, Sergi Grau⁸, Ana Adan^{2,3}, Núria Bargalló⁹*¹IDIBAPS, Barcelona, Spain, ²Institute of Neuroscience, Barcelona, Spain, ³Department of Clinical Psychology and Psychobiology, University of Barcelona, Barcelona, Spain, ⁴Department of Neurology, Hospital Sant Joan de Deu, Barcelona, Spain, ⁵Biodonostia Health Research Institute, San Sebastian, Spain, ⁶Centro de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas (CIBERNED), Madrid, Spain, ⁷Department of Neurobiology, Care Sciences and Society, Karolinska Institutet, Stockholm, Sweden, ⁸Data and Signal Processing Research Group UScienceTech University of Vic - Central University of Ca, Vic, Spain, ⁹Centre de Diagnòstic per la Imatge Hospital Clinic de Barcelona (CDIC), Barcelona, Spain**3707 Elaborative processing in people with mild cognitive impairment***Michael Kuo¹*¹Tung Wah College, Hong Kong, Hong Kong**3709 Influence of disgust and fear on long-term memory***Monika Riegel¹, Małgorzata Wierzbą², Marek Wypych³, Katarzyna Jednoróg¹, Anna Grabowska⁴, Artur Marchewka⁵*¹Nencki Institute of Experimental Biology, Warsaw, Poland, ²Nencki Institute of Experimental Biology Polish Academy of Sciences, Warszawa, Poland, ³Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warszawa, Poland, ⁴Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warszawa, Poland, ⁵Laboratory of Brain Imaging, Neurobiology Center, Nencki Institute of Experimental Biology, Warsaw, Poland**3710 What the brain likes: Repetition suppression for aversive but enhancement for appetitive stimuli***Zachary Yaker¹, Vaibhav Diwadkar¹*¹Wayne State University, Detroit, United States**3711 Distinct Patterns of Inter-Voxel Dynamics along the Hippocampal Longitudinal Axis***Iva Brunec^{1,2}, Buddhika Bellana^{1,2}, Jason Ozubko³, Morgan Barense^{1,2}, Morris Moscovitch^{1,2}*¹University of Toronto, Toronto, Canada, ²Rotman Research Institute, Toronto, Canada, ³SUNY Geneseo, Geneseo, NY**3712 Decoupling the mPFC from the default mode network benefits memory***Nils Müller¹, Nils Kohn¹, Martin Dresler¹, Gabriele Janzen², Christian Beckmann¹, Guillén Fernández¹*¹Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Centre, Nijmegen, Netherlands, ²Behavioural Science Institute, Radboud University Nijmegen, Nijmegen, Netherlands**3713 Audiovisual integration supports face-name associative memory formation***Hwee Ling Lee¹, Ruediger Stirnberg¹, Tony Stoecker¹, Nikolai Axmacher^{1,2}*¹German Center for Neurodegenerative Diseases, Bonn, Germany, ²Institute of Cognitive Neuroscience, Department of Neuropsychology, Ruhr University Bochum, Bochum, Germany**3714 Functionally Coupled Intrinsic Fluctuations in fMRI Signals Predict Subsequent Memory Performance***Ruedeerat Keerativittayayut¹, Ryuta Aoki¹, Mitra Taghizadeh Sarabi¹, Kiyoshi Nakahara¹*¹Research Center for Brain Communication, Kochi University of Technology, Kochi, Japan**3715 The role of odor context cues in episodic memory processing***Johanna Reicher^{1,2}, Manuel Ninaus³, Wolfgang Schühly⁴, Florian Ph.S Fischmeister⁵, Christina Hirschmann¹, Deepika Bagga^{1,2}, Veronika Schöpf^{1,2}*¹Institute of Psychology, University of Graz, Graz, Austria, ²BioTechMed, Graz, Austria, ³Leibniz Institut für Wissensmedien, Tübingen, Germany, ⁴Institute of Zoology, University of Graz, Graz, Austria, ⁵Medical University of Vienna, Vienna, Austria**3716 Heterogeneous memory- and rest-related activity within the human posteromedial cortex***Amy Daitch¹, Josef Parvizi²*¹Stanford University, Belmont, CA, ²Stanford University, Stanford, CA**3717 Neurodevelopmental correlates of the retrieval-practice effect***Kepa Paz-Alonso¹, Jaione Arnaez-Telleria¹*¹BCBL. Basque Center on Cognition, Brain and Language, Donostia-San Sebastian, Spain**3718 Sleep supports memory systems consolidation between the hippocampus and parietal cortex***Lea Himmer^{1,2}, Monika Schönerauer^{1,2,3}, Dominik Heib⁴, Manuel Schabus⁴, Steffen Gais^{1,2,3}*¹University of Tübingen, Tübingen, Germany, ²LMU Munich, Munich, Germany, ³BCCN, Munich, Germany, ⁴University of Salzburg, Salzburg, Austria**3719 Dissociable cortical contributions to the encoding of time and space information in episodic memory***Saeko Iwata¹, Hikaru Sugimoto¹, Takashi Tsukiura¹*¹Graduate School of Human and Environmental Studies, Kyoto University, Kyoto, Japan**3720 Brain Functional and Structural Changes over Learning and Sleep***Svenja Brodt¹, Jonas Beck¹, Michael Erb², Klaus Scheffler³, Steffen Gais¹, Monika Schönerauer¹*¹University of Tübingen, Tübingen, Germany, ²Department of Radiology, Medical School, University of Tübingen, Tübingen, Germany, ³Max Planck Institute for Biological Cybernetics, Tübingen, Germany**3721 Successful encoding activation modulated by empathic traits in memory for highly empathetic people***Natsumi Kondo¹, Hikaru Sugimoto¹, Takashi Tsukiura¹*¹Graduate School of Human and Environmental Studies, Kyoto University, Kyoto, Japan

- 3722 The encoding/retrieval flip in the posteromedial cortex and associated anterior PFC activations**
Satoshi Umeda¹, Yuri Terasawa¹, Shiro Nishikata², Toshiaki Kikuchi³, Takaki Maeda¹, Ryosuke Den²
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- 3723 The functional role of hippocampal subregions: A high-resolution fMRI study of memory**
Melanie MacGillivray¹, Stanislaw Hrybowski¹, Christopher Madan², Peter Seres¹, Rawle Carter¹, Yushan Huang¹, Nikolai Malykhin¹
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- 3724 Predicting memory dysfunction from promoting and inhibiting functional connectivity in MS**
Markus Gschwind¹, Djalel-Eddine Meskaldji², Dimitri Van De Ville³, patrik vuilleumier⁴
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- 3725 Network Organisation in Core and Extended Face Systems, a cognitive approach.**
Scott Fairhall¹, Silvia Ubaldi², Aidas Aglinskas²
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- 3726 Effects of Closed-Loop tACS Strength During Slow-Wave Sleep on Learning in a Target Detection Task**
Aaron Jones¹, Jaehoon Choe², Natalie Bryant^{1,3}, Charles Robinson¹, Steven Skorheim², Angela Combs¹, Melanie Lamphere¹, Bradley Robert¹, Nicholas Ketz², Michael Howard², Vincent Clark¹, Praveen Pilly²
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- 3727 Remembering faces and words relies on distinct cortical-hippocampal white matter pathways**
Athanasia Metoki¹, Kylie Alm¹, Yin Wang¹, Ingrid Olson¹
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- 3729 Sleep slow wave activity is related to functional recovery in children with acquired brain injury**
Anne-Laure Mouthon¹, Andreas Meyer-Heim¹, Reto Huber², Hubertus van Hedel¹
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- 3730 Pre-lesion connectivity predicts acute and chronic plasticity in monkeys with hippocampal lesions**
Sean Froudust-Walsh¹, Philip Browning², James Young¹, Kathy Murphy³, Rogier Mars⁴, Lazar Fleysher¹, Paula Croxson¹
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- 3731 Naturalistic stories synchronize visual cortices across congenitally blind individuals**
Rita Loiotile¹, Rhodri Cusack², Marina Bedny¹
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- 3732 Visual cortex of congenitally blind individuals responds to non-verbal executive function demands**
Rita Loiotile¹, Marina Bedny¹
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- 3733 HD Brain-Train: Neuroplasticity as a Target to Improve Function in Huntington's Disease**
Marina Papoutsis¹, Joerg Magerkurth^{2,3}, Oliver Josephs³, Sophia Pepes¹, Temitope Ibitoye¹, Ralf Reilmann⁴, Douglas Langbehn⁵, Nikolaus Weiskopf^{6,3}, Geraint Rees^{3,7}, Sarah Tabrizi¹
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- 3734 Hippocampal blood oxygen saturation changes due to exercise measured with 7 Tesla susceptibility MRI**
Andreas Becke¹, Julio Acosta-Cabronero², Arturo Cardenas-Blanco², David Berron¹, Emrah Düzel²
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- 3735 Exposure in vivo reduces behavioral and neural responses to pain-related fear in chronic pain**
Inge Timmers¹, Jeroen de Jong², Jeanine Verbunt², Rainer Goebel³, Amanda Kaas⁴
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- 3736 Age-related 6-month decline in fornix white matter integrity was slowed with dance intervention**
Agnieszka Burzynska¹, Yuqin Jiao¹, Edward McAuley², Arthur Kramer³
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LEARNING AND MEMORY

Neural Plasticity and Recovery of Function

- 3728 Upper extremity immobilization induces neuroplasticity measurable with high-fidelity functional MRI**
Dillan Newbold¹, Timothy Laumann¹, Mario Ortega¹, Catherine Drazen¹, Rebecca Coalson^{1,2}, Annie Nguyen¹, Jacqueline Hampton¹, Ashley Nielsen¹, Steven Nelson^{3,4}, Adrian Gilmore⁵, Jeffrey Berg⁶, Deanna Greene^{2,7}, Evan Gordon^{3,4}, Caterina Gratton¹, Bradley Schlaggar^{1,2,7,8,9}, Steven Petersen^{1,2,9,10}, Anish Mitra², Ryan Raut², Nico Dosenbach¹
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- 3737 Bridging structure and function in brain plasticity: longitudinal MRI while learning a language**
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- 3738 Temporal Changes in Brain Structure Associated with Handwriting Training: VBM and DWI Study**
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LEARNING AND MEMORY

Skill Learning

- 3739 Short-term Abacus Training Shifts Brain Activation Pattern in Adults -- a Longitudinal fMRI Study**
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- 3740 Hemodynamic modulations during complex motor skill learning and the influence of hand dominance**
Daniel Carius¹, Greta Engelke¹, Patrick Ragert¹
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- 3741 Resting state functional connectivity differs between athletes and non-athletes**
Jack Solomon¹, Christopher Friesen¹, Sarah Kraeutner¹, Timothy Bardouille², Shaun Boe¹
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- 3742 Resting state network changes associated with skill acquisition using the upper-extremity**
Cristina Rubino¹, Bimal Lakhani¹, Anica Villamayor¹, Lara Boyd¹
¹University of British Columbia, Vancouver, Canada
- 3743 Individualized analysis of a multi-session fMRI neurofeedback training of the somato-moto cortex**
Renate Schweizer^{1,2}, Merle Dohrmann^{1,2,3}, Tibor Auer^{4,5}, Roberto Goya-Maldonado^{3,2}
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- 3744 Motor sequence learning and its neural dynamics: Insights from patients with Parkinson's disease**
Sarah Meissner¹, Vanessa Krause¹, Martin Südmeyer², Christian Hartmann¹, Bettina Pollok¹
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- 3745 Longitudinal representational similarity analysis of extensive motor sequence learning**
Lukas Volz¹, Nick Wymbs², Alex Schlegel¹, Scott Grafton¹
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- 3746 Short and Long Term Effects of Post-Training Nap on Motor Sequence Representation in the Elderly**
Ella Gabitov¹, Bradley King², Philippe Saucier¹, Avi Karni³, Julien Doyon¹
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- 3747 Voice Therapy Normalizes Feedforward and Feedback Networks of the Speech Motor System**
Shalini Narayana¹, Crystal Franklin², Elizabeth Peterson³, Donald Robin⁴, Peter Fox², Lorraine Ramig^{5,6,7}
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- 3748 Motor imagery drives learning of the shape of a complex movement as effectively as physical practice**
Tony Ingram¹, Shaun Boe¹
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- 3749 Modulation of motor skill learning by cerebellar theta-burst stimulation**
Traian Popa¹, Freja Gheysen², Mélanie Pélégriani-Issac³, Geneviève Albouy⁴, Sabine Meunier⁵, Habib Benali³, Julien Doyon⁶
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- 3750 Adjuvant TMS Accelerates Skill Learning and Enhances Retention in Parkinson's Hypophonia**
Katherine Schiller¹, Bella Bydlinski¹, Emily Galdun¹, Caroline Royal-Evans², Mark LeDoux¹, Asim Choudhri¹, Tamekia Jones¹, Michael Cannito³, Shalini Narayana¹
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- 3751 Short-term visual experience increases intrinsic brain connectivity within ventral visual pathway**
Zhen He¹, Jia Wu², Chenwang Jin³, Minghao Dong⁴
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LEARNING AND MEMORY

Working Memory

- 3752 Electrophysiological correlates of individual differences in working memory performance in females**
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- 3753 A common frontoparietal network for tactile and visual parametric working memory representations**
Yuan-hao Wu^{1,2}, Isil Uluc^{1,2}, Timo Schmidt^{1,3}, Felix Blankenburg^{1,2}
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- 3754 Insight in Working-Memory Training Effects in Young and Old Adults using Behavioral Modeling and EEG**
Andreas Pedroni¹, Klaus Oberauer¹, Claudia von Bastian², Nicolas Langer¹
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- 3755 Construction of an Assessment and Improvement System for Working Memory**
Chia-Yen Yang¹, Hsin-Yung Chen^{2,3}
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- 3756 Towards mapping the neural substrates of the residual variance in human working memory**
Christelle van Antwerpen¹, Christopher Jarrold¹, Jamila Andoh², Iain Gilchrist¹, N. Jade Thai¹
¹University of Bristol, Bristol, United Kingdom, ²University of Mannheim, Mannheim, Germany
- 3757 Exploring Covarying Brain Patterns of Schizophrenic Working Memory Deficit: A Replication Study**
Jing Sui^{1,2,3}, Shile Qi^{1,4}, Theo van Erp⁵, Eswar Damaraju², Juan Bustillo⁶, Jiayu Chen², Yuhui Du², QINGBAO YU², Jessica Turner^{6,2}, Daniel H. Mathalon^{7,8}, Judith M. Ford^{7,8}, James Voyvodic⁹, Bryon A. Mueller¹⁰, Aysenil Belger¹¹, Sarah McEwen¹², Steven G. Potkin⁵, Adrian Preda⁵, Tianzi Jiang^{1,3,4}, Vince Calhoun^{2,6,13}
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- 3758 Striatum regional specialization in association with working memory performance during development**
Fahimeh Darki¹, Torkel Klingberg¹
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- 3759 Patterns of n-back related Activation, Connectivity and Behavior in the Human Connectome Project**
Dominik Moser¹, Gaelle Doucet¹, Alex Ing², Klaas Enno Stephan³, Jakob Heinze⁴, Sophia Frangou¹
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- 3760 Activation Patterns in Relational versus Item Verbal Memory Retrieval in Cancer Survivors**
Karen Marcjan¹, Heidi Gray¹, Paul Robinson¹, Erika Maust², Rddhi Moodliar¹, Haley Mendoza¹, Monique Cherrier¹
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- 3761 FMRI study of working memory training**
Wan Zhao¹, Zhifang Zhang¹, Qiumei Zhang¹, Jun Li¹
¹State Key Laboratory of Cognitive Neuroscience and Learning, Beijing normal University, Beijing, China
- 3762* Decoding retrieval success and memory content during short-term memory maintenance**
Monika Schöner¹, Sarah Alizadeh¹, Hamidreza Jamalabadi¹, Mirjam Emmersberger², Steffen Gais¹
¹University of Tübingen, Tübingen, Germany, ²LMU Munich, Munich, Germany
- 3763 Classification of brain states using functional data obtained during a mental arithmetic task**
Rina Hagiwara¹, Satoru Hiwa¹, Tomoyuki Hiroyasu¹
¹Doshisha University, Kyotanabe-shi, Kyoto, Japan
- 3764 The Contribution of the Late Cognitive ERP Components to Context Processing**
Qiumei Zhang¹, Bingqian Han¹, Wan Zhao², Jun Li²
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- 3765 The stabilization of widespread gain modulation during adolescence and its effect on working memory**
David Montez¹, Finnegan Calabro¹, Beatriz Luna¹
¹University of Pittsburgh, Pittsburgh, PA
- 3766 Impact of Cognitive Training on Verbal Memory in Gynecologic Cancer Survivors**
Rddhi Moodliar¹, Karen Marcjan¹, Erika Maust², Haley Mendoza¹, Paul Robinson¹, Heidi Gray¹, Monique Cherrier¹
¹University of Washington, Seattle, USA, ²Fred Hutchinson Cancer Research Center, Seattle, USA
- 3767 Spontaneous brain oscillations as neural fingerprints of working memory capacities: A resting-state**
victor oswald¹, Younes Zerouali², Aubree Boulet-Craig², Maja Krajnovic², Caroline Laverdiere³, Daniel Sinnett³, Pierre Jolicoeur⁴, Sarah Lippé⁵, Karim Jerbi⁶, Philippe Robaey⁵
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- 3768 Self-ordered search tasks reveal load effects on sensory cortex during Working Memory**
Matt Scoggins¹, Heather Conklin¹, Ping Zou¹, Jason Ashford¹, Robert Ogg¹
¹St. Jude Children's Research Hospital, Memphis, TN
- 3769 Neural activity associated with the processing of familiar information in working memory**
Ada Leung^{1,2}, Benson Ng¹
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- 3770 Altered MEG Oscillatory Dynamics during Working Memory Processing in Patients with Type 1 Diabetes**
Christine Embury^{1,2}, Amy Proskovec^{1,2}, Elizabeth Heinrichs-Graham¹, Timothy McDermott¹, Alex Wiesman¹, Grace Lord¹, Kaitlin Brau¹, Andjela Drincic¹, Cyrus Desouza¹, Tony Wilson¹
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- 3771 Resting state connectivity and working memory capacities: A resting-state MEG study.**
Victor Oswald¹, Younes Zerouali², Sarah Lippé³, David Meunier⁴, Karim Jerbi⁵, Philippe Robaey³
¹University of Montreal, Montreal, Quebec, ²Université de Montreal, Montreal, Canada, ³Université de Montréal, Montréal, Canada, ⁴CRNL, Lyon, France, ⁵Département de Psychologie, Université de Montréal, Montréal, Canada
- 3772 Dissociating maintenance and manipulation operations in working memory**
Courtney Crowell¹, Simon Davis¹, Lysianne Beynel², Susan Hilbig², Angel Peterchev², Bruce Luber³, Sarah Lisanby⁴, Lawrence Appelbaum², Roberto Cabeza¹
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- 3773 Neuroimaging factors predicting benefits in working memory accuracy associated with rTMS**
Lysianne Beynel¹, Simon Davis², Courtney Crowell³, Susan Hilbig⁴, Wesley Lim¹, Duy Nguyen¹, Angel Peterchev⁵, Bruce Luber⁶, Sarah Lisanby⁷, Roberto Cabeza⁸, Lawrence Appelbaum⁴
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- 3775 The Relationship between Theta, Alpha/ Beta and Gamma Oscillations during Memory Encoding**
Asiya Gul¹, Jeffery Jones²
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- 3776 Norepinephrine system's role in ADHD: pupil diameter as a biomarker in a working memory task**
Gabriel Wainstein¹, Daniel Rojas², Ximena Carrasco², Francisco Aboitiz², Tomas Ossandon³
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LIFESPAN DEVELOPMENT

Aging

- 3777 Modulation of the Anterior Salience Network after 4 Weeks Verbal Training in Older Adults**
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- 3778* Longitudinal changes in the cerebral cortex functional organization of healthy elderly individuals**
Joanna Su Xian Chong¹, Jiesca Tandi¹, Kwun Kei Ng¹, Chenhao Wang¹, June Chi Yan Lo¹, Michael Chee¹, Juan Zhou¹
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- 3779 Dopamine Decline and the effects of Aging on the Similarity of Functional Connectomes**
Benjamin Garzon¹, Jan Axelsson², Katrine Riklund², Lars Nyberg², Lars Bäckman¹, Marc Guitart-Masip¹
¹Karolinska Institute, Stockholm, Sweden, ²Umeå University, Umeå, Sweden
- 3780 Association of adiposity and lipid measurements with brain white and grey matter**
Meghann Ryan¹, Peter Kochunov¹, Els Fieremans², Jelle Veraart², Dmitry Novikov², Laura Rowland¹, S. Andrea Wijtenburg¹, Xiaoming Du¹, Bhim Anya Savransky¹, Hemalatha Sampath¹, Braxton Mitchell³, L. Elliot Hong¹
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- 3781 Differential age effects of limbic white matter on functional activity during memory encoding**
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- 3782 Spatial normalization in elderly populations: an optimized approach for brain MR images**
Marco Ganzetti¹, Dante Mantini^{1,2}
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- 3783 Metabolic obesity profiles and gray matter tissue loss in older individuals**
Frauke Beyer^{1,2}, Shahrzad Kharabian Masouleh¹, Kratzsch Jürgen³, Joachim Thiery³, Markus Loeffler^{4,5}, Matthias Schroeter^{1,5,6}, Michael Stumvoll^{7,2}, Arno Villringer^{1,2,6}, Veronica Witte^{1,2}
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- 3784 Interactions between Inhibition Control and Task-Switching in Middle-Aged and Older Adults**
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- 3785 Mechanism underlying resilience of crystallized cognitive abilities against aging**
Yunglin Gazes¹, Christian HABECK¹, Peipei Li¹, Qolamreza Razlighi¹, Timothy Salthouse², Yaakov Stern¹
¹Columbia University, New York, NY, ²University of Virginia, Charlottesville, VA

- 3786 White Matter Hyperintensities in Older Adults are Reduced by Long-Term Physical Exercises**
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- 3787 Sources of Disconnection in Neurocognitive Aging**
David Madden¹, Emily Parks², Catherine Tallman², Maria Boylan², David Hoagey², Sally Cocjin², Lauren Packard², Micah Johnson², Ying-hui Chou², Guy Potter², Nan-kuei Chen², Rachel Siciliano², Zachary Monge³, Jesse Honig², Michele Diaz⁴
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- 3788 The Activity in Resting State Networks depend on the History of Physical Exercise in Older Adults**
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- 3789 A "Neurometric" Approach to Cognitive Aging**
Nicolas Langer¹, Andreas Pedroni¹, Klaus Oberauer¹, Michael Milham², Andreas Monsch³
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- 3790 Lifestyle risk in older adults: Integrating evidence from structural and functional MRI**
Nora Bittner^{1,2}, Christiane Jockwitz^{1,3,2}, Felix Hoffstaedter^{1,4}, Simon Eickhoff^{1,4}, Susanne Moebus⁵, Ute Bayen⁶, Karl Zilles^{1,3,7}, Katrin Amunts^{1,2,7}, Svenja Caspers^{2,1,7}
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- 3791 The aged brain: less dynamic functional connectivity relates to slower reaction times**
Maria Giulia Preti^{1,2}, Nathalie Mella³, de Ribaupierre Sandrine⁴, Roy Eagleson⁵, Anik de Ribaupierre⁶, Dimitri Van De Ville⁷
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- 3792 Associations of white matter hyperintensity burden with age-related neuropathologies**
Nabil Algam¹, Arnold Evia Jr.¹, Luis Campos Cardoso¹, Lucas Fagundes Lopes¹, Diego Vieira¹, Julie Schneider^{2,3,4}, Sue Leurgans^{2,3}, David Bennett^{2,3}, Konstantinos Arfanakis^{1,2,5}
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- 3793 Walnut consumption in relation to brain health**
Yian Gu¹, Lamia Haider¹, Qolamreza Razlighi¹, Yunglin Gazes¹, Christian HABECK¹, Yaakov Stern¹
¹Columbia University, New York, NY
- 3794 Preserved default mode network connectivity contributes to youthful memory in supeperagers**
Jiahe Zhang¹, Alexandra Touroutoglou², Joseph Andreano², Bradford Dickerson², Lisa Barrett^{1,2}
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- 3795 Grey and White Matter Integrity Assessment Along Brain Tracts Throughout Normal Aging**
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- 3796 Structural correlates for gender-specific cognitive processing strategies in older adults**
Christiane Jockwitz^{1,2,3}, Lara Bohr¹, Susanne Moebus⁴, Karl Zilles^{1,2,5}, Katrin Amunts^{1,3,5}, Svenja Caspers^{1,3,5}
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- 3797 Cortical Grey Matter Thinning and Functional Connectivity Alterations Over Normal Aging**
Bruno Vieira¹, Carlos Salmon¹
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- 3798 Motor Task-Induced Changes in Resting-State MEG Networks in Healthy Aging**
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- 3799 Validation of ex-vivo assessment of white matter hyperintensity burden**
Arman Kulkarni¹, Arnold Evia Jr.¹, Julie Schneider^{2,3,4}, David Bennett^{2,3}, Konstantinos Arfanakis^{1,2,5}
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- 3800 Gray matter structural networks are associated with cardiovascular risk factors in older adults**
Shahrazad Kharabian Masouleh¹, Frauke Beyer², Leonie Lampe¹, Markus Loeffler³, Tobias Luck⁴, Steffi Riedel-Heller⁵, Matthias Schroeter¹, Michael Stumvoll⁶, Arno Villringer¹, Veronica Witte¹
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- 3801 Prestimulus oscillatory mechanisms shaping sensory encoding and decision-making in healthy ageing**
Steven McNair¹, Stephanie Kayser¹, Christoph Kayser¹
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- 3802 Default Network Is Relatively Preserved in Healthy Aging: A High-Field rs-fMRI Study**
Stanislau Hrybowski¹, Fraser Olsen¹, John McGonigle², Rawle Carter¹, Peter Seres¹, Nikolai Malykhin¹
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- 3803 Age-related Changes in the Frontoparietal and Default Mode Networks during Working Memory**
Weifang Cao¹, Hechun Li¹, Changyue Hou¹, Rui Peng¹, Cheng Luo¹, Dezhong Yao¹
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- 3804 Spatiotemporal Features of Microstructural Brain Changes across the Life-Span**
Vyacheslav Karolis¹, Martina Callaghan², Thomas Hope², Nikolaus Weiskopf³, Geraint Rees^{2,4}, Cathy Price², Marinella Cappelletti^{5,4}
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- 3805 Differences in Nucleus Basalis Magnocellularis Volume affects Resting State EEG α -Power**
Norman Zacharias¹, Florian Lammers¹, Eleftheria Papadaki¹, Laszlo Zaborszky², Georg Winterer¹
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- 3806 Mood Improvement Boosted Cognitive Training Gains through Hippocampus-amygdala Connectivity**
Xinyi Zhu¹, Shufei Yin¹, Rui Li¹, Juan Li¹
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- 3807 The Aging Brain and Changes in GABA Concentrations**
Lize Hermans¹, Inge Leunissen¹, Celine Maes¹, Stefanie Verstraeten², Koen Cuypers^{1,2}, Richard Edden³, Nicolaas Puts³, Stephan Swinnen¹
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- 3808 A Model of Accelerating Age Effects on Regional Brain Volumes**
Jason Steffener¹, Yaakov Stern², Qolamreza Razlighi², Karine Riad¹
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- 3809 Repetition Suppression in Aging: A Near-Infrared Spectroscopy Study on the size-congruity effect**
Silvia Kober¹, Guilherme Maia de Oliveira Wood²
¹University of Graz, Graz, Austria, ²Herr, Graz, Austria
- 3810 Aging Effect on Attentional Processing Speed**
Chetwyn Chan¹, Clive Wong¹, Jiao Liu², Tatia Lee³, Jing Tao², Lidian Chen⁴
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- 3811 Aging and the probability of detection of white and gray matter of the brain**
Guilherme Maia de Oliveira Wood¹, Karl Koschutnig², Maria Morozova³
¹Herr, Graz, Austria, ²BioTechMed, Graz, Austria, ³University of Graz, Graz, Austria
- 3812 Modulation of Brain Structure by Resting Blood Pressure Variations in Young Adults**
H Lina Schaare^{1,2}, Shahrazad Kharabian Masouleh¹, Frauke Beyer¹, Janis Reinelt¹, Deniz Kumral^{1,3}, Marie Uhlig^{1,2}, Miray Erbey^{1,3}, Andrea Reiter^{1,4}, Josefin Roebbig¹, Anahit Babayan^{1,3}, Veronica Witte^{1,5}, Michael Gaebler^{1,3,5}, Arno Villringer^{1,3,5}
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- 3813 Neural Correlates of Age Differences in Contingent Rule Processing**
Chi Chuan Chen¹, Joshua Goh¹
¹Graduate Institute of Brain and Mind Sciences, National Taiwan University College of Medicine, Taipei, Taiwan
- 3814 Individual Electrophysiological Neuromarkers are Predictors for Alzheimer's Conversion**
Yang Jiang¹, Xiaopeng Zhao², Juan Li³, Erin Abner⁴, Richard Kryscio⁴, Gregory Jicha⁴
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- 3815 Age related changes in functional connectivity of the dorsal premotor cortex in older adults**
Benjamin Sigl¹, Christiane Jockwitz², Simon Eickhoff³, Felix Hoffstaedter⁴, Christian Rubbert⁵, Katrin Amunts⁶, Bernd Turowski⁵, Christian Mathys⁵, Svenja Caspers⁷, Julian Caspers⁵
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- 3816 Aging and Network Properties: Stability over Time and Links with Cognitive Training Outcomes**
Alexandru Iordan¹, Katherine Cooke¹, KyungJun Kim¹, Kyle Moored², Benjamin Katz¹, Martin Buschkuehl³, Susanne Jaeggi⁴, Thad Polk¹, Scott Peltier¹, John Jonides¹, Patricia Reuter-Lorenz¹
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- 3817 Evaluation of Mean Diffusivity along Skeletonized White Matter Tracks over the Adult Lifespan**
Cheryl McCreary^{1,2}, Linda Andersen^{1,2}, Eric Smith^{1,2,3}, Richard Frayne^{1,2,3}
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- 3818 Genetic influence on Brain Microstructure and Cognitive Function in an Ageing Cohort**
Kiyana Zarnani¹, Jayachandra Raghava², Naja Hansen³, Erik Mortensen⁴, Merete Osler⁴, Martin Lauritzen⁴, Egill Rostrup⁵
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- 3819 White matter hyperintensities are unrelated to cognition in older-old patients with TIA/minor stroke**
Giovanna Zamboni¹, Ludovica Griffanti¹, Sara Mazzucco², Sarah Pendlebury², Mark Jenkinson¹, Peter Rothwell²
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- 3820 Age effects on predicting cognitive performance from network-based functional connectivity**
Rachel Pläschke^{1,2}, Alessandra Nostro^{1,2}, Deepthi Varikuti^{1,2}, Anna Plachti^{2,1}, Patrick Lösche³, Felix Hoffstaedter^{2,1}, Robert Langner^{1,2}, Simon Eickhoff^{1,2}
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- 3821 Age Differences in the Neural Signature of Multitasking**
Robert Langner^{1,2}, Rachel Pläschke^{1,2}, Anna Plachti², Simon Eickhoff^{1,2}
¹Heinrich Heine University Düsseldorf, Düsseldorf, Germany, ²Research Centre Jülich, Jülich, Germany
- 3822 Metabolic Syndrome Moderates the Beneficial Effect of Physical Activity on Cortical Thickness**
Andreana Haley¹, Sonya Kaur¹, Evan Pasha¹, Alex Birdsill¹, Stephanie Oleson¹, Hirofumi Tanaka¹
¹The University of Texas at Austin, Austin, TX
- 3823 Fractionating executive control in the aging brain**
Gary Turner¹, Sabrina Lemire-Rodger¹, Karin Kantarovitch¹, Jaeger Lam¹, Bri Darboh¹, W. Dale Stevens¹, R. Nathan Spreng²
¹York University, Toronto, Canada, ²Laboratory of Brain and Cognition, Human Neuroscience Institute, Cornell University, Ithaca, NY
- 3824 Structural and Functional Connectivities in Corpus Callosum Tracts over Normal Aging**
Bruno Vieira¹, Maíra Pinto², Carlos Salmon²
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- 3825 Structural and functional connectivity in middle age: a multimodal imaging study.**
Alex Birdsill¹, Andreana Haley¹
¹The University of Texas at Austin, Austin, TX
- 3826 Resting State Functional Connectivity of Cognitive Networks Predicts Walking Speed in Older Adults**
Victoria Poole^{1,2,3}, Azizah Jor'dan^{2,3,4}, Lewis Lipsitz^{2,3,5}, Michael Esterman^{1,6}
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- 3827 Multivariate examination of cortical volume and white matter integrity in healthy aging**
David Hoagey¹, Jenny Rieck², Karen Rodrigue¹, Kristen Kennedy¹
¹The University of Texas at Dallas, Dallas, TX, ²Rotman Research Institute, Baycrest, Toronto, Ontario
- 3828 Mid-life composite markers of biological ageing predict structural integrity measures in later life.**
Eniko Zsoldos¹, Mark Jenkinson², Nicola Filippini¹, Abda Mahmood¹, Clare Mackay¹, Archana Singh-Manoux³, Mika Kivimäki³, Klaus Ebmeier¹
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LIFESPAN DEVELOPMENT

Lifespan Development Other

- 3829 Neonatal MRI of the Preterm Cerebellum: Early Vulnerability Relates to 2-Year Functional Impairment**
Lillian Matthews¹, Peter Anderson^{2,3}, Alexander Leemans⁴, Christopher Adamson², Richard Beare^{2,5}, Jian Chen^{2,5}, Claire Kelly², Wai Yen Loh^{2,6}, Lex Doyle^{2,3,7,8}, Alicia Spittle^{2,7,9}, Jeanie Cheong^{2,7,8}, Marc Seal^{2,3}, Deanne Thompson^{2,3,6}
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- 3830 Mismatch or cumulative stress: trauma through life shapes grey matter and functional connectivity**
Casey Paquola¹, Maxwell Bennett¹, Sean Hatton², Daniel Hermens¹, Jim Lagopoulos³
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- 3831 Reference ability neural networks and behavioral performance across the adult life span**
Christian HABECK¹, Qolamreza Razlighi¹, Yaakov Stern¹
¹Columbia University, New York, NY
- 3832 DAT1, substance use onset time (earlier vs. later) and thalamic volume in substance use naïve youth.**
Emma Rose¹, John Vanmeter², Diana Fishbein¹
¹Penn State University, University Park, PA, ²Georgetown University, Washington, DC

- 3833 Changes in neonatal regional brain volume associated with preterm birth**
Bonnie Alexander¹, Claire Kelly¹, Chris Adamson¹, Richard Beare^{1,2}, Jian Chen^{1,2}, Andrea Murray¹, Wai Yen Loh^{1,3,4}, Lillian Matthews^{5,6,1}, Simon Warfield⁷, Peter Anderson^{1,6}, Lex Doyle^{1,6,8,9}, Marc Seal^{1,6}, Alicia Spittle^{1,8,10}, Jeanie Cheong^{1,8,9}, Deanne Thompson^{1,3,6}
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- 3834 Changes in resting state functional network topology across the lifespan**
Shruti Vij¹, Jason Nomi², Lucina Uddin¹
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- 3835 Metastability of Resting State Networks in Maturation and Senescence**
Shruti Naik¹, Raju Bapi², Arpan Banerjee³, Gustavo Deco⁴, Dipanjan Roy⁵
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- 3836 Prenatal stress predicts mood and gray matter volume in young adulthood**
Klara Mareckova¹, Anja Klasnja², Petra Bencurova¹, Lenka Andryskova³, Milan Brazdil¹, Tomas Paus⁴
¹Central European Institute of Technology, Masaryk University, Brno, Czech Republic, ²Institute for clinical evaluative sciences (ICES), Toronto, Canada, ³Recetox, Masaryk University, Brno, Czech Republic, ⁴Rotman Research Institute, Baycrest, Toronto, Canada
- 3837 Aberrant development changes in the asymmetry of hemispheric brain white matter network in Autism**
Suyu Zhong¹, Long Wei², Shengdong Nie², Gaolang Gong¹
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- 3838 Is rate of motor milestone acquisition during infancy associated with cortical structure at age 70?**
Sanjay Budhdeo¹, Marcus Richards¹, Chris Lane¹, Thomas Parker¹, David Thomas¹, David Cash¹, Ian Malone¹, Jana Klimova¹, Nick Fox¹, Diana Kuh¹, Jonathan Schott², Nikhil Sharma¹
¹UCL, London, United Kingdom, ²University College London, London, I am not in the U.S. or Canada
- 3839 Childhood Sex Differences in the "Integration" of the Superficial White and Cortical Gray Matter**
Owen Phillips¹, Juan Juan², Shantanu Joshi³, Alexander Onopa², Yuhei Chiba², Joachim Hallmayer², Ian Gotlib², Jonathan Taylor⁴, Manpreet Singh²
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- 3840* Deep learning reveals brain features associated with preterm birth and perinatal risk factors**
Manuel Hinojosa Rodriguez¹, Xiaoyu Lei², Carinna Torgerson³, Andrei Irimia², John Van Horn⁴, Thalia Harmony¹
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- 3841 Lifespan Gyrfication Trajectories in Healthy Individuals and Patients with Psychiatric Disorders**
Bo Cao¹, Benson Mwangi¹, Ives Passos², Mon-Ju Wu¹, Zafer Keser¹, Giovana Zunta-Soares¹, Dianping Xu¹, Khader Hasan¹, Jair Soares¹
¹The University of Texas Health Science Center at Houston, Houston, TX, ²Federal University of Rio Grande do Sul, Porto Alegre, Brazil
- 3842 Development and maturation of spectral intrinsic resting-state networks: from children to adults**
Benjamin Dunkley¹, Simeon Wong², Annette Ye², Benjamin Hunt³, Margot Taylor⁴
¹Hospital for Sick Children, Toronto, Ontario, ²The Hospital for Sick Children, Toronto, Canada, ³Department of Diagnostic Imaging, The Hospital for Sick Children, Toronto, Canada, ⁴Neurosciences and Mental Health, SickKids Research Institute, Toronto, Ontario
- 3843 Fetal brain volumetry to predict neonatal brain injury in patients with congenital heart disease**
Hosung Kim¹, Joanne Lau², Patrick McQuillen², Duan Xu², Shabnam Peyvandi²
¹University of Southern California, Arcadia, CA, ²University of California San Francisco, San Francisco, CA
- 3844* Multivariate framework for detecting changes in brain areal organization across the lifespan**
Ting Xu¹, Cameron Craddock², Xi-Nian Zuo³, Michael Milham²
¹Child Mind Institute, New York City, United States, ²Child Mind Institute, New York, NY, ³Chinese Academy of Sciences, Beijing, China
- 3845 Lifespan developmental trajectories of local functional homogeneity in the human brain**
Zhe Zhang^{1,2,3,4}, Xi-Nian Zuo^{2,3,4}
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LIFESPAN DEVELOPMENT

Normal Brain Development: Fetus to Adolescence

- 3846 Clustering structural thalamocortical connectivity in the developing brain**
Rali Dimitrova^{1,2}, Jonathan O'Murcheartaigh¹, Judit Ciarrusta^{1,2}, Dafnis Batalle¹, Emer Hughes¹, Johannes Steinweg¹, Emily Perry², Johanna Kangas², Julia Wurie¹, Ines Pote², Serena Counsell¹, Declan Murphy², David Edwards¹, Grainne McAlonan²
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3847 Influence of Early Nutrition on Longitudinal Brain and Cognitive DevelopmentSean Deoni¹, Sarah Joelson², Andrea Miele³, Jonathan O'Regan⁴, Nora Schneider⁵¹University of Colorado, Arvada, CO, ²Brown University, Providence, RI, ³University of Colorado, Aurora, CO, ⁴Wyeth Nutrition Ireland, Limerick, Ireland, ⁵Nestle Research Centre, Lausanne, Switzerland**3848 More screen time correlates with decreased functional connectivity in reading-related brain regions**Tzipi Horowitz-Kraus¹, John Hutton²¹Cincinnati Children's Hospital, Cincinnati, OH, ²Cincinnati Children's Hospital Medical Center, Cincinnati, OH**3849 Brain connectivity during adrenarche: associations between hormone levels and white matter integrity**Marjolein Barendse¹, Julian Simmons^{1,2}, Nicholas Allen^{3,1}, George Patton^{4,5,6}, Michelle Byrne³, Marc Seal⁷, Lisa Mundy^{4,5,6}, Stephen Wood⁸, Sarah Whittle^{1,2}¹Melbourne Neuropsychiatry Centre, Department of Psychiatry, The University of Melbourne, Carlton, VIC, Australia, ²Melbourne School of Psychological Sciences, The University of Melbourne, Parkville, VIC, Australia, ³Department of Psychology, University of Oregon, Eugene, OR, US, ⁴Murdoch Children's Research Institute, Parkville, VIC, Australia, ⁵Centre for Adolescent Health, The Royal Children's Hospital, Parkville, VIC, Australia, ⁶Department of Pediatrics, University of Melbourne, Parkville, VIC, Australia, ⁷Murdoch Children's Research Institute, Parkville, VIC, Australia, ⁸Orygen, the National Centre of Excellence in Youth Mental Health, University of Melbourne, Parkville, VIC, Australia**3850 White matter apparent fibre density and morphology alterations with pubertal onset**Sila Genc¹, Marc Seal², Thijs Dhollander³, Charles Malpas², Philip Hazell⁴, Timothy Silk²¹The University of Melbourne, Melbourne, Australia, ²Murdoch Children's Research Institute, Melbourne, Australia, ³The Florey Institute of Neuroscience and Mental Health, Melbourne, Australia, ⁴The University of Sydney, Sydney, Australia**3851 Association between cortical activity and motor development in term and preterm-born children**Debora Miranda¹, Suellen Oliveira¹, Ana Carolina Machado¹, Marco Romano¹, Rickson Mesquita², Maria Candida Viana¹¹UFMG, Belo Horizonte, Brazil, ²Unicamp, Campinas, Brazil**3852 Subject-based Maturational Coupling as Indicator of Brain Development: A Longitudinal MRI Study**Budhachandra Khundrakpam¹, John Lewis¹, Yasser Medina¹, Francois Chouinard-Decorte¹, Penelope Kostopoulos¹, Seun Jeon¹, Alan Evans¹¹Montreal Neurological Institute, McGill University, Montreal, Canada**3853 Genetic influences on development of cortical thickness during adolescence**Jalmar Teeuw¹, Marinka Koenis¹, Rachel Brouwer¹, Suzanne Swagerman², Dorret Boomsma², Hilleke Hulshoff Pol¹¹University Medical Center Utrecht, Utrecht, Netherlands, ²Free University Amsterdam, Amsterdam, Netherlands**3854 Commute Time as a Method to Reveal Local Age-Related Effects on Functional Networks**João Ricardo Sato¹, Cristiane Sato¹, Marcel Silva¹, Claudinei Biazoli Jr.¹¹Federal University of ABC, São Paulo, Brazil**3855 Fetal atypical asymmetric cortical folding predicts language lateralization in a heterozygotic twin**Anna-Lisa Schuler¹, Lisa Bartha-Doering¹, Ernst Schwartz¹, Rainer Seidl¹, Georg Langs¹, Daniela Prayer¹, Gregor Kasprian¹¹Medical University of Vienna, Vienna, Austria**3856 Structural controllability of the neonatal brain network**Piergiorgio Salvan¹, Donald Tournier¹, Tomoki Arichi¹, David Edwards¹, Serena Counsell¹¹King's College London, London, United Kingdom**3857 Angiogenesis Related Gene Co-Expression Networks and Cortical Vascular Architectonics**Lana Vasung^{1,2}, Djalel-Eddine Meskaldji³, Marina Raguz⁴, Dimitri Van De Ville⁵, Petra Huppi⁶¹Harvard Medical School, Boston, MA, ²Boston Children's Hospital, Boston, MA, ³EPFL, Ecublens, Switzerland, ⁴Croatian Institute For Brain Research, Zagreb, Croatia, ⁵Ecole Polytechnique Fédérale de Lausanne, Lausanne, Vaud, ⁶University of Geneva, Geneva, Switzerland**3858 Emergence of anticipatory motor control from interactions between brain networks during development**Fabien Cignetti¹, Marianne Vaugoyeau¹, Aurélie Fontan¹, Leslie Decker², Nadine Girard³, Yves Chaix⁴, Patrice Péran⁴, Marie-Helene Grosbras¹, Christine Assaïante¹¹Laboratoire de Neurosciences Cognitives UMR 7291 CNRS/Aix-Marseille Université, Marseille, France, ²COMETE U1075 INSERM/UNICAEN, Caen, France, ³Radiologie adultes et neuroradiologie - Hôpital de la Timone, Marseille, France, ⁴Toulouse Neuroimaging Center U825 INSERM/Université Paul Sabatier III, Toulouse, France**3859 Disorganized sulcal position patterns in fetal brains with agenesis of corpus callosum**Tomo Tarui¹, Neel Madan¹, Nabgha Farhat², Rie Kitano¹, Asye Tanritanir², George Graham¹, Borjan Gagoski³, Alexa Craig⁴, Caitlin Rollins³, Cynthia Ortinau⁵, Vidya Iyer¹, Rudolph Pienaar³, Diana Bianchi¹, P. Ellen Grant³, Kiho Im³¹Tufts Medical Center, Tufts University School of Medicine, Boston, MA, ²Boston Children's Hospital, Boston, MA, ³Boston Children's Hospital, Harvard Medical School, Boston, MA, ⁴Maine Medical Center, Portland, ME, ⁵Brigham and Women's Hospital, Boston, MA**3860* Adolescent development of structural brain networks**Frantisek Vasa¹, Jakob Seidlitz^{1,2}, Rafael Romero-Garcia¹, Kirstie Whitaker¹, Petra Vertes¹, Maxwell Shinn¹, Gideon Rosenthal³, Olaf Sporns⁴, Edward Bullmore^{1,5,6}¹University of Cambridge, Cambridge, United Kingdom, ²National Institute of Mental Health, Bethesda, MD, ³Ben-Gurion University of the Negev, Be'er Sheva, Israel, ⁴Indiana University, Bloomington, IN, ⁵Cambridgeshire and Peterborough NHS Foundation Trust, Huntingdon, United Kingdom, ⁶GlaxoSmithKline R&D, Stevenage, United Kingdom**3861 The development of amygdala functional connectivity in the infant brain.**Andrew Salzwedel¹, John Gilmore², Wei Gao¹¹Cedars-Sinai, Los Angeles, CA, ²University of North Carolina at Chapel Hill, Chapel Hill, NC

3862* Connectome wide association study of sex differences in functional connectivity across puberty

Katherine Reding¹, Shau-Ming Wei², Michael Gregory², Pedro Martinez¹, Elizabeth Robinson³, D. Ellen Boyle³, Jasmin Czarapata², Miriam Zawadzki², Jordan Barone², Austin Boroshok², J. Shane Kippenhan², Philip Kohn², Steven Soldin⁴, Lynnette Nieman⁵, Jack Yanovski⁶, Peter Schmidt¹, Karen Berman²

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3863 Electrophysiological neural correlates of inhibition in a go/no-go task in children

Kaitlyn Casimo¹, Chao-Hung Kuo¹, Patrick Rice¹, Jeffrey Ojemann¹, Kurt Weaver¹

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3864 Neurodevelopmental trajectories estimated from structural covariance using sparse methods

Richard Beare¹, Sally Richmond¹, Gareth Ball¹, Joseph Yang¹, Chris Adamson¹, Marc Seal²

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3865 Specialization of task-induced functional connectivity with age

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3866 Functional and Structural Developments of Medial Frontal Subdivisions in First 2 Years of Life

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3867 Sulcal morphology in the medial temporal lobe in healthy preterm infants.

Antoine Bouyeure¹, Jessica Dubois², David Germanaud¹, François Leroy², Jean-François Mangin³, Julien Lefèvre⁴, Linda de Vries⁵, Floris Groenendaal⁶, Catherine Chiron⁶, Lucie Hertz-Pannier⁷, Manon Benders⁵, Marion Noulhiane¹

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3868 The developing Human Connectome Project automated functional pre-processing pipeline for neonates

Sean Fitzgibbon¹, Jesper Andersson¹, Samuel Harrison¹, Emma Robinson², Jelena Bozek³, Antonios Makropoulos², Matteo Bastiani¹, Ludovica Griffanti¹, Robert Wright², Andreas Schuh², Emer Hughes⁴, Jonathan O'Muircheartaigh⁴, Ana Gomes⁴, Joanna Allsop⁴, Johannes Steinweg⁴, Nora Tusor⁴, Julia Wurie⁴, Jose Bueno-Conde⁴, Maryam Abaei⁴, Anthony Price⁴, Lucilio Cordero-Grande⁴, Jana Hutter⁴, Christian Beckmann⁵, Joseph Hajnal⁴, Daniel Rueckert², David Edwards⁴, Stephen Smith¹, Mark Jenkinson¹, Eugene Duff¹

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3869 Sulcal morphology in the medial temporal lobe in children and adolescents.

Antoine Bouyeure¹, Dhaif Bekha¹, David Germanaud¹, Victor Delattre¹, Denis Rivière², Jean-François Mangin², Catherine Chiron³, Lucie Hertz-Pannier¹, Marion Noulhiane¹

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3870 Pediatric population-based neuroimaging of brain development

Ryan Muetzel¹, Philip Jansen¹, Koen Bolhuis¹, Suzanne Louwen¹, Frank Verhulst¹, Henning Tiemeier¹, Tonya White²

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3871 Parahippocampal cortex thickness mediates the effects of early adversity on anti-social behavior

Scott Mackey¹, Bader Chaarani¹, Philip Spechler¹, Matthew Albaugh², Nicholas Allgaier¹, Nicholas D'Albarto³, Kelsey Hudson¹, Catherine Orr¹, Robert Althoff¹, Hugh Garavan¹

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3872* Longitudinal Mapping of Development of Cortical Thickness and Surface Area during the First Year

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3873 Functional network characterization in musician and non-musician teenagers

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3874 Eye contact modulates functional connectivity between STS, IFG and mPFC: a PPI fNIRS infant study

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3875 Greater learning-dependent change in hippocampal circuitry relates to reward learning in adolescenceBart Larsen¹, Finnegan Calabro¹, Vishnu Murty¹, William Foran¹, Beatriz Luna¹¹University of Pittsburgh, Pittsburgh, PA**3876 Toward Bilateral Symmetrical Functional Connectivity in Infants from Birth to 2-Years-Old**Weiyin Yin¹, Weili Lin¹¹University of North Carolina at Chapel Hill, Chapel Hill, NC**3877 Longitudinal Stability of Adolescent's Value Tracking in fMRI**Juliane Fröhner¹, Nils Kroemer¹, Michael Smolka¹¹Technische Universität Dresden, Dresden, Germany**3878 Precocious Fetal Brain Maturation Predicts Fewer Behavior Difficulties at 3 Years-of-Age**Janessa Manning¹, Jamie Piercy¹, Jordan Boeve¹, Marion van den Heuvel¹, S. Alexandra Burt², Marjorie Beeghly¹, Elise Turk³, Martijn van den Heuvel⁴, Moriah Thomason¹¹Wayne State University, Detroit, MI, ²Michigan State University, East Lansing, MI, ³UMC Utrecht, Utrecht, Netherlands, ⁴Brain Center Rudolf Magnus, Dutch Connectome Lab, University Medical Center Utrecht, Utrecht, Netherlands**3879 Early Development of Functional Thalamocortical Connectivity of the Preterm Human Brain**Qinlin Yu^{1,2,3,4}, Qinmu Peng^{1,2}, Tina Jeon^{1,2}, Minhui Ouyang^{1,2}, Lina Chalak⁵, Roy Heyne⁵, Nancy Rollins⁶, Fang Fang^{3,4}, Hao Huang^{1,2}¹Department of Radiology, Children's Hospital of Philadelphia, Philadelphia, PA, United States,²Department of Radiology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, United States,³School of Psychological and Cognitive Sciences, Peking University, Beijing, China,⁴Peking-Tsinghua Center for Life Science, Peking University, Beijing, China, ⁵Department of Pediatrics, University of Texas Southwestern Medical Center, Dallas, TX, United States,⁶Department of Radiology, University of Texas Southwestern Medical Center, Dallas, TX, United States**3880 Frequency-Specific Contributions to the Development of Cognitive Flexibility**Scott Marek¹, Brenden Tervo-Clemmens¹, Emily Muha¹, William Foran¹, Bart Larsen¹, Beatriz Luna¹¹University of Pittsburgh, Pittsburgh, PA**3881 A Longitudinal Analysis of Whole-brain Activation to Emotional Faces in Adolescent Girls**Veronika Vilgis¹, Kristina Gelardi¹, Erika Forbes², Alison Hipwell², Kate Keenan³, Amanda Guyer¹¹University of California Davis, Davis, CA, ²University of Pittsburgh, Pittsburgh, PA, ³University of Chicago, Chicago, IL**3882 Developmental Trajectories of Cortical Thickness and Myelin Contents from Birth to 6 years old**Weili Lin^{1,2}, Yu Meng¹, Gang Li³, Li Wang⁴, Dinggang Shen⁵¹University of North Carolina at Chapel Hill, Chapel Hill, NC, ²Biomedical Research Imaging Center,CHAPEL HILL, NC, ³UNC-Chapel Hill, Chapel Hill, NC, ⁴Department of Radiology and BRIC,University of North Carolina at Chapel Hill, Chapel Hill, NC, ⁵Department of Radiology and BRIC,

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3883 Adolescent changes in hippocampal volume and functional connectivity affect memory performanceNicholas Christopher-Hayes¹, Anthony Rangel², Julia Stephen³, Vince Calhoun⁴, Yu-Ping Wang⁵, Tony Wilson¹, David Warren¹¹University of Nebraska Medical Center, Omaha, NE, ²Creighton University, Omaha, United States,³The Mind Research Network, Albuquerque, 86106, ⁴The Mind Research Network, Albuquerque, NM,⁵Tulane University, New Orleans, United States**3884 The Developing Human Connectome: announcing the first release of open access neonatal brain imaging**Emer Hughes¹, Lucilio Cordero-Grande¹, Maria Murgasova¹, Jana Hutter¹, Anthony Price¹, Ana Dos Santos Gomes¹, Joanna Allsop¹, Johannes Steinweg¹, Nora Tusor¹, Julia Wurie¹, Jose Bueno-Conde¹, Jacques-Donald Tournier¹, Maryam Abaei¹, Serena Counsell¹, Mary Rutherford¹, Maximilian Pietsch¹, David Edwards¹, Joseph Hajnal¹, Sean Fitzgibbon², Eugene Duff², Matteo Bastiani², Jesper Andersson², Saad Jbabdi², Stamatios Sotiropoulos², Mark Jenkinson², Stephen Smith², Samuel Harrison², Ludovica Griffanti², Robert Wright³, Jelena Bozek⁴, Christian Beckmann⁵, Antonios Makropoulos³, Emma Robinson³, Andreas Schuh³, Jonathan Passerat-Palmbach³, Gregor Lenz³, Filippo Mortari³, Tencho Tenev³, Daniel Rueckert³¹Centre for the Developing Brain, King's College London, London, United Kingdom, ²FMRIB, Oxford University, Oxford, United Kingdom, ³Department of Computing, Imperial College London, London, United Kingdom, ⁴Faculty of Electrical Engineering and Computing, University of Zagreb, Zagreb, Croatia, ⁵Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Centre, Nijmegen, Netherlands**3885 Developmental Alterations in the Oscillatory Dynamics Serving Visual Working Memory: A MEG Study**Christine Embury^{1,2}, Amy Proskovec^{1,2}, Elizabeth Heinrichs-Graham¹, Timothy McDermott¹, Alex Wiesman¹, Yu-Ping Wang³, Vince Calhoun^{4,5}, Julia Stephen⁴, Tony Wilson¹¹University of Nebraska Medical Center, Omaha, NE, ²University of Nebraska Omaha, Omaha, NE,³Tulane University, New Orleans, LA, ⁴The Mind Research Network, Albuquerque, NM, ⁵University of New Mexico, Albuquerque, NM**3886 Intrinsic functional connectivity of the striatum covaries with cognitive performance in adolescents**Rachel Spooner¹, Nicholas Christopher-Hayes¹, Julia Stephen², Vince Calhoun², Yu-Ping Wang³, Tony Wilson¹, David Warren¹¹University of Nebraska Medical Center, Omaha, NE, ²The Mind Research Network, Albuquerque, NM, ³Tulane University, New Orleans, LA**3887 Distressed Infants May Have Altered Neural Connections Even Before Birth**Moriah Thomason¹, Jordan Boeve¹, Jamie Piercy¹, Janessa Manning¹, Jasmine Hect¹, Marjorie Beeghly¹, Ann Stacks¹, Rebecca Waller², Elise Turk³, Martijn van den Heuvel⁴¹Wayne State University, Detroit, MI, ²University of Michigan, Ann Arbor, MI, ³UMC Utrecht, Utrecht, Netherlands, ⁴Brain Center Rudolf Magnus, Dutch Connectome Lab, University Medical Center Utrecht, Utrecht, Netherlands**3889 Hippocampal microstructural maturation in typical development**Kirsten Lynch^{1,2}, Yonggang Shi², Kristi Clark³, Arthur Toga²¹University of Southern California, Los Angeles, CA, ²Laboratory of Neuro Imaging, USC Stevens Neuroimaging and Informatics Institute, Los Angeles, CA, ³Laboratory of Neuro Imaging, USC Stevens Neuroimaging and Informatics Institute, Los Angeles, United States**3890 Age-related changes in hippocampal subfields and white matter across childhood and adolescence**Alexandra Decker¹, Eric Bouffet¹, Suzanne Laughlin¹, M. Mallar Chakravarty^{2,3}, Jovanka Skocic¹, Cynthia de Medeiros¹, Donald Mabbott¹¹The Hospital for Sick Children, Toronto, Ontario, ²Department of Biological and Biomedical Engineering, McGill University, Montreal, Quebec, ³Douglas Mental Health University Institute, Montreal, Canada

- 3891 Influence of Maternal Prenatal Financial Stress on Fetal Brain Development**
Moriah Thomason¹, Narcis Marshall¹, Janessa Manning¹, Jasmine Hect¹, Saige Rutherford¹,
Rebecka Craig², Katarina Milosavljevic²
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MODELING AND ANALYSIS METHODS

Classification and Predictive Modeling

- 3892 Machine learning and domain adaptation for cortical thickness in autism**
Jussi Tohka¹, Elaheh Moradi², Budhachandra Khundrakpam³, John Lewis³, Alan Evans³
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- 3893 Voxel importance in classifier ensembles based on sign consistency patterns**
Jussi Tohka¹, Vanessa Gomez-Verdejo², Emilio Parrado-Hernandez²
¹University of Eastern Finland, Kuopio, Finland, ²Universidad Carlos III de Madrid, Leganes, Spain
- 3894 Parcelling and tree-based ensemble methods for the prognosis of Alzheimer's disease**
Marie Wehenkel¹, Christine Bastin¹, Pierre Geurts¹, Christophe Phillips¹
¹University of Liège, Liège, Belgium
- 3895 Path-Embedded Structural Human Brain Network Generation and Classification on Alzheimer's Disease**
Zhou Zhuang^{1,2}, Yan Jin³, Hanghang Tong⁴, Lei Shi², Yang Chen¹, Paul Thompson⁵
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- 3896 Impact of spatial scale in thickness networks is not significant in predicting Alzheimers and Autism**
Pradeep Reddy Raamana^{1,2}, Stephen Strother^{1,2}
¹University of Toronto, Toronto, ON, Canada, ²Rotman Research Institute, Baycrest, Toronto, ON, Canada
- 3897 Regional Detection of Intracerebral Hemorrhage on Multi-modal MRI with Kernel Spectral Regression**
Samantha Ma¹, Songlin Yu², David Liebeskind³, Danny Wang¹, Fabien Scalzo³
¹University of Southern California, Los Angeles, CA, ²Beijing Tiantan Hospital, Capital Medical University, Beijing, China, ³UCLA, Los Angeles, CA
- 3898 Human state estimation from cerebral blood flow data using CNN and LSTM**
Takaya Tamaki¹, Satoru Hiwa¹, Keisuke Hachisuka², Eiichi Okuno², Tomoyuki Hiroyasu¹
¹Doshisha University, Kyotanabe-shi, Kyoto, Japan, ²DENSO CORPORATION, Kariya-shi, Aichi, Japan

- 3899 Machine Learning Algorithms and Structural Features for Optimal Diagnostic Prediction in Psychosis**
Raymond Salvador^{1,2}, Joaquim Radua³, Erick Canales-Rodríguez^{3,2}, Aleix Solanes³, Salvador Sarró¹,
José Goikolea⁴, Alicia Valiente⁵, Gemma Monté¹, María del Carmen Natividad⁶, Amalia Guerrero-Pedraza⁵,
Noemí Moro⁵, Paloma Fernández-Corcuera¹, Benedikt Amann¹, Teresa Maristany⁷, Eduard Vieta^{4,2},
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- 3900 A review on MRI-based markers of structural brain maturation during childhood and adolescence**
Katja Franke¹
¹University Hospital Jena, Jena, Germany
- 3901 A review on MRI-based markers of structural brain aging**
Katja Franke¹
¹University Hospital Jena, Jena, Germany
- 3902 Brain Fingerprinting for Assessment of Infant Brain Development**
Ehsan Adeli¹, Yu Meng¹, Li Gang¹, Weili Lin¹, Dinggang Shen¹
¹Department of Radiology and BRIC, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA
- 3903 Resistance Perturbation Distance Kernel Regression for Prediction of Biological Phenotypes in fMRI**
Alexandria Jensen¹, Jason Tregellas¹, Debashis Ghosh¹
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- 3904 Improving the stability of decoders by ensembles of regularized models**
Andrés Hoyos Idrobo¹, Gael Varoquaux², Yannick Schwartz¹, Bertrand Thirion¹
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- 3905 Predicting Temperament Dimension Scores using Brainnetome-Atlas based Functional Connectivity**
Rongtao Jiang^{1,2}, Vince Calhoun^{3,4,5}, QINGBAO YU³, Yuhui Du³, Jiayu Chen³, Dongdong Lin³, Yini He⁶,
Tianzi Jiang^{1,2,7}, Jing Sui^{1,3,7}
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- 3906 Comparing the interpretability of structured sparsity methods in fMRI**
Jose Valdes-Herrera¹, Jonathan Shine¹, Thomas Wolbers^{1,2}
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- 3907 Wavelet Kernel Based Machine Learning for Group Classification on an fMRI Risk-Taking Decision Task**
Manish Dalwani^{1,2}, Susan Mikulich-Gilbertson¹, Thomas Crowley¹, Joseph Sakai¹, Debashis Ghosh²
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3908 Hybrid Methods are Better for Imbalanced Multi-level Classifiers for AD Subtype Prediction using MRI

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3909 Modeling and Predicting Individual Functional Connectivity in Longitudinal fMRI Studies

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3910 Early Imaging Based Predictive Modeling of Cognitive Performance Following Therapy for Childhood ALL

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3911 Multivoxel multi-point pattern analysis based fMRI neurofeedback for urge control

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3912 Prediction of Alzheimer's Disease based on MRI deformation

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3913 Classification of Schizophrenia Using Functional Connectivity Based on fMRI Data

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3914 Human brain manipulates scene view anticipation using error-tolerant encoding

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3915* Evaluation of Non-negative matrix Factorization of grey matter in age prediction

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3916 Predictive models based on functional connectivity: a benchmark across multiple datasets

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3917 Multimodal Imaging Signatures of Parkinson's Disease in the Basal Ganglia

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3918 MEG Outperforms EEG in Discriminating Single-Trial Event-Related Brain Signals

Christoph Reichert¹, Stefan Dürschmid², David Weizel², Jens-Max Hopf¹, Hans-Jochen Heinze², Hermann Hinrichs²

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3919 NAPR: neuroimaging-based age prediction in the cloud

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3920 Lost in permutation – widespread errors in permutation testing in MVPA and possible solutions

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3921 Identifying low-dimensional spatiotemporal patterns from resting state fMRI via deep learning

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3922 The DMN contributes most to gender prediction: a large resting fMRI study

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3923 Predicting Smoking Cessation Treatment Outcomes Using Dynamics Between Large-scale Brain Networks

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3924 Selection Bias due to Massive Evaluation of Classifiers in (f)MRI Searchlight Classification

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3925 Multivariate Models of Brain Volume for Identification of Individuals Prenatally Exposed to Alcohol

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3926 Cooperative Learning: Decentralized Data Neural Network

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- 3927 A new classification model unifying local anatomy and kinetics of cerebral gliomas: the Brain Grid**
Francesco Latini¹, Anja Smits², Mats Ryttefors¹
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- 3928 Hyperalignment Improves Prediction of Fluid Intelligence from Functional Connectivity**
Feilong Ma¹, J. Guntupalli¹, James Haxby¹
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- 3929 Multi-stage feature selection of functional connectivity for identifying autism spectrum disorder**
Huifang Huang¹, Xingdan Liu¹, Chunyun Chang¹, Chong-Yaw Wee², Dinggang Shen³
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- 3930 Neural networks reveal brain features modulating the interaction between sex and ASD**
Xiaoyu Lei¹, Carinna Torgerson², Sumiko Abe¹, Andrei Irimia³, John Van Horn³, GENDAAR Research Consortium⁴
¹University of Southern California, Keck School of Medicine, Los Angeles, CA, ²Laboratory of Neuroimaging, USC, Los Angeles, CA, ³University of Southern California, Los Angeles, CA, ⁴George Washington, Washington, DC
- 3931 Comparison of machine learning methods for identifying the interaction of ASD with sex**
Xiaoyu Lei¹, Carinna Torgerson², Sumiko Abe¹, Andrei Irimia³, John Van Horn³, GENDAAR Research Consortium⁴
¹University of Southern California, Keck School of Medicine, Los Angeles, CA, ²Laboratory of Neuroimaging, USC, Los Angeles, CA, ³University of Southern California, Los Angeles, CA, ⁴George Washington, Washington, DC
- 3932 Combined imaging markers more accurately predict real life disease onset in Huntington's disease**
Richard Daws¹, Sarah Mason², Eyal Soreq¹, Roger Barker³, Adam Hampshire¹
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- 3933 Multiplex functional connectivity patterns encodes for task specificity**
Eyal Soreq¹, Ines Violante¹, Richard Daws¹, Robert Leech², Adam Hampshire²
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- 3934 Predicting Multiple Clinical Scores Improves Neuroimaging-Based Subject Descriptions**
Mehdi Rahim¹, Bertrand Thirion², Danilo Bzdok³, Gael Varoquaux⁴
¹INRIA, Paris, France, ²Inria, Saclay, France, ³RWTH Aachen University, Aachen, Germany, ⁴Parietal team, INRIA-CEA, Saclay, France
- 3935 Brain Morphometry reveals distinct IBS subgroups**
Clarence Le¹, Emeran Mayer², Cody Ashe-McNalley³, Cathy Liu³, Kirsten Tillisch⁴, Jennifer Labus⁵
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- 3936* Deep neural network predicts emotional responses using whole brain neuronal activations**
Hyun-Chul Kim¹, Jong-Hwan Lee¹
¹Korea University, Seoul, Korea, Republic of
- 3937 Using Structural Connectomes for the Classification of Twin Zygosity and Sibling/Non-sibling Pairs**
Dmitry Petrov¹, Boris A. Gutman¹, Joshua Faskowitz², Neda Jahanshad¹, Paul M. Thompson¹
¹Imaging Genetics Center, University of Southern California, Marina Del Rey, CA, ²Indiana University, Bloomington, IN
- 3938 A Mathematical Model of Neurotransmitter Interactions during Complex Voluntary Motor Behaviors**
Jacob Yatvitskiy¹, Stefan Fuertinger¹, Kristina Simonyan¹
¹Icahn School of Medicine at Mount Sinai, New York, NY
- 3939 Functional Network Patterns as Multivariate Predictors of Symptom Severity in Schizophrenia**
Mina Gheiratmand¹, Irina Rish², Guillermo Cecchi², Matthew Brown¹, Russell Greiner¹, Andrew Greenshaw¹, Serdar Dursun¹
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- 3940 A Deep Learning Approach to EEG Based Brain-Computer Interface**
Pouya Bashivan¹, Irina Rish², Mohammed Yeasin³
¹MIT, Cambridge, MA, ²IBM T.J. Watson Research Center, Yorktown Heights, NY, ³University of Memphis, Memphis, TN
- 3941 Subtype-based prediction of Alzheimer's dementia using structural and functional MRI**
Christian Dansereau^{1,2}, Angela Tam^{3,2}, Sebastian Ursh^{2,4}, Pierre Orban^{2,5}, Pedro Neto⁶, Pierre Bellec^{1,2}
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- 3942 Cluster-size test based on a back propagation neural network**
Huashuai Xu¹, Lisa Nickerson², Fengyu Cong¹, Huanjie Li^{2,1}
¹Dalian University of Technology, Dalian, China, ²Harvard Medical School, Mclean Hospital, Boston, United States
- 3943 Multivariate pattern analysis of multi-band MRI k-space data**
Scott Peltier¹, Krisanne Litinas¹, Jonathan Lisinski², Stephen LaConte²
¹Functional MRI Laboratory, University of Michigan, Ann Arbor, MI, ²Virginia Tech Carilion Research Institute, Roanoke, VA

MODELING AND ANALYSIS METHODS

fMRI Connectivity and Network Modeling

- 3944 Evaluation of Resting State Connectivity in HCP Data using Two Effective Connectivity Methods**
Olga Boukrina¹, Soha Saleh¹, Ekaterina Dobryakova²
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3946 Rest fMRI phase data analysis reveals spontaneous function connectivity in positive/negative balanceZikuan Chen¹, Arvind Caprihan¹, Vince Calhoun¹¹The Mind Research Network, Albuquerque, NM**3947 Spatial extent of task induced connectivity changes and its influence on whole-brain cognitive state**Javier GonzalezCastillo¹, Natasha Topolski¹, James Brown², Daniel Handwerker¹, Peter Bandettini¹¹Section of Functional Imaging Methods, National Institute of Mental Health, Bethesda, MD, ²Virginia Tech, Blacksburg, VA**3948 Functional Connectivity Change in the Cognitive Control Network with Change in Cognitive Performance**Isabella Breukelaar¹, Cassandra Antees¹, Stuart Grieve^{1,2,3}, Sheryl Foster^{4,5}, Lavier Gomes⁴, Leanne Williams^{1,6,7}, Mayuresh Korgaonkar^{1,8}¹Brain Dynamics Centre, The Westmead Institute for Medical Research, The University of Sydney, Westmead, NSW, ²Sydney Translational Imaging Laboratory, Heart Research Institute, Charles Perkins Centre and Sydney Medical School, University of Sydney, Sydney, NSW, Australia, ³Department of Radiology, Royal Prince Alfred Hospital, Camperdown, NSW, Australia, ⁴Department of Radiology, Westmead Hospital, Westmead, NSW, ⁵The Discipline of Medical Radiation Sciences, Faculty of Health Science, The University of Sydney, Sydney, NSW, Australia, ⁶Psychiatry and Behavioral Sciences, Stanford University, Stanford, CA, ⁷MIRECC, Palo Alto VA, Palo Alto, CA, ⁸Discipline of Psychiatry, Sydney Medical School, Westmead, NSW, Australia**3949 Affect coding differs across stimulus modalities - dynamics in fMRI BOLD and functional connectivity**Jelle R. Dalenberg¹, Liselore Weitkamp¹, Remco Renken¹, Gert ter Horst¹¹University Medical Center Groningen, Groningen, Netherlands**3950 Inter-individual differences in the stability of resting-state functional units within the striatum.**Manu Garcia-Garcia¹, Aki Nikolaidis², Pierre Bellec³, Cameron Craddock², Francisco Castellanos⁴, Brian Cheung², Michael Milham²¹Phyllis Green and Randolph Cowen Institute for Pediatric Neuroscience, New York, NY, ²Child Mind Institute, New York, NY, ³University of Montreal, Montreal, Canada, ⁴Nathan Kline Institute for Psychiatric Research, Orangeburg, NY**3951 Communicability and correlated gene expression cooperatively support synchronized brain activity**David Grayson¹, Brian Mills², Eric Earl³, Anandakumar Shunmugavel³, Damien Fair⁴¹University of California, Davis, Davis, CA, ²Oregon Health and Science University, Portland, United States, ³Oregon Health and Science University, Portland, OR, ⁴Oregon Health and Science University, Oregon, United States**3952 Verbal Working Memory Network in Adults and Children: An Effective Connectivity Study**Fu Yu Kwok¹, Beth O'Brien², Stacey Tay³, Welton Chang⁴, SH Annabel Chen⁵¹Nanyang Technological University, Singapore, Singapore, ²National Institution of Education, Singapore, Singapore, ³Paediatric Neurology and Developmental Paediatrics, NUH, NUS, Singapore, Singapore, ⁴Magnetic Resonance Imaging Group, BSI, SBIC, A*STAR, Singapore, Singapore, ⁵Nanyang Technological University, Singapore, Other**3953 Identifying Dynamic Functional Connectivity Biomarkers Using GIG-ICA: Application to Psychosis**Yuhui Du¹, Godfrey Pearson², Dongdong Lin¹, Jing Sui¹, Jiayu Chen¹, Mustafa Salman³, Carol Tamminga⁴, Elena Ivleva⁴, John Sweeney⁴, Matcheri Keshavan⁵, Brett Clementz⁶, Juan Bustillo⁷, Vince Calhoun³¹The Mind Research Network & LBERI, Albuquerque, NM, ²Departments of Psychiatry & Neurobiology, Yale University; Olin Neuropsychiatry Research Center, New Haven, CT, ³The Mind Research Network & LBERI; Department of Electrical and Computer Engineering, UNM, Albuquerque, NM, ⁴Department of Psychiatry, University of Texas Southwestern Medical School, Dallas, TX, ⁵Department of Psychiatry, Beth Israel Deaconess Medical Center and Harvard Medical School, Boston, MA, ⁶Departments of Psychology and Neuroscience, Bioluminescence Research Center, University of Georgia, Athens, GA, ⁷Department of Psychiatry, University of New Mexico, Albuquerque, NM**3954 Tuning the social brain: Neurofeedback in Autism directly addresses aberrant network structure**Michal Ramot¹, Sara Kimmich², Javier GonzalezCastillo¹, Vinai Roopchansingh¹, Haroon Popal¹, Emily White¹, Stephen Gotts¹, Alex Martin¹¹National Institutes of Health, Bethesda, MD, ²National Institute of Mental Health, Bethesda, MD**3955* Brain Network Dynamics are Hierarchically Organised in Time**Diego Vidaurre¹, Stephen Smith², Mark Woolrich³¹University of Oxford, Oxford, Oxfordshire, ²FMRIB, Oxford University, Oxford, United Kingdom, ³OHBA, University of Oxford, Oxford, United Kingdom**3956 Assessing dynamic functional connectivity in heterogeneous samples**Brieuc Lehmann¹, Simon White¹, Richard Henson², Linda Geerligs²¹MRC Biostatistics Unit, University of Cambridge, Cambridge, United Kingdom, ²MRC Cognition & Brain Sciences Unit, Cambridge, United Kingdom**3957 Effective Brain Connectivity based on Structural Prior**Alessandro Crimi^{1,2}, Luca Dodero², Fabio Sambataro³, Vittorio Murino^{4,2}, Diego Sona^{5,2}¹University of Zurich, Zurich, Switzerland, ²Pattern Analysis and Computer Vision, Istituto Italiano di Tecnologia, Genoa, Italy, ³Department of Experimental and Clinical Medical Sciences, University of Udine, Udine, Italy, ⁴University of Verona, Verona, Italy, ⁵Fondazione Bruno Kessler, Trento, Italy**3958 Stationarity does not imply absence of brain states: interpreting fluctuations in fMRI connectivity**Raphael Liegeois¹, Abraham Snyder², Timothy Laumann², Juan Zhou³, B.T. Thomas Yeo¹¹National University of Singapore, Singapore, Singapore, ²Department of Neurology, Washington University in St. Louis, St. Louis, MO, ³Duke-National University of Singapore Medical School, Singapore, Singapore**3959 Consensus clustering approach to group brain connectivity matrices**Javier Rasero Daparte¹, Jesus Cortes¹, Daniele Marinazzo², Sebastiano Stramaglia³¹Biocruces Health Research Institute. Hospital Universitario de Cruces, Barakaldo, Spain, ²University of Ghent, Ghent, -- only for US citizens, ³University, Bari, Italy**3960 Functional Stability of the Human Connectome Project Parcellation**Nicolas Honnorat¹, Christos Davatzikos²¹University of Pennsylvania, Philadelphia, United States, ²University of Pennsylvania, Philadelphia, PA

- 3961 Developing MRI for Clinical Practice: Limitations of Current rsfMRI Analysis Methods in Aging Brains**
Sukhmanjit Ghuman¹, Scott Nugent², Christian-Alexandre Castellano^{1,3}, Stephen Cunnane^{1,3}, Kevin Whittingstall¹
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- 3962 Sustained Connectivity is an Individual Trait Related to Processing Speed**
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- 3963 Estimation of dynamic sparse connectivity patterns from resting state fMRI**
Biao Cai¹, Pascal Zille¹, Julia Stephen², Tony Wilson³, Vince Calhoun^{2,4}, Yu-Ping Wang¹
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- 3964 BOLD fMRI activation volume and functional connectivity of patients with AVMs**
Bob Hou¹, Sanjay Bhatia¹, Jeff Carpenter¹
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- 3965 A joint time-frequency analysis of resting-state functional connectivity to study schizophrenia**
Maziar Yaesoubi¹, Robyn Miller², Juan Bustillo³, Kelvin Lim⁴, Jatin Vaidya⁵, Vince Calhoun⁶
¹Mind Research Institute, Albuquerque, NM, ²The Mind Research Network, Albuquerque, United States, ³Department of Psychiatry, University of New Mexico, Albuquerque, NM, ⁴Dept. of Psychiatry, University of Minnesota, Minneapolis, MN, ⁵University of Iowa, Iowa City, IA, ⁶The Mind Research Network, Albuquerque, NM
- 3966* Synchronization of fMRI Data Across Subjects and Scans by Orthogonal Transformation**
Anand Joshi¹, Minqi Chong¹, Richard Leahy¹
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- 3967 Distinct neurocognitive processes involved in believing and thinking**
Shihui Han¹, Xiaochun Han²
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- 3968 Directed connectivity architecture of the triple network model in the elderly**
Rui Li^{1,2}, Juan Li^{1,2}
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- 3969 From perception-action to spontaneous thoughts: computational insights into a cortical hierarchy**
Peng Wang¹, Raphael Liegeois¹, Ru Kong¹, Gustavo Deco², Martijn van den Heuvel³, B.T. Thomas Yeo¹
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- 3970 Analysis of Metastable Dynamics in Schizophrenia**
Jessica Dafflon¹, Federico Turkheimer¹, Oliver Howes², Peter Hellyer³
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- 3971 Longitudinal Independent Component Analysis with Application to fMRI data**
Yikai Wang¹, Ying Guo²
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- 3972 Evaluating a framework for optimal input data for Dynamic Casual Modelling**
Samira Kazan¹, Peter Zeidman¹, Nick Todd², Karl Friston¹, Nikolaus Weiskopf^{3,1}, Martina Callaghan¹
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- 3973 Attention Modulates the Negative BOLD Response in DMN Without Disrupting its Functional Connectivity**
David Parker¹, Qolamreza Razlighi²
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- 3974 Statistical Stationarity, Temporal Epochs and Functionally-Relevant fMRI Dynamics**
Robyn Miller¹, Michael Robinson², Gabriel Huerta³, Erik Erhardt³, Vince Calhoun¹
¹The Mind Research Network, Albuquerque, NM, ²American University, Washington DC, DC, ³University of New Mexico, Albuquerque, NM
- 3975 Temporo-frontal functional anticorrelation is associated with verbal memory in older adults**
Sana Suri¹, Nicola Filippini¹, Enikő Zsoldos¹, Abda Mahmood¹, Anya Topiwala¹, Archana Singh-Manoux², Mika Kivimäki², Clare Mackay¹, Stephen Smith³, Klaus Ebmeier¹
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- 3976 Developing a Hippocampal Co-Atrophy Network Model Using Structural MACM from BrainMap's VBM Database**
Eithan Kotkowski¹, Peter Fox¹
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- 3977 FMRI activity propagation through early visual cortex**
Nicolas Gravel¹, Matthiew Gilson², Remco Renken³, Frans Cornelissen¹, Gustavo Deco⁴
¹Groningen University, Groningen, Netherlands, ²Universitat Pompeu Fabra, Barcelona, Spain, ³University Medical Center Groningen, Groningen, Netherlands, ⁴Center for Brain and Cognition, Computational Neuroscience Group, Universitat Pompeu Fabra, Barcelona, Spain
- 3978 ADHD and Attentional Control: Impaired Segregation of Task Positive and Task Negative Brain Networks**
Brian Mills¹, Michaela Cordova¹, Kathryn Mills¹, Sarah Karalunas¹, Joel Nigg¹, Damien Fair¹
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- 3979 Effects of Socioeconomic Status on Early Functional Connectivity Development and Behavior**
Andrew Salzwedel¹, John Gilmore², Barbara Goldman², Weili Lin², Wei Gao¹
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3980 Dynamic Functional Connectivity Analysis Reveals Differences Between Wake and Stage 2 SleepMazen El-Baba¹, Daniel Lewis¹, Zuo Fang¹, Adrian Owen¹, Stuart Fogel², J Bruce Morton¹¹University of Western Ontario, London, Ontario, ²University of Ottawa, Ottawa, Ontario**3981 Network-Based Diagnostic Probability Estimation from Resting-state Functional MRI**
ATSUSHI KAWAGUCHI¹¹Saga University, Saga, Japan**3982 Dynamic Brain Functional Connectivity: Change-Point Estimation based on Random Matrix Theory**Jaehee Kim¹, DuBois Bowman²¹Duksung Women's University, Seoul, Korea, Republic of, ²Columbia University, New York, United States**3983 Mapping epileptic networks by EEG-based selection of fMRI functional connectivity dynamic components**Rodolfo Abreu¹, Alberto Leal², Patrícia Figueiredo¹¹ISR-Lisboa/LARSyS, Instituto Superior Técnico – Universidade de Lisboa, Portugal, Lisbon, Portugal, ²Centro Hospitalar Psiquiátrico de Lisboa, Lisbon, Portugal**3984 Instantaneous phase synchrony is related to correlation based sliding-windows: An fMRI study**Mangor Pedersen¹, Amir Omidvarnia¹, Andrew Zalesky², Graeme Jackson¹¹The Florey Institute of Neuroscience and Mental Health, Melbourne, Australia, ²University of Melbourne, Melbourne, Australia**3985 Altered Topological Properties in Major Depression Disorder with Suicidal Ideation**Wei Liao¹, Jiao Li¹, Yixiao Fu², HuaFu Chen¹¹University of Electronic Science and Technology of China, Chengdu, Sichuan, ²the First Affiliated Hospital of Chongqing Medical University, Chongqing, Chongqing**3986 The Functional Link between Thalamus and Post-Central Gyrus is the Central Link in Human Brain**Yunyi Zhou¹, Jianfeng Feng²¹Fudan University, Shanghai, China, ²University of Warwick, Coventry, United Kingdom**3987 Challenges in measuring individual differences in fMRI functional connectivity in healthy aging.**Linda Geerligs^{1,2}, Kamen Tsvetanov³, Cam-CAN^{4,2,3}, Richard Henson²¹Donders Institute, Radboud University, Nijmegen, Netherlands, ²MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom, ³Centre for Speech, Language and the Brain, Department of Psychology, University of Cambridge, Cambridge, United Kingdom, ⁴Cambridge Centre for Ageing and Neuroscience (Cam-CAN), University of Cambridge, MRC CBU, Cambridge, United Kingdom**3988 A first approach of associating fMRI-based connectivity and simultaneously acquired EEG alpha power**Adrian Wroblewski¹, Yifei He¹, Miriam Steines¹, Gebhard Sammer², Tilo Kircher¹, Benjamin Straube¹¹University of Marburg, Department of Psychiatry and Psychotherapy, Marburg, Germany, ²University of Giessen, Cognitive Neuroscience at Centre for Psychiatry, Giessen, Germany**3989 Regression DCM for fMRI**Stefan Frässle¹, Ekaterina Lomakina¹, Adeel Razi², Karl Friston², Joachim Buhmann³, Klaas Enno Stephan¹¹Translational Neuromodeling Unit (TNU), UZH & ETH Zurich, Zürich, Switzerland, ²The Wellcome Trust Centre for Neuroimaging, University College London, London, United Kingdom, ³Department of Computer Science, ETH Zurich, Zürich, Switzerland**3990 EEG vigilance modulates PCC between-network functional connectivity at rest**Viola Borchardt^{1,2}, Galina Surova³, Johan van der Meer^{4,1}, Michal Bola⁵, Yan Fan^{1,6}, Anna Linda Krause^{1,7}, Jörg Frommer⁸, Meng Li¹, Sebastian Olbrich^{9,10}, Martin Walter^{1,2,11}¹Clinical Affective Neuroimaging Laboratory, Magdeburg, Germany, ²Department of Behavioral Neurology, Leibniz Institute for Neurobiology, Magdeburg, Germany, ³Clinic for Psychiatry and Psychotherapy, Leipzig, Germany, ⁴QIMR Berghofer Medical Research Institute, Brisbane, Australia, ⁵Laboratory of Brain Imaging, Neurobiology Center, Nencki Institute of Experimental Biology of Polish, Warsaw, Poland, ⁶Department of Psychiatry, CBF, Charité, Berlin, Germany, ⁷Clinic for Psychiatry and Psychotherapy, Otto-von Guericke University Magdeburg, Magdeburg, Germany, ⁸Clinic for Psychosomatic Medicine and Psychotherapy, University Clinic Magdeburg, Magdeburg, Germany, ⁹Clinic for Psychiatry and Psychotherapy, University of Leipzig, Leipzig, Germany, ¹⁰Clinic for Psychiatry, Psychotherapy and Psychosomatic, University Clinic Zurich, Zurich, Switzerland, ¹¹Clinic for Psychiatry and Psychotherapy, Eberhard-Karls University, Tuebingen, Germany**3991 Estimating the statistical power of brain-wide association study**Fan Cheng¹, Weikang Gong², Jianfeng Feng³¹Shanghai Center for Mathematical Sciences, Fudan University, Shanghai 200433, China, ²CAS-MPG Partner Institute for Computational Biology, Shanghai 200031, China, ³Shanghai Center for Mathematical Sciences, Fudan university, Shanghai 200433, China**3992 Impact of physiological noise optimization on functional connectivity measures in rs-fMRI at 7T**Joana Pinto¹, Sandro Nunes¹, Marta Biancardi², Afonso Dias¹, Luís Silveira³, Lawrence Wald⁴, Patrícia Figueiredo¹¹ISR-Lisboa/LARSyS, Instituto Superior Técnico – Universidade de Lisboa, Lisbon, Portugal, ²Department of Radiology, A.A. 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Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Boston, MA**3993 Psycho-physiological interactions network analysis of adaptive reward learning**Ting Wang¹, Xi Wu¹, Jiefeng Jiang²¹Department of Computer Science, Chengdu University of Information Technology, Chengdu, China, ²Department of Psychology Stanford University, California, United States**3994 Is hormonal responses associated with acute stress-induced changes in the DMN?**Wei Zhang¹, Floris Klumpers¹, Mahur Hashemi¹, Reinoud Kaldewaij¹, Christian Beckmann², Karin Roelofs¹¹Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands, ²Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Centre, Nijmegen, Netherlands**3995 Reduced Functional Connectivity is Present at Birth in Preterm Infants with Language Delays at Age 2**Lili He^{1,2,3}, Nehal Parikh^{1,2,3}¹Perinatal Institute, Department of Pediatrics, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, ²University of Cincinnati College of Medicine, Cincinnati, OH, ³Pediatric Neuroimaging Research Consortium, Cincinnati Children's Hospital, Cincinnati, OH

- 3996 Cerebellar functional connectivity plays a role in cognitive performance of progressive MS**
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- 3997 Resting-state functional connectivity of the Cognitive Control Network in Major Depressive Disorder**
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- 3998 Early Identification of Premature Brain Functional Connectome Using Support Vector Machine**
Lili He^{1,2,3}, Elveda GOZDAS³, Scott Holland^{2,3,4}, Nehal Parikh^{1,2,3}
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- 3999 Disrupted brain networks in obesity and alcohol use disorder: a data-driven graph theory approach**
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- 4000* Dynamic Reorganization of the Frontal Parietal Network during Cognitive Control and Episodic Memory**
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- 4001 Dynamic Brain Organization Reflects Compensation in Subjects with Mild Parkinson's Disease**
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- 4002 Functional Connectivity Alterations in Patients with Ischemic White Matter Lesions**
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- 4003 Relation between Dynamic Functional Connectivity and Complexity in the Default Mode Network**
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- 4004 Enhanced Connectivity of Post-task Resting State after Perceptual Learning: an fMRI Study**
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- 4005 Relationship Between Default Mode Network and Brain Function in Healthy Participants**
Zih-Kai Kao¹, Jiing-Feng Lirng¹, Wen-Chi Hsieh¹, Yuan-Hwa Chou¹
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- 4006 Fluctuations in network dynamics: Mind wandering is not so random**
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- 4007 Individual Variability and Time-Varying Features of Modular Brain Architecture**
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- 4008 Temporal and spatial factors driving functional fingerprinting**
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- 4009 Influence of Global Signal, Parcellation and Null Network Models on Functional Connectomic Analysis**
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- 4010 Combined spatiotemporal ICA (stICA) for continuous and dynamic lag structure analysis of MREG data**
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- 4011 Local signal complexity and dynamic functional connectivity associated with Alzheimer's severity**
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- 4012 Functional networks are more small-world than scale-free**
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- 4013 fMRI Signal Denoising by Dictionary Learning for High-Resolution Functional Connectivity Inference**
Seongah Jeong¹, Xiang Li², Hamed Farhadi³, Quanzheng Li⁴, Vahid Tarokh³
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- 4014 Dynamical functional connectivity correlates with periods of high and low degree**
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- 4015 Modeling brain dynamics in brain tumor patients using the Virtual Brain**
Hannelore Aerts¹, Daniele Marinazzo¹
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- 4016 Balanced activity and environmental interaction in a simple embodied neural simulation**
Peter Hellyer¹, Claudia Clopath¹, Angie Kehagia², Federico Turkheimer³, Robert Leech¹
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- 4017 Brain state transition processes in cortical brain system at rest based on energy landscape analysis**
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- 4018 Temporal Restricted Boltzmann Machine for brain network identification of fMRI data**
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- 4019 Fibre dispersion in the corpus callosum relates to interhemispheric functional connectivity**
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- 4020 Functional connectivity estimates are largely driven by spatial configuration, not true connectivity**
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- 4021 Changes in visual spatial attention networks following rTMS of the human parietal cortex**
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- 4022 Dynamic causal modelling of resting state fMRI using spectral graph theory**
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- 4023 Using Effective Connectivity to investigate Reorganization of the Primary Motor Cortex**
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- 4024 An extended representation of the brain dynamics based on hypergraph for disorders of consciousness**
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- 4025 In the heat of the action: inter-subject brain synchronisation during movie-watching in ASD**
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- 4026 Chronnectome Fingerprinting: Identifying Individuals Using Dynamic Functional Brain Connectivity**
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- 4027 Using Network topology in order to predict Missing Edges in the Connectome**
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- 4028 Discovery of Aberrant Brain Connectivity in Schizophrenia using Gaussian Graphical Models**
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- 4029 FMRI Connectivity is Differentially Associated with Performance Across Tasks in a Multi-Task Study**
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- 4030 Effective Connectivity of Information Processing Speed**
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- 4031 Sparse representation of the connectome for group discrimination: application to multiple sclerosis**
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- 4032* A dopaminergic signature contributes to similarity in the brain's functional connectome**
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- 4033 Quantification of directed dynamic functional networks of the brain**
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- 4034 Heritability of the human cortico-striatal connectivity gradient**
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- 4035 Autonomic influences on resting state activity mediated by the basal forebrain**
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- 4036 Disambiguating Brain Functional Connectivity**
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- 4037 Concordance between white-matter pathways and functional circuits linking the VWFA with the IPS**
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- 4038 Subcortical arousal-promoting regions show reduced activity with wide-spread fMRI signal increases**
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- 4039 Resting State Network Alterations in Spinocerebellar Ataxia**
Cigdem Ulasoglu Yildiz^{1,2}, Kardelen Eryurek^{1,2}, Zerrin Karaaslan³, Asli Demirtas Tatlidede³, Basar Bilgic³, Hasmet Hanagasi³, Tamer Demiralp^{2,4}, Hakan Gurvit³
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- 4040 Large-scale functional connectivity networks predict attention fluctuations**
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- 4041 Functional connectivity with insular cortex is predictive of placebo analgesia**
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- 4042 Can brain state be manipulated to emphasize individual differences in functional connectivity?**
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- 4043 Replication of a Highly-Cited Neuroimaging Study: Correspondence of Resting State and Task Networks**
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- 4044 Resting state networks alteration in Pantothenate-Kinase Associated Neurodegeneration (PKAN)**
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- 4045 An fMRI study on ivy methylphenidate-induced thalamo-cortical connectivity**
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- 4046 Evaluating Nodal Differential Degree Centrality via Statistically Motivated Random Networks**
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- 4047 A simple data driven predictive dynamical model of whole brain resting state fMRI signal dynamics**
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- 4048 A Novel Measure of fMRI Task Event-Locked Dynamic Functional Connectivity**
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- 4049 Maternal Caregiving Moderates the Association Between Emotionality and Network Topology in Infants**
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- 4050 The effects of inattention and hyperactivity-impulsivity symptoms on functional connectivity**
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- 4051 Detection of Structure in Dynamic Connectivity States Using Random Matrix Theory**
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- 4052 Identifying Dynamic Connectivity States Using Affinity Propagation Clustering**
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- 4053 The Developing Triple Networks in Infants from 2-Week-Old to 2-Year-Old: A Longitudinal Study**
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- 4054 Hierarchical organization of functional networks in Parkinson's disease: a resting-state fMRI study**
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- 4055 Developmental changes in resting-state functional connectivity in borderline personality disorder**
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- 4056 Comparing effective connectivity between task and resting state fMRI**
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- 4057 Estimation of task-related regions from default-mode networks in the real-time fMRI settings**
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- 4058* Connectome community structure: Weighted blockmodels versus modularity maximization**
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- 4059 Distinct Disruptions of Intrinsic Brain Networks in Schizophrenia: A Connectivity Domain Analysis**
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- 4060 A Hierarchical Covariate-Adjusted ICA Matlab Toolbox for Investigating Differences in Brain Networks**
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- 4061 Sparse Functional Connectivity**
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- 4062 Transient brain activity reveals spatiotemporal structure of functional networks during rest & sleep**
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- 4063 Gustatory Task-Based Functional Network Differentiation via Modularity Analysis**
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- 4064 A more integrated brain is more variable across moments**
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- 4065 Connectivity of the Putamen in Language Function as revealed by MACM**
Vinas Guasch Nestor¹
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- 4066 How do local perturbations influence systems-level brain dynamics?**
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- 4067 Investigating task-dependent inter-network communication during working memory**
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- 4068 Primary communication frequency of Intrinsic Connectivity Network**
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- 4069 Lithium Modulation of Functional Connectome & Peripheral Transcription - A Novel Treatment Biomarker**
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- 4070 Static/Dynamic measures of human brain connectivity predict complementary aspects of human cognition**
Aurora Ramos-Nuñez¹, Simon Fischer-Baum¹, Randi Martin¹, Qiuha Yue¹, Fengdan Ye¹, Michael Deem¹
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- 4071 Network based statistical approach to study functional connectivity in epilepsy patients**
VEENA NAIR¹, Jed Mathis², Gyujoon Hwang³, Megan Rozman², Taylor McMillan³, Rosaleena Mohanty³, Gengyan Zhao⁴, Dace Almane³, Lisa Conant², Andrew Nencka², Rasmus Birn⁵, Rama Maganti³, Edgar DeYoe², Bruce Hermann⁶, Manoj Raghavan², Jeffrey Binder², Beth Meyerand³, Vivek Prabhakaran⁶
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4072 Optimal neural gain maximizes metastability, communicability and temporal variabilityMac Shine¹, Matthew Aburn², Michael Breakspear³, Russell Poldrack⁴¹Brain and Mind Centre, University of Sydney, Bateau Bay, New South Wales, ²QIMR, Brisbane, Queensland, ³Queensland Institute of Medical Research, Brisbane, Australia, ⁴Stanford University, Stanford, United States**4073 Disentangling coupling and anti-coupling in functional connectomic studies**Djalel-Eddine Meskaldji¹, Dimitri Van De Ville²¹EPFL, Ecublens, Switzerland, ²Ecole Polytechnique Fédérale de Lausanne, Lausanne, Vaud**4074 Spatial structure of resting state fMRI BOLD latency structure explored at the voxel level**Riya Paul¹, Benno Pütz¹, Bertram Müller-Myhsok¹, Yorick Peterse¹, Michael Czisch¹, Philipp Sämann¹¹Max Planck Institute of Psychiatry, Munich, Germany**4075 Network asymmetry of the auditory system**Bratislav Misić¹, Richard Betzel², Alessandra Griffo³, Marcel de Reus⁴, Ye He⁵, Xi-Nian Zuo⁶, Martijn van den Heuvel⁷, Patric Hagmann⁸, Olaf Sporns⁵, Robert Zatorre⁹¹Montreal Neurological Institute, Montreal, Quebec, ²University of Pennsylvania, Philadelphia, PA, ³Signal Processing Lab (LTS5), Ecole Polytechnique Fédérale de Lausanne/ Lausanne University Hospital, Lausanne, -- SELECT --, ⁴Brain Center Rudolf Magnus, UMC Utrecht, Utrecht, Netherlands, ⁵Indiana University, Bloomington, IN, ⁶Chinese Academy of Sciences, Beijing, China, ⁷Brain Center Rudolf Magnus, Dutch Connectome Lab, University Medical Center Utrecht, Utrecht, Netherlands, ⁸Department of Radiology, Lausanne University Hospital and Signal Processing Lab 5, EPFL, Lausanne, Switzerland, ⁹McGill University, Montreal, Canada**4076 Multisite reliability of fMRI-based resting state brain graphs**Hengyi Cao¹, Sarah McEwen², Carrie E. Bearden³, Jean Addington⁴, Brad Goodyear⁵, Kristin Cadenhead⁶, Helene Mirzakhani⁶, Barbara Cornblatt⁷, Doreen Olvet⁷, Daniel H. 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Carlson Center for Imaging Science, Rochester Institute of Technology, Rochester, NY**4082 An Evaluation of Visual Field Map Properties in a Hemispherectomized Patient**Hinke Halbertsma¹, Mirjan van Dijk¹, Koen Haak², Frans W. Cornelissen¹¹Laboratory of Experimental Ophthalmology, University Medical Center Groningen, Groningen, Netherlands, ²Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands**4083 Spatial frequency domain dynamics in fMRI and functional network connectivity**Robyn Miller¹, Vince Calhoun¹¹The Mind Research Network, Albuquerque, NM**4084 Functional Connectivity while Recovering from a Recent Mental Task Set**Andrew Reineberg¹, Marie Banich¹, Naomi Friedman¹¹University of Colorado Boulder, Boulder, CO**4085 Differences in Default Mode Network in Children with High and Low Working Memory**Katherine White¹, Julia Schmidt¹, Jennifer Ferris¹, Sue Peters¹, Kayla Pedret¹, Lara Boyd¹¹University of British Columbia, Vancouver, BC**4086 Symptom severity in psychosis predicts activation in a network underlying outward attention**Meighen Roes¹, Todd Woodward¹¹University of British Columbia, Vancouver, British Columbia**4087 Multi-site reliability of resting state fMRI using graph theoretical measures**Sumra Bari¹, Kausar Abbas², Ikbeom Jang¹, Brenna McDonald³, Thomas Talavage¹¹Purdue University, West Lafayette, IN, ²Purdue University, West Lafayette, United States, ³Indiana University School of Medicine, Indianapolis, IN**4088 Estimation of the whole brain effective connectivity network using spectral DCM**Bumhee Park¹, Jinseok Ur², Changwon Jang², Chongwon Pae², Maeng-Keun Oh³, Yoon Kyoung Choi⁴, Hae-Jeong Park^{2,3,4}¹Department of Statistics, Hankuk University of Foreign Studies, Yongin, Korea, Republic of, ²BK21 PLUS Project for Medical Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, ³Department of Nuclear Medicine, Psychiatry, Radiology, Yonsei University College of Medicine, Seoul, Korea, Republic of, ⁴Department of Cognitive Science, Yonsei University, Seoul, Korea, Republic of

- 4089 Estimation of Effective Connectivity Alternation using PEB after Thalamotomy in Essential Tremors**
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- 4090 Frequency ranges for spectral dynamic causal modeling in the resting state fMRI**
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- 4091 Dissecting the task-positive and task-negative networks by convergent functional connectivity**
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- 4092 Non-negative matrix factorization uncovers topological modes of dynamic functional brain networks**
Ankit Khambhati¹, Marcelo Mattar¹, Danielle Bassett²
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- 4093 Delayed activation of a frontoparietal network underlying evaluation in Stroop and semantic tasks**
Nicole Sanford¹, Todd Woodward¹
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- 4094 Adaptive analysis of change points in large-scale functional connectivity networks**
Seok-Oh Jeong¹, Bumhee Park¹, Chongwon Pae², Hae-Jeong Park^{2,3,4}
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- 4095 Effective coupling of the ascending synchronising system, limbic system and default mode network**
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- 4096 Effective connectivity in the IPL during working memory is associated with sustained attention level**
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- 4097 Movie vs rest: a comparison of resting state and naturalistic fMRI paradigms**
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- 4098 Dynamic functional connectivity spatial states: eyes open vs. eyes closed**
Lei Wu¹, Arvind Caprihan¹, Vince Calhoun²
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- 4099 Classification of schizophrenia using sparse feature selection and stacked autoencoder**
Jin Seok Ur¹, Chongwon Pae¹, Maeng-Keun Oh², Hae-Jeong Park^{1,3,2}
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MODELING AND ANALYSIS METHODS

Image Registration and Computational Anatomy

- 4100 Accurate Nonlinear Mapping Between MNI Volumetric and FreeSurfer Surface Coordinate System**
Jianxiao Wu¹, Gia Ngo², Douglas Greve³, Bruce Fischl³, Simon Eickhoff⁴, B.T. Thomas Yeo²
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- 4101 Effects of MEG–MRI coregistration error on functional connectivity estimates**
Federico Chella^{1,2}, Laura Marzetti^{1,2}, Matti Stenroos³, Lauri Parkkonen³, Risto Ilmoniemi³, Gian Luca Romani^{1,2}, Vittorio Pizzella^{1,2}
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- 4102 Reproducible TBM and ROI Analyses Using the BrainSuite Statistics Toolbox (BSS)**
Shantanu Joshi¹, Yeun Kim¹, Anand Joshi², Richard Leahy², David Shattuck¹
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- 4103 A pipeline for evaluating geometric distortion in magnetic resonance images: application to 7T**
Jonathan Lau¹, Patrick Park¹, Keith MacDougall¹, Andrew Parrent¹, Terry Peters¹, Ali Khan¹
¹Western University, London, Canada

4104 A framework based on sulcal constraints to register preterm, infant and adult human brain images.

Jessica Lebenberg¹, Mickael Labit², Guillaume Auzias³, Mohlberg Hartmut⁴, Clara Fischer², Denis Rivière¹, Claire Kabdebon⁵, Francois Leroy⁵, Timo Dickscheid⁴, Lucie Hertz-Pannier⁶, Cyril Poupon⁷, Ghislaine Dehaene-Lambertz⁵, Petra Huppi⁸, Katrin Amunts⁴, Jessica Dubois⁵, Jean-François Mangin⁹
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4105 Comparative Mapping Cortical Local Gyrification between Human and Macaque during Infancy

Jing Xia^{1,2}, Li Wang², Dingna Duan², Zhengwang Wu², Cuijin Lao², Yongchang Chen³, Yuyu Niu³, Caiming Zhang¹, Weili Lin², Dinggang Shen², Gang Li²
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4106 High-resolution Insights into the Fiber Architecture of a Vervet Brain with 3D-PLI

Markus Axer¹, David Gräßel¹, Nicola Palomero-Gallagher², Marcel Huysegoms¹, Martin Schober¹, Isabelle Mafoppa¹, Philipp Schlömer¹, Yann Leprince¹, Matthew Jorgensen³, Roger Woods⁴, Karl Zilles¹, Katrin Amunts¹
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4107 Validation of ROI-based morphometry implemented in the Computational Anatomy Toolbox (CAT12)

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4108 Comparison of FreeSurfer longitudinal and cross-sectional streams for children's brain morphometry

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4109 MRI-Based Iron and Myelin Mapping with Volumetric vs. Combined Volumetric-Surface Normalization

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4110 Validation of Metric Optimization-based Surface Mapping for the Prediction of Hippocampal Subfields

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4111 3D visualization and quantification of axonal dispersion

Katarina Yaros¹, Jelle Veraart², Liang Fengxia¹, Jasmine Pathan¹, Sungheon Kim², Dmitry Novikov², Els Fieremans²
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MODELING AND ANALYSIS METHODS

Methods Development

4112 Inflated false positive rates in fMRI depend on the voxel size of normalized images

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4113 Evaluating measures of cortical morphology: What features does fractal dimensionality index?

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4114 Effective connectivity eigenmodes produced by unified theory of neuro-MRI data

Vitaly Galinsky¹, Lawrence Frank¹
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4115 Construction of individual morphological brain network with multiple morphometric features

Wan Li¹, Chunlan Yang¹, Feng Shi², Shuicai Wu¹, Qun Wang³, Yingnan Nie¹, Xin Zhang¹
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4116 Guideline for clustering threshold selection in cluster-based permutation test for EEG/MEG data

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4117 Equitable Thresholding and Clustering

Robert Cox¹
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- 4118 Speeding Up FreeSurfer using Marching Cubes and Spectral Projection**
Lee Tirrell¹, Bruce Fischl^{1,2,3}, Douglas Greve^{1,2}, Martin Reuter^{4,1,2,3}
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- 4119 Inference of effective connectivity from functional connectivity**
James MacLaurin¹, Peter Robinson¹
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- 4120 Nonlinear brain region interactions associated with nicotine addiction**
Nicholas Allgaier¹, Philip Spechler¹, Xiaoyu Ding², Yuzheng Hu³, Thomas Ross⁴, Elliot Stein⁵, Hugh Garavan¹
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- 4121 Retrieving laminar profiles in the human cortex from in vivo 3T T1-w MRI, validated at 7T**
Bart Ferguson¹, Natalia Petridou², Alessio Fracasso², Martijn van den Heuvel³, Rachel Brouwer⁴, Hilleke Hulshoff Pol⁴, Rene Kahn⁴, Rene Mandl⁴
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- 4122* Sparse coupled hidden Markov models to probe temporally overlapping functional network interactions**
Thomas Bolton^{1,2}, Dimitri Van De Ville^{1,2}
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- 4123 Optimising Structure from Function using Biophysical Simulations**
Jonathan Hadida^{1,2}, Romesh Abeysuriya², Saad Jbabdi¹, Stamatios Sotiropoulos¹, Mark Woolrich^{2,1}
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- 4124 Nonlinear Harmonic Generation and Wave-Wave Interactions in the Brain**
Mariya Ferdousi¹, Tahereh Babaie¹, Peter Robinson¹
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- 4125 Miss-SDM: a voxelwise meta-analytic method that uses unbiased effect sizes and standard statistics**
Anton Albajes-Eizaguirre¹, Aleix Solanes¹, Raymond Salvador¹, Erick Canales-Rodríguez¹, Edith Pomarol-Clotet¹, Joaquim Radua²
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- 4126 Shifted Least Squares: a simple method to model lag differences of single-trial BOLD responses**
Wouter Weeda¹
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- 4127 Autism: Knowledge-based functional connectivity Enrichment Analysis**
Wei Cheng¹, Edmund T. Rolls², Jie Zhang¹, Jianfeng Feng¹
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- 4128 White Matter Hyperintensity Segmentation**
Franklin W. Feingold¹, Kevin S. King², Paul M. Thompson¹, Meredith N. Braskie¹
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- 4129 Characterizing task-evoked brain activity using inter-subject synchronization dynamics**
Taylor Bolt¹, Jason Nomi², Shruti Vij³, Lucina Uddin³
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- 4130 The Power of Negative Thinking: A Serious Treatment of Non-Trivial Edges**
Liang Zhan¹, Lisanne Jenkins², Ouri Wolfson², Johnson GadElkarim², Paul M. Thompson³, Olusola Ajilore², Moo Chung⁴, Alex Leow²
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- 4131 A statistical testing framework for brain-wide association study**
Weikang Gong¹, Lin Wan², Jianfeng Feng³
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- 4132 Microstates: Improvement in the topographic segmentation using Empirical Mode Decomposition**
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- 4133 Keep a cool head: The effect of fixation temperature on human brain post mortem MRI**
Rachel Barrett¹, Istvan Bodi², Diana Marques Dias², Teresa Rodriguez², Sashika Selvackadunco², Claire Troakes², Steven Williams², Marco Catani¹, Flavio Dell'Acqua¹
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- 4134 MR Tool: a SPM-based toolbox for structural MR imaging analyses**
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- 4135 When the conventional intraclass correlation computation fails, a nudge from Bayes can help**
Gang Chen¹, Simone Haller¹, Katharina Kircanski¹, Joel Stoddard¹, Daniel Pine¹, Ellen Leibenluft¹, Melissa Brotman¹, Robert Cox¹
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- 4136 Refining Variability Estimates in Neuroimaging: The BOLD Volatility Index**
David Moreau¹, Kristina Wiebels¹, Reece Roberts¹
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- 4137 Slice-direction geometric distortion correction with reversed slice-select gradient scans and topup**
Anna Blazejewski¹, Thomas Witzel², Lawrence Wald³, Jonathan Polimeni⁴
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- 4138 Towards optimal bias field correction using multi-contrast MRI data**
Sara Lorio¹, Antoine Lutti², Amy McDowell¹, Jamie Kawadler¹, Nikolaus Weiskopf³, David Carmichael¹
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- 4139 Subject-independently B1 shimmed brain imaging at 7T pTX**
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- 4140 Common-space embedding of private data without collocation**
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- 4141 Arterial transit delays can cause inaccurate identification of functional connectivity networks**
Hesam Jahani¹, Thomas Christen¹, Michael Moseley¹, Greg Zaharchuk¹
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- 4142 Simultaneous whole-brain fMRI activation analysis using spatially adaptive kernel CCA method**
Zhengshi Yang¹, Xiaowei Zhuang¹, Tim Curran², Richard Byrd², Rajesh Nandy³, Virendra Mishra¹, Karthik Sreenivasan¹, Dietmar Cordes¹
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- 4143 Seed-based dual regression for detection of fMRI functional connectivity**
Robert Kelly¹, Matthew Hoptman², Martin McKeown³
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- 4144 A new method to estimate HRF containing high frequency content**
Xiaowei Zhuang¹, Zhengshi Yang¹, Virendra Mishra¹, Karthik Sreenivasan¹, Dietmar Cordes¹
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- 4145 Randomized voxel based morphometry for studying sex differences in cortical myelin repartition**
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- 4146 Geometric Convolutional Neural Network for Analyzing Surface-Based Neuroimaging Data**
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- 4147 Learning brain regions via large-scale online structured sparse dictionary-learning**
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- 4148 A Robust Matlab Tool for Gyral Measurements**
Shadia Mikhael¹, Calum Gray², Tom MacGillivray², Maria Valdes Hernandez³, Corné Hoogendoorn⁴, Cyril Pernet⁵
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- 4149 LISA - a new threshold-free and non-parametric statistical inference method for fMRI data**
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- 4150 Improving Stability of Imaging-Behavioral CCA with Supervised Dimension Reduction**
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- 4151 The Construction of Cell-based Reporter Model for anti- Cerebral Ischemia**
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- 4152 Informed N4 bias-field correction**
Michael Woletz¹, André Hoffmann¹, Daniela Pfabigan², Thomas Vanicek¹, Nicole Geissberger¹, Martin Tik¹, Bastian Auer², Georg Kranz¹, Katharina Paul², Christoph Kraus¹, Claus Lamm², Rupert Lanzenberger¹, Christian Windischberger¹
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- 4153 Topic Models for the Cognitive Neuroscience Literature**
Jérôme Dockès¹, Olivier Grisel¹, Fabian Suchanek², Bertrand Thirion¹, Gael Varoquaux¹
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- 4154 A model-free approach for HRF estimation from resting state fMRI data**
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4155 Auto-encoders denoise blood oxygenation level-dependent signals and improve group inferenceJong-Hwan Lee^{1,2}, Vinai Roopchansingh³, J. Andrew Derbyshire³, Peter Bandettini¹¹Section on Functional Imaging Methods, National Institute of Mental Health, Bethesda, MD,²Department of Brain and Cognitive Engineering, Korea University, Seoul, Korea, Republic of,³Functional MRI Core Facility, National Institute of Mental Health, National Institutes of Health, Bethesda, MD**4156 Is representational similarity analysis stable across a broad range of overall fMRI activity levels?**Spencer Arbuckle¹, Atsushi Yokoi¹, Jorn Diedrichsen¹¹Brain and Mind Institute, Western University, London, Canada**4157 Large-Scale Classification of Recurrent Major Depression Disorder in Adult Using EPIC**Marc Harrison¹, Brandalyn Riedel², Dajiang Zhu², Gautam Prasad², Neda Jahanshad³, Ilya Veer⁴, Henrik Walter⁵, Lianne Schmaal⁶, Dick Veltman⁷, Dominik Grotegerd⁸, Udo Dannlowski⁹, Claas Kähler⁹, Tim Hahn¹⁰, Jim Lagopoulos¹¹, Sean Hatton¹², Pedro Rosa¹³, Geraldo Busatto Filho¹⁴, Maristela Schaufelberger¹⁴, Christopher Davey¹⁵, Ben Harrison¹⁵, Jair Soares¹⁶, Benson Mwangi¹⁶, Danai Dima¹⁷, James Cole¹⁸, Cynthia Fu¹⁷, Nynke Groenewold¹⁹, Dan Stein²⁰, Philipp Saemann²¹, Paul Thompson²²¹Imaging Genetics Center, University of California, Marina Del Rey, CA, ²University of Southern California, Los Angeles, CA, ³Imaging Genetics Center, USC, Marina del Rey, CA, ⁴Charité – Universitätsmedizin Berlin, Berlin, Germany, ⁵Charité Universitätsmedizin Berlin, Berlin, Germany, ⁶Orygen, The National Centre of Excellence in Youth Mental Health, Melbourne, Australia, Melbourne, Australia, ⁷VU University Medical Center, Amsterdam, Netherlands, ⁸Forchungsbereich Transtionale Psychiatrie, Klinik für Psychiatrie und Psychotherapie, Münster, Germany, ⁹University of Münster, Münster, Germany, ¹⁰Gothe University Frankfurt, Frankfurt, Germany, ¹¹University of the Sunshine Coast, Sunshine Coast, QLD, ¹²University of Sydney, La Jolla, CA, ¹³University of São Paulo, São Paulo, Brazil, ¹⁴University of São Paulo, University of São Paulo, Brazil, ¹⁵The University of Melbourne, Melbourne, Australia, ¹⁶University of Texas Health Science Center at Houston, Houston, TX, ¹⁷King's College London, London, United Kingdom, ¹⁸Imperial College London, London, United Kingdom, ¹⁹University of Cape Town, Cape Town, South Africa, ²⁰Department of Psychiatry and Mental Health, University of Cape Town, Cape Town, South Africa, ²¹University of Groningen, Groningen, Netherlands, ²²Imaging Genetics Center, University of Southern California, Marina Del Rey, CA**4158 Single subject network based on regional distribution of cortical thickness in Alzheimer disease**Yong-Ho Choi¹, Hunki Kwon¹, Bo-Hyun Kim¹, Jong-Min Lee¹¹Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of**4159 Reproducibility of Cortical Thickness Measurement: CIVET (v2.1) vs. Freesurfer (v6.0-beta & v5.3)**Seun Jeon¹, Claude Lepage¹, Lindsay Lewis¹, Najmeh Khalili-Mahani¹, Patrick Bermudez¹, Robert Vincent¹, Alex Zijdenbos², Mona Omidyeganeh¹, Reza Adalat¹, Alan Evans¹¹McGill Centre for Integrative Neuroscience, Montreal Neurological Institute, McGill University, Montreal, Canada, ²Biospective, Inc., Montreal, Canada**4160 Amplitude Characteristics of Resting-State Networks in Parkinson's Disease using EMD**Dietmar Cordes¹, Muhammad Kaleem², Xiaowei Zhuang¹, Karthik Sreenivasan¹, Zhengshi Yang¹, Virendra Mishra¹, Ryan Walsh¹¹Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, NV, ²University of Management and Technology, Lahore, Pakistan**4161 Psychophysiological interaction of co-activation patterns: tracking task-dependent brain activity.**Lorena Freitas^{1,2}, Thomas Bolton^{1,2}, Delphine Jochaut³, Anne-Lise Giraud³, Petra Huppi², Dimitri Van De Ville^{1,2}¹École Polytechnique Fédérale de Lausanne, Switzerland, ²Faculty of Medicine, University of Geneva, Switzerland, ³Department of Neurosciences, University of Geneva, Switzerland**4162 Neuropointillist: Bringing the Flexibility of R to Voxelwise Modeling of fMRI Data**Tara Madhyastha¹, Matthew Peverill², Natalie Koh¹, Connor McCabe¹, John Flournoy³, Kevin King¹, Katie McLaughlin², Thomas Grabowski¹¹University of Washington, Seattle, WA, ²Psychiatry, University of Washington, Seattle, WA,³University of Oregon, Eugene, OR**4163 Cortical Surface Based Threshold Free Cluster Enhancement and Cortex-wise Mediation**Tristram Lett¹, Lea Waller², Heike Tost³, Ilya Veer⁴, Arash Nazeri⁵, Susanne Erk⁶, Eva Brandl⁷, Katrin Charlet⁷, Anne Beck⁷, Sabine Vollstädt-Klein⁸, Anne Jorde⁸, Falk Kiefer⁸, Andreas Heinz⁴, Andreas Meyer-Lindenberg⁹, M. Mallar Chakravarty¹⁰, Henrik Walter⁷¹Charité, Berlin, Germany, ²Charité - Universitätsmedizin Berlin, Berlin, Berlin, ³Central Institute of Mental Health, Medical Faculty Mannheim, University of Heidelberg, Mannheim, Germany, ⁴Charité – Universitätsmedizin Berlin, Berlin, Germany, ⁵Centre for Addiction and Mental Health, Toronto, Canada, ⁶Department of Psychiatry and Psychotherapy, Charité Universitätsmedizin, Berlin, Germany, ⁷Charité Universitätsmedizin Berlin, Berlin, Germany, ⁸Central Institute of Mental Health, Mannheim, Germany, ⁹Central Institute of Mental Health, Heidelberg University, Mannheim, Germany, ¹⁰Department of Biological and Biomedical Engineering, McGill University, Montreal, Quebec**4164 Bias in Neuroimaging Effect Sizes**Marianne Reddan¹, Martin Lindquist², Tor Wager¹¹Department of Psychology and Neuroscience, University of Colorado at Boulder, Boulder, CO,²Johns Hopkins University, Baltimore, MD**4165 Frequency Characteristics of Default Mode Network using Empirical Mode Decomposition and Group ICA**Dietmar Cordes¹, Muhammad Kaleem², Xiaowei Zhuang¹, Karthik Sreenivasan¹, Zhengshi Yang¹, Virendra Mishra¹¹Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, NV, ²University of Management and Technology, Lahore, Pakistan**4166 Human MR Evaluation of Cortical Thickness Using CIVET-2.1**Claude Lepage¹, Lindsay Lewis¹, Seun Jeon¹, Patrick Bermudez¹, Najmeh Khalili-Mahani¹, Mona Omidyeganeh¹, Alex Zijdenbos², Robert Vincent¹, Reza Adalat¹, Alan Evans¹¹McGill Centre for Integrative Neuroscience, Montreal Neurological Institute, McGill University, Montreal, Quebec, Canada, ²Biospective, Inc., Montreal, Quebec, Canada**4167 Confound Suppression in resting State fMRI using Sliding Window and Running Mean**Cameron Trapp¹, Kishore Vakamudi¹, Stefan Posse^{1,2,3}¹University of New Mexico - Department of Neurology, Albuquerque, NM, ²University of New Mexico - Department of Physics and Astronomy, Albuquerque, NM, ³University of New Mexico - Department of Electrical Engineering, Albuquerque, NM**4168 Simulation Test Suite for Evaluation of MRI Cortical Thickness Pipelines**Claude Lepage¹, Lindsay Lewis¹, Seun Jeon¹, Patrick Bermudez¹, Mona Omidyeganeh¹, Alex Zijdenbos², Robert Vincent¹, Reza Adalat¹, Alan Evans¹¹McGill Centre for Integrative Neuroscience, Montreal Neurological Institute, McGill University, Montreal, Quebec, Canada, ²Biospective, Inc., Montreal, Quebec, Canada

- 4169 An fMRI informed EEG source localization method based on space-time-frequency structured constraints**
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- 4170 Prior Knowledge Oriented Independent Component Analysis (pICA) for Component Identification in fMRI**
Gengyan Zhao¹, Vivek Prabhakaran¹, Beth Meyerand¹, Rasmus Birn¹
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- 4171* Spatial Confidence Sets - Beyond Null Hypothesis Testing of Cluster Size.**
Alexander Bowring¹, Armin Schwartzman², Max Sommerfeld³, Thomas Nichols¹
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- 4172 Random Field Theory: Conservative corrections in current fMRI research due to low smoothing levels**
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- 4173 Brain Connectivity-Informed Regularization Methods for Regression**
Marta Karas¹, Damian Brzyski¹, Joaquin Goni², David Kareken³, Timothy Randolph⁴, Mario Dzemidzic³, Jaroslaw Harezlak¹
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- 4174 Exploratory Multidimensional Persistent Homology of Functional Connectivity Networks**
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- 4175 Quasi-Periodic Patterns: From Individuals to Subgroups**
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- 4176 TDA barcodes to identify topological features of resting state fMRI time courses in healthy subjects**
Darwin Martínez Riaño^{1,2}, Jorge Rudas¹, Athena Demertzi³, Lizette Heine⁴, Andrea Soddu⁵, Edward Becerra¹, José Perea⁶, Steven Laureys⁴, Francisco Gómez¹
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- 4177 Detecting the Temporal Characteristics of Dynamical Interactions**
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- 4178 Fast linear mixed effect model for multi-subject task fMRI analysis**
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- 4179 Powerful Permutation Tests for Neuroimaging using Voxel-wise Transformations**
Simon Vandekar¹, Theodore Satterthwaite¹, Adon Rosen¹, Rastko Ciric¹, David Roalf¹, Kosha Ruparel², Ruben Gur¹, Raquel Gur², Russell Shinohara¹
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- 4180 Inter-Subject Alignment of MEG Datasets at the Neural Representational Space**
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- 4181 Habenula Resting-State fMRI: Evaluation of ROI Optimization Strategies**
Benjamin Ely¹, Emily Stern¹, Junqian Xu¹
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- 4182 Topological data analysis of fMRI signals in the hippocampus during learning: Function to structure**
Raviteja Suryadevara¹, Sean DeBusschere², Asadur Chowdury³, Vaibhav Diwadkar⁴, Andrew Salch⁵
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- 4183 Brain activity dynamics revealed by activation-deactivation modeling of fMRI data**
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- 4184 Advocating prevalence estimation for single subject replicability in MVPA**
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- 4185 Automatic Search of Control Points in Cortical Thickness Analysis**
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- 4186 Mapping the human somatosensory cortex by high resolution fMRI at 7T using a multi-scale technique**
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- 4187 Assessing small sample bias in coordinate based meta-analyses for fMRI**
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- 4188 A novel non-parametric threshold-free method to produce fMRI activation maps**
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- 4189 Persistence homology of brain geometry: a marker for preterm birth.**
Amanmeet Garg¹, Ken Poskitt², Kevin Fitzpatrick³, Bruce Bjornson⁴, Steven Miller⁵, Ruth Grunau³, Mirza Faisal Beg¹
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- 4190 FSLeves: FSL's new image viewer**
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- 4191 Modeling Dynamic Connectivity with Recurrent Neural Networks**
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- 4192 Cross Frequency Coupling in Non-linear and Non-sinusoidal Neuronal Oscillations**
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- 4193 Ultra-High-Speed Resting State fMRI using Simultaneous Multi-Slab Echo-Volumar Imaging**
Stefan Posse¹, Sudhir Ramanna², Steen Moeller³, Rebecca Ramb⁴, Kishore Vakamudi⁵, Cameron Trapp⁵, Ricardo Otazo⁴, Essa Yacoub⁶
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- 4194 Imaging Human Adult Hippocampal Aberrant Neurogenesis**
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- 4195 Comparing Nonlinear Registration Methods to Assess Brain Volume Loss with Aging**
Christina Boyle¹, Greg Fleishman¹, Oscar Lopez², James Becker², Paul M. Thompson³
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- 4196 Functional Brain Networks Analysis Based on Multiplex Visibility Graph**
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SOCIAL NEUROSCIENCE

Self Processes

- 4197 Self-esteem modulates insula activity response to mortality salience effect in self-face processing**
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- 4198 A fMRI study on Relational Self using Social Comparison and Reflected Appraisal**
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- 4199 Am I female or male? Neural correlates of gender identity**
Birgit Derntl¹, Jessica Junger², Katharina Pauly³, Ute Habel²
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- 4200 Theory of Mind and the Game of Chicken**
Justin Campbell¹, Bradley Robinson¹, Nick Wan¹, Kerry Jordan¹
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- 4201* Unique neural representations of the self**
Yina Ma¹
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- 4202 Neural correlates of self-criticism and self-praise and their relation to mindfulness and depression**
Jacqueline Lutz¹, Annette Brühl², Uwe Herwig²
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SOCIAL NEUROSCIENCE

Social Cognition

- 4203* Learning the neurobiology of social behavior from data: Four networks underlying social cognition**
Daniel Alcalá-López¹, Jonathan Smallwood², Elizabeth Jefferies², Frank Van Overwalle³, Kai Vogeley⁴, Rogier Mars⁵, Angie Laird⁶, Peter Fox⁷, Simon Eickhoff⁸, Danilo Bzdok⁹
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- 4204 Brain Activity in Response to Feedback on Face-Based Trait Inferences in Older and Younger Adults**
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- 4206 Brain-based Lifespan Trajectory of Social Cognition: From Resting-state fMRI Perspective**
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- 4207 Social life modulates neural connectivity in the primate brain**
Davide Folloni¹, Lennart Verhagen¹, Jerome Sallet¹, MaryAnn Noonan¹, Matthew Rushworth¹, Rogier Mars^{2,3}
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- 4208 Implicit perceived vocal trustworthiness negatively correlates with Amygdala activation**
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- 4210 Neural correlates of laughter interpretation biases and the relation to physical aggression**
Anne Martinelli¹, Benjamin Kreifelts², Dirk Wildgruber², Anka Bernhard¹, Katharina Ackermann¹, Christine Freitag¹, Christina Schwenck^{3,1}
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- 4211 Is disclosure moderated by social brain connectivity? A comparison of connections across the brain.**
John Flournoy¹, Kathryn Mills¹, Nandita Vijayakumar¹, Arian Mobasser¹, Theresa Cheng¹, Jessica Flannery¹, Michelle Byrne¹, Alison Helzer¹, Monika Lind¹, Nicholas Allen¹, Jennifer Pfeifer²
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- 4212 Cooperation in autism and conduct disorder: an fMRI study**
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- 4213 Effects of Racial Bias on Working Memory During Competition for Attention: An ERP Study**
Guadalupe Gonzalez¹, David Schnyer¹
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- 4214 Disentangling Empathy Related Processes in the Human Brain**
Ayam Greental^{1,2}, Ofir Shany^{2,3}, Gadi Gilam^{1,2}, Maya Bleich-Cohen², Daniella Perry-Ziv², Avihay Cohen², Moran Ovadia², Talma Hendler^{1,2,3}, Gal Raz^{1,2}
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- 4215 Neural Correlates of Empathy for Pleasant and Unpleasant Touch across the Life-span**
Federica Riva¹, Melanie Tschernegg², Patrizia Chiesa³, Martin Kronbichler², Giorgia Silani¹, Claus Lamm⁴
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- 4216 Interdependent self-construal influences early attention capture during feedback processing**
Daniela Pfabigan¹, Claus Lamm², Shihui Han¹
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- 4217 Neural Responses to Dynamic Pain Expression of Same-Race and Other-Race Faces**
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- 4218 Impaired activation of social perception networks in the 22q11.2 deletion syndrome**
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- 4219 Functional Network Changes Following Cognitive Training in Individuals at Risk for Psychosis**
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- 4220 Cross-modal integration in social communication areas in naturalistic tasks**
Gaurav Patel¹, Cheryl Corcoran¹, Sophie Arkin¹, Casimir Klim¹, Javier Lopez-Calderon¹, Antigona Martinez¹, Rebecca Berman², David Leopold², Daniel Javitt¹
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- 4221 Effective connectivity in two Theory of Mind tasks**
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- 4222 Differentiating altruistic and strategic decisions in striatum and vmPFC: An AES-SDM meta-analysis**
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- 4223* A Network for Social Interaction Understanding in the Primate Brain**
Julia Sliwa¹, Winrich Freiwald²
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- 4224 Neural processes involved in cognitive and affective Theory of mind: validation of verbal task**
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- 4225 Contingent Negative Variation During Social Dilemmas**
Nick Wan¹, Justin Campbell¹, Bradley Robinson¹, Kerry Jordan¹
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- 4226* Social Neuroimaging Meta-Analysis through the RDoC Lens Yields Distinct Context-Driven Cliques**
Emily Boeving¹, Afra Toma¹, Michael Riedel¹, Jessica Bartley¹, Katie Bottenhorn², Danilo Bzdok³, Simon Eickhoff⁴, Matthew Sutherland¹, David Glahn⁵, Angie Laird¹
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- 4227 Brain Networks Associated with Adolescent Loneliness**
Janelle Beadle¹, Abi Heller¹, David Warren², Vince Calhoun³, Julia Stephen³, Yu-Ping Wang⁴, Tony Wilson²
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- 4228 fMRI meta-analyses support an integrative framework for empathy and counter-empathy**
Di Fu^{1,2}, Yanyan Qi^{1,2}, Haiyan Wu¹, Wenyu Wan³, Bowen Ran³, Syeda Raiha^{1,2}, Xun Liu^{1,2}
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- 4229 Intrinsic brain networks as a schema to delineate brain activity in movie watching**
Zheng-Zheng Deng¹, Yang Hu¹, Hao-Ming Dong¹, Jia-Qi Gao¹, Jin-Feng Wu¹, Xi-Nian Zuo¹, Zhi Yang¹
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- 4230 Common and distinct neural substrates of subjective and objective fairness: An fMRI meta-analysis**
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- 4231 Neural signatures of social norm enforcement and violation: A coordinate-based meta-analysis**
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- 4232 The dynamic social brain**
Ryan Kopstick¹, Christine Tipper¹
¹University of British Columbia, Vancouver, BC
- 4234 Neural correlates of social rejection in borderline personality disorder and major depression**
Kathrin Malejko¹, Dominik Neff¹, Birgit Abler¹, Heiko Graf¹
¹Ulm University, Ulm, Germany
- 4235 MR hyper-scanning reveals BOLD correlation differences when interact with different identities**
Kevin Tsai¹, Pu-Yeh Wu², Claire Hui-Chuan Chang³, Jacky Tai-Yu Lu², Shu-Yu Huang², Jo-Fu Lin², Wen-Jui Kuo³, Ying-Hua Chu², Hsin-Ju Lee³, Fa-Hsuan Lin²
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- 4236 Neural correlates of mental communication in social intention**
Shu-Hui Lee¹, Meng-Chuan Lai², Hsiang-Yuan Lin³, Susan Gau³, Tai-Li Chou¹
¹National Taiwan University, Taipei, Taiwan, ²University of Toronto, Toronto, Canada, ³National Taiwan University Hospital and College of Medicine, Taipei, Taiwan
- 4237 Transmission of Knowledge through Interpersonal Neural Synchronization**
Lifen Zheng¹, Yuhang Long¹, Wenda Liu¹, Hui Zhao¹, Xialu Bai¹, Chunming Lu¹
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- 4238 The neural signatures of egocentric bias in normative decision-making**
Chunliang Feng¹, Zhihao Li², Yuejia Luo²
¹Beijing Normal University, Beijing, China, ²Shenzhen University, Shenzhen, China
- 4239* Acculturation is associated with two-brain neural coupling during interaction in ethnic minorities**
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- 4240 Enhancement of empathy for pain by vicarious reward measured with skin conductance response**
Mizuki Nakajima¹, Aziem Abdullah¹, Sotaro Shimada¹
¹Meiji University, Kawasaki, Japan
- 4241 The human brain views denial of altruism from genetic vs. non-genetic siblings differently**
Mareike Bacha-Trams¹, Enrico Gleran¹, Juha Lahnakoski², Elisa Ryyppö¹, Sams Mikko¹, Iiro Jääskeläinen¹
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- 4242 Neural responses to others' pain during group conflict**
Xiaochun Han¹, Ting Zhang¹, Shihui Han¹
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- 4243 Child Adversity, Adolescent Family and Peer Support and Neural Responses to Rejection Feedback**
Jessica Fritz¹, Jason Stretton², Nick Walsh³, Susanne Schweitzer², Tim Dalgleish², Bernet Elzinga⁴, Ian Goodyer¹, anne-Laura van Harmelen¹
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- 4244 The modulation effect of significant others' attitudes on one's shopping decisions**
Chiu-Yueh Chen¹, Chun-Chia Kung¹
¹National Cheng Kung University, Tainan, Taiwan

SOCIAL NEUROSCIENCE

Social Interaction

- 4233 The Neural Correlates of Seeing Bayesian Ghosts**
Imme Christina Zillekens¹, Marie-Luise Brandt¹, Juha Lahnakoski¹, Atesh Koul², Valeria Manera³, Cristina Beccio⁴, Leonhard Schilbach¹
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4245 Coupling of Brains in Love: An fMRI Hyperscanning Study

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4246 Reward processing during gaze-based social interaction

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4247 Learning changes group identification

Björn Lindström¹, Alexander Soutcheck¹, Pyungwon Kang¹, Grit Hein¹, Philippe Tobler¹

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4248 Neural Circuit of Eye Contact in Verbal Communication Predicts Autistic Traits in Neurotypicals

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4249 Attachment-dependent reward response to praise in the dog brain

Anna Gábor¹, Márta Gácsi¹, Sara Świerkosz¹, Ádám Miklósi¹, Attila Andics¹

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4250 The Influence of Cognitive Dissonance on Social Dilemmas: an EEG study

Bradley Robinson¹, Kerry Jordan¹, Nicholas Wan¹, Justin Campbell¹

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4253 Blunted insula activation reflects increased risk-taking in MAOA low participants after testosterone

Ute Habel¹, Mikhail Votinov¹, Sina Radke¹, Benjamin Clemens¹, Frank Schneider², Christian Montag³, Sonja Jung³, Lisa Wagens¹

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4254 Responsibility modulates the neural correlates of regret during a sequential risk taking task

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4255 The neural correlates of gender differences in Aggressive jokes and Nonaggressive jokes

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4256 Distinct neural coding of same-race and other-race faces

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4257 Generalizability of a brain marker for vicarious pain to interpersonal pain empathy

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4258* Predicting Personality from Network-based Resting-State Functional Connectivity

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4259 Reminders of mortality decrease neural responses to feedback of missing own reward during learning

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4260 Masked priming of social and emotional cues affects cognitive conflict mechanisms: An ERPs study

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SOCIAL NEUROSCIENCE

Social Neuroscience Other

4251 Meta-analysis of aberrant brain activity in psychopathy

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4252 Masked social status cues modulate attention: An Event-related Potentials study

Sabela Fondevila¹, Su Miao Ye Chen¹, David Hernández-Gutiérrez¹, Javier Espuny¹, Laura Jimenez-Ortega^{1,2}, Pilar Casado^{1,2}, Francisco Muñoz Muñoz^{1,2}, Manuel Martín-Loeches^{1,2}

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4261 Harm avoidance meditates the relationship between Cingulum fasciculus and aggression

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A

Aarabi, Ardalan – 1875 MT
 Aarnoutse, Erik – 3544 WTh
 Abaei, Maryam – 3868 WTh, 3884 WTh
 Abate, Filomena – 3194 WTh
 Abbara, Ali – 1438 MT
 Abbas, Anzar – 1923 MT, 1945 MT, 1989 MT
 Abbas, Kausar – 3263 WTh, 4087 WTh
 Abbasi, Nooshin – 3052 WTh, 3217 WTh
 Abbasi, Omid – 3558 WTh
 Abbasi, Sima – 3217 WTh
 Abbott, Christopher – 1031 MT, 1217 MT
 Abboud, Sami – 2131 MT
 Abdallah, Chadi – 1138 MT
 Abdallah, Chifaou – 1762 MT
 Abdel Rahman, Rasha – 3633 WTh
 Abdolalizadeh, Amirhussein – 3052 WTh, 3217 WTh
 Abdullah, Aziem – 4240 WTh
 Abdulrahman, Hunar – 1458 MT
 Abe, Mitsunari – 3457 WTh
 Abe, Sumiko – 3930 WTh, 3931 WTh
 Abe, Sumiko – 1698 MT
 Abend, Rany – 1381 MT
 Abeysuriya, Romesh – 1758 MT, 4123 WTh
 Abi-Dargham, Anissa – 2217 MT
 Abler, Birgit – 1933 MT, 4234 WTh
 Ablin, Pierre – 1760 MT
 Abner, Erin – 3814 WTh
 Aboitiz, Francisco – 3776 WTh
 Aboud, Katherine – 3637 WTh
 Abraham, Alexandre – 3916 WTh
 Abrams, Daniel – **3678 WTh**
 Abreu, Rodolfo – 3983 WTh
 Abrol, Anees – 1505 MT
 Abu-Amara, Duna – 3145 WTh
 Aburn, Matthew – 4072 WTh
 Acar, Freya – 4187 WTh
 Accascina, Simone – 1960 MT
 Acharya, Alaka – 3044 WTh
 Acheson, Ashley – 1113 MT
 Ackerley, Suzanne – 3244 WTh
 Ackermann, Katharina – 4210 WTh
 Acosta-Cabronero, Julio – 3734 WTh
 Acton, Paul – 3004 WTh
 Adair, Devin – 1018 MT
 Adalat, Reza – 3432 WTh, 3440 WTh, 3483 WTh, 4159 WTh, 4166 WTh, 4168 WTh
 Adam, Claude – 1629 MT
 Adam, Ramina – 3222 WTh
 Adamczuk, Kate – 4041 WTh
 Adamczyk, Agnieszka – 1408 MT

Adamczyk, Przemysław – 1304 MT
 Adams, Janet – 1578 MT
 Adamson, Chris – 2029 MT, 3833 WTh, 3864 WTh
 Adamson, Christopher – 3829 WTh
 Adan, Ana – 3424 WTh, 3662 WTh, 3706 WTh
 Adcock, Jane – **1889 MT**
 Addington, Jean – 4076 WTh
 Adedeji, Ayo – 2143 MT, 2145 MT
 Adeli, Ehsan – 3902 WTh
 Ades-Aron, Benjamin – 3064 WTh
 Ades-Aron, Benjamin – 1811 MT
 Adhikari, Bhim – 1463 MT
 Adisetiyo, Vitria – 1099 MT
 Adkinson, Brendan – 1431 MT, 1928 MT
 Adler, Sophie – 3104 WTh, 3109 WTh
 Adli, Mazda – 2198 MT
 Aerts, Hannelore – 1274 MT, 4015 WTh
 Aftanas, Lyubomir – 1241 MT
 Afyouni, Soroosh – 4033 WTh
 Afyouni, Soroosh – 1812 MT, 1816 MT
 Agartz, Ingrid – 1339 MT, 1348 MT, 2002 MT
 Agcaoglu, Oktay – 1808 MT
 Aglinskis, Aidas – 3725 WTh
 Ahissar, Merav – 3696 WTh
 Ahn, Byeong-Cheol – 3041 WTh
 Ahn, Hyun Jung – 1034 MT
 Ahn, Hyun-Jung – 2120 MT
 Ahn, Jaeun – 3094 WTh
 Ahn, Sangtae – 1406 MT
 Ahrens, Stefan – 2215 MT
 Ahtam, Banu – 1920 MT, 3471 WTh
 Ai, Leo – 1046 MT
 Aibir, Reza – 2084 MT
 Aigbirhio, Franklin – 3048 WTh
 Aigner, Christoph – 1443 MT
 Ailion, Alyssa – 1270 MT
 Aimoto, Takeru – 2101 MT
 Aine, Cheryl – **1330 MT**
 Ainslie, Phil – 2204 MT
 Airey, Megan – 1231 MT
 Aissa, Joel – 3179 WTh
 Aitken, Michael – 1109 MT
 Ajilore, Olu – 1584 MT
 Ajilore, Olusola – 4130 WTh
 Åkerstedt, Torbjörn – 1909 MT
 Akin, Burak – 3119 WTh, 4154 WTh
 Akintola, Abimbola – 1259 MT
 Akkermans, Sophie – 1290 MT, 1562 MT
 Akparian, Vania – 1799 MT
 Aksoy, Murat – **1581 MT**
 Al Dahhan, Noor – 1480 MT
 Al-Diwani, Adam – 3062 WTh

Al-Fahad, Rakib – 3910 WTh
 Al-Loos, Rita – 1767 MT
 Al-Shargabi, Tareq – 3509 WTh
 Alaerts, Kaat – 1962 MT
 Alain, Claude – 1633 MT
 Alamian, Golnoush – 1314 MT
 Alanis, Jose – 3373 WTh
 Alavash, Mohsen – **2074 MT**, 4021 WTh
 Albajes-Eizaguirre, Anton – 1865 MT, 3464 WTh, 4125 WTh
 Albaugh, Matthew – 1136 MT, 3146 WTh, 3151 WTh, 3317 WTh, 3360 WTh, 3469 WTh, 3871 WTh
 Albouy, Geneviève – 2196 MT, 3749 WTh
 Albouy, Philippe – 3696 WTh
 Albrecht, Franziska – 3173 WTh
 Alcalá-López, Daniel – **4203 WTh**
 Alcauter, Sarael – 1101 MT, 1105 MT, 1111 MT, 1112 MT, 1523 MT, 2103 MT, 3643 WTh
 Alda, Martin – 1324 MT
 Alday, Phillip – 1761 MT
 Aldenkamp, Albert – 1064 MT
 Alearts, Kaat – 1454 MT
 Aleman, Andre – 1236 MT, 1237 MT, 1241 MT, 1318 MT, 1349 MT
 Aleman, André – 1308 MT, 1338 MT
 Alemi, Razieh – 3688 WTh
 Alexander, Bonnie – 3833 WTh
 Alexander, Daniel – 3019 WTh
 Alexander-Bloch, Aaron – 2009 MT
 Alfaro-Almagro, Fidel – 1666 MT, 1704 MT, 1824 MT, 1911 MT, 3461 WTh, 4019 WTh
 Alfayate, Eva – 1535 MT
 Alhamud, A. – 1597 MT
 Alimohammadi, Seyed Meysam – 3581 WTh
 Alizadeh, Sarah – 1840 MT, **3762 WTh**
 Aljabar, Paul – 3298 WTh
 Alkawadri, Rafeed – 3105 WTh
 Alkire, Diana – 1917 MT
 Alkomiet, Hasan – 1367 MT, 3580 WTh
 Alkozei, Anna – 1378 MT
 Alkozei, Anna – 1379 MT
 Allan, Charlotte – 1870 MT
 Allard, Michèle – 1498 MT
 Allefeld, Carsten – 1709 MT, 1728 MT, 1828 MT, 1842 MT, 3920 WTh
 Allemang-Grand, Rylan – 3489 WTh
 Allen, Nicholas – 3849 WTh, 4211 WTh
 Allendorfer, Jane – 3110 WTh
 Allexandre, Didier – 1976 MT, 3399 WTh
 Allgaier, Nicholas – 1136 MT, 3146 WTh, 3151 WTh, 3317 WTh, 3360 WTh, 3469 WTh, 3871 WTh, 4120 WTh

Allison, Brendan – 1961 MT
 Alloza Romero, Clara – 1306 MT
 Allsop, Joanna – 1748 MT, 3868 WTh, 3884 WTh
 Alm, Kylie – 3727 WTh
 Almane, Dace – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh
 Almasy, Laura – 3313 WTh
 Almeida, Rita – 1909 MT
 Almor, Amit – 3636 WTh
 Alonazi, Batil – 1608 MT
 Alonso, Pino – 1295 MT
 Alpert, Kathryn – 1324 MT, 2033 MT, 3036 WTh
 Alqam, Nabil – 3792 WTh
 Altaye, Mekibib – 1265 MT, 1578 MT, 3133 WTh
 Althoff, Robert – 1136 MT, 3146 WTh, 3151 WTh, 3317 WTh, 3360 WTh, 3470 WTh, 3871 WTh
 Altinkaya, Ayca – 1896 MT
 Altmann, Andre – **3294 WTh**, 3296 WTh
 Altukhov, Dmitrii – 1314 MT
 Álvarez, Blanca – 3009 WTh
 Alvarez-Amador, Alfredo – 3430 WTh
 Alves, Jordan – 1181 MT
 Alwethinani, Shatha – 1642 MT, 3120 WTh
 Amadon, Alexis – 3485 WTh
 Aman, Joshua – 3218 WTh
 Amann, Benedikt – 3899 WTh
 Amaral, Laura – 1916 MT
 Amaral-Pontes, Selene – 4186 WTh
 Amaro Jr., Edson – 2124 MT
 Amedi, Amir – 2151 MT, 2168 MT, 3425 WTh
 Ameis, Stephanie – 1158 MT
 Ameis, Stephanie – 1195 MT, 1924 MT
 Amengual, Julià – 1629 MT, 2078 MT
 Amini, Ahmad – 2035 MT, 4023 WTh
 Amirbekian, Bagrat – 1710 MT
 Amsel, Larry – 1251 MT
 Amtage, Florian – **1000 MT**
 Amunts, Katrin – **1567 MT**, 1661 MT, 1862 MT, 1869 MT, 1886 MT, 1999 MT, 2045 MT, 3297 WTh, **3613 WTh**, 3790 WTh, 3796 WTh, 3815 WTh, **3915 WTh**, 4104 WTh, 4106 WTh
 An, Jie – 1609 MT
 An, Li – 1221 MT
 Anagnostou, Evdokia – 1195 MT
 anand, amit – 4069 WTh
 Ances, Beau – 1258 MT, 1261 MT
 Andersen, Linda – 1628 MT, 3817 WTh
 Anderson, Adam – 4035 WTh
 Anderson, Jeffrey – 3962 WTh
 Anderson, John – 4180 WTh
 Anderson, Michael – 3377 WTh
 Anderson, Nathaniel – 1935 MT

Anderson, Peter – 3829 WTh, 3833 WTh
 Andersson, Gerhard – 1130 MT
 Andersson, Jesper – 1561 MT, 1748 MT, 3868 WTh, 3884 WTh
 Andescavage, Nickie – 3509 WTh
 Andics, Attila – 1435 MT, 4249 WTh
 Andoh, Jamila – 3756 WTh
 Andreano, Joseph – 3794 WTh
 Andreassen, Ole – 1205 MT, 1324 MT, 2002 MT
 Andreassen, Ole – 1339 MT, 1348 MT
 Andrews, Derek – 1166 MT, 1328 MT, 3439 WTh, 3444 WTh
 Andriola, Diana – 1917 MT
 Androvičová, Renata – 1943 MT
 Andryskova, Lenka – 3836 WTh
 Anés, Maurício – 3139 WTh
 Ang, Desmond – 1300 MT
 Angeles Quinto, Annemarie – 1024 MT, 3283 WTh
 Angeles-Valdez, Diego – 1111 MT
 Angeles-Valez, Diego – 1105 MT
 Angstadt, Mike – 3292 WTh
 Angulo-Perkins, Arafat – 1101 MT, 1112 MT
 Anikin, Anatoly – 1275 MT, 1277 MT
 Annoni, Jean-Marie – 1081 MT
 Ansakorpi, Hanna – 3124 WTh
 Anstey, Kaarin – 3404 WTh
 Antees, Cassandra – 3948 WTh
 Anticevic, Alan – 1309 MT, 1431 MT, 1928 MT, 2218 MT
 Anticevic, Alan – 3324 WTh
 Anticevic, Alan – 1335 MT
 Anton, Jean-Luc – 1496 MT, 3653 WTh
 Antosz, Anna – 2002 MT
 Antshel, Kevin – 1611 MT
 Anwander, Alfred – 1296 MT, 3737 WTh
 Anwar, Abdul Rauf – 1003 MT
 Anzures, Gizelle – 3381 WTh
 Aoki, Ryuta – 3714 WTh, 4004 WTh
 Aponte, Eduardo – 1982 MT
 Apostolova, Liana – 3016 WTh
 Appelbaum, Lawrence – 2191 MT, 3772 WTh, 3773 WTh
 Appenzeller, Simone – 3073 WTh
 Appiah, Kofi – **3705 WTh**
 Apple, Alexandra – 1262 MT
 Apud, Jose – 1326 MT, 1329 MT
 Aquino, Kevin – 1763 MT, 1786 MT
 Arab Kheradmand, Jalil – 1455 MT
 Aravand, Puya – 1479 MT
 Arbuckle, Spencer – 4156 WTh
 Ard, Tyler – 1881 MT

Arfanakis, Konstantinos – 1798 MT, 3534 WTh, 3792 WTh, 3799 WTh
 Argyelan, Miklos – 1217 MT
 Arias Vasquez, Alejandro – 3144 WTh
 Arichi, Tomoki – 1153 MT, 3856 WTh
 Arkin, Sophie – 4220 WTh
 Arloth, Janine – 1466 MT
 Armony, Jorge – 1407 MT
 Armstrong, Nicola – 3303 WTh
 Arnaez-Telleria, Jaione – 3717 WTh
 Arnold, Paul – 1283 MT, 1285 MT
 Arnold, Paul – 1291 MT, 1292 MT
 Arnold, Ronert – 3048 WTh
 Arnold Anteraper, Sheeba – 1192 MT
 Arnulf, Isabelle – 3175 WTh
 Arolt, Volker – 1125 MT, 1131 MT
 Aron, Adam – 3372 WTh
 Arridge, Simon – 3598 WTh
 Arrigoni, Filippo – 3661 WTh
 Arslan, Dilek Betul – 3187 WTh, 3200 WTh, 3584 WTh, 3585 WTh
 Arthur, Joy – 1017 MT
 Arzy, Shahar – 1887 MT, 2151 MT, 3148 WTh
 Asai, Tomohisa – 1964 MT
 Asaridou, Salomi – 3618 WTh
 Ascheid, Sonja – 1392 MT
 Aselcioglu, Irem – 1303 MT
 Asghar, Mohammad – 2135 MT
 Ashburn, Sikoya – 3649 WTh
 Ashburner, John – 1690 MT
 Ashe-McNalley, Cody – 1278 MT, 2149 MT, 3935 WTh
 Ashford, Jason – 3768 WTh
 Ashtari, Manzar – 1479 MT, 2028 MT
 Askren, Mary – 3005 WTh
 Assaf, Yaniv – 3436 WTh, 4078 WTh
 Assaiante, Christine – 3858 WTh
 Asseconci, Sara – 2186 MT
 Aston, John – 1522 MT
 Asturias, Alex – 1750 MT
 Asturias, Alexander – 1788 MT
 Aubinet, Charlene – 2094 MT
 Audrain, Samantha – 3129 WTh
 Auer, Bastian – **1058 MT**, 1242 MT, 4152 WTh
 Auer, Tibor – 1686 MT, 1695 MT, 1704 MT, 1706 MT, 3743 WTh
 Augustinack, Jean – 3473 WTh
 Aumentado-Armstrong, Tristan – 1679 MT
 Aupperle, Robin – 1559 MT
 Aur, Dorian – 1037 MT
 Auriat, Angela – 3237 WTh
 Authié, Colas – 3476 WTh

Autio, Joonas – 2216 MT, **3186 WTh**
 Auzias, Guillaume – 3533 WTh, 4104 WTh
 Avants, Brian – 1984 MT
 Avela, Janne – 2160 MT
 Avesani, Paolo – 2055 MT
 Avila, Cesar – 1940 MT
 Axelsson, Jan – 3779 WTh
 Axer, Markus – **3613 WTh**, 4106 WTh
 Axmacher, Nikolai – 3713 WTh
 Aydin, Ümit – 1785 MT, 3556 WTh
 Ayoub, Lizbeth – 3092 WTh
 Ayrancı, Gülebru – 3021 WTh
 Aziz-Zadeh, Lisa – 1189 MT, 3232 WTh
 Azondekon, Roseric – 1792 MT
 Azzouz, Nour – 1169 MT
 A'Darceuil, Helen – 2068 MT

B

Babaie, Tahereh – 4124 WTh
 Babajani-Feremi, Abbas – 1875 MT, 3017 WTh, 3685 WTh, 3687 WTh
 Babajani-Feremi, Abbas – 3569 WTh
 Babayan, Anahit – 3812 WTh
 Babenko, Viktoriya – 1788 MT
 Babul, Shelina – 3267 WTh
 Bach, Dominik – 1126 MT, 1419 MT
 Bacha-Trams, Mareike – 4241 WTh
 Bachatene, Lyes – 1538 MT
 Bachhuber, David – 2202 MT
 Bachmann, Katharina – 3143 WTh
 Bachtar, Velicia – 1052 MT
 Bäckman, Lars – 3779 WTh
 Bacon, Tamar – 3064 WTh
 Baczowski, Blazej – **1395 MT**, 1833 MT, 1991 MT, 3400 WTh
 Badhwar, AmanPreet – 1713 MT
 Badier, Jean Michel – 1635 MT
 Badillo, Solveig – 3639 WTh
 Baecke, Sebastian – 1555 MT
 Baehrend, Ina – **1039 MT**
 Baek, Ji-Won – 3273 WTh
 Baek, Kwangyeol – 3999 WTh
 Baek, So – 2010 MT
 Baeken, Chris – 1042 MT, 1064 MT
 Baete, Steven – **1741 MT**, 2060 MT
 Baez, Sebastian – 3223 WTh
 Bagarinao, Epifanio – 1143 MT, 1952 MT
 Bagga, Deepika – 1443 MT, 3715 WTh
 Bagley, Jennifer – **1882 MT**
 Bagshaw, Andrew – 1636 MT
 Bahnmueller, Julia – 3429 WTh
 Bahri, Mohamed – 3167 WTh
 Bahs, Nathalie – 1084 MT
 Bai, Xialu – 4237 WTh
 Bai, Xialu – 3590 WTh
 Bai, Yuntong – 1332 MT
 Baig, Fahd – 3191 WTh
 Bailey, Christopher – 2190 MT
 Bailey, Stephen – 3637 WTh
 Baillet, Sylvain – 2171 MT
 Baillet, Sylvain – 1753 MT, 2130 MT, 3551 WTh
 Bain, Anaëlle – 1972 MT
 Bains, Lauren – 1552 MT
 Baird, Jessica – 3230 WTh
 Bajaj, Sahil – 1378 MT, 1379 MT
 Bajbouj, Malek – 1250 MT
 Baker, Chris – 1062 MT, 1616 MT, 1842 MT, 3666 WTh
 Baker, Chris – 1430 MT
 Baker, Dewleen – 1024 MT, 3283 WTh
 Baker, Gareth – 3598 WTh
 Baker, Halen – 1381 MT
 Baker, Seth – 2217 MT
 Baker, Travis – 3202 WTh, 3339 WTh, 3373 WTh
 Bakhshmand, Saeed – 1739 MT
 Bakker, Geor – 3318 WTh, **3320 WTh**
 Bal, Amanat – 3141 WTh
 Bal, Tim – 3682 WTh
 Balachander, Rakesh – 3036 WTh
 Balba, Nadir – 1196 MT
 Balchandani, Priti – 2119 MT
 Baldeweg, Torsten – 3104 WTh, 3109 WTh
 Balducci, Thania – 1089 MT, 1105 MT, 1111 MT
 Baliki, Marwan – 1799 MT
 Ball, Gareth – 2029 MT, 3864 WTh
 Ball, Tonio – 1014 MT, 1539 MT
 Ballard, Grey – 1385 MT
 Ballarini, Tommaso – 3166 WTh, 3171 WTh
 Balsters, Joshua – 3345 WTh
 Baltacı, Ayşegül – 3589 WTh
 Balteau, Evelyne – 3167 WTh
 Balzus, Luisa – 1298 MT
 Bammer, Roland – **1581 MT**
 Banaschewski, Tobias – 3151 WTh, 3469 WTh
 Banasr, Mounira – 1248 MT
 Banaszkiwicz, Anna – 3616 WTh, 3617 WTh
 Bandettini, Peter – **1015 MT**, 1054 MT, 2110 MT, 3539 WTh, 3540 WTh, 3605 WTh, 3947 WTh, 4029 WTh, 4155 WTh
 Banerjee, Arpan – 3835 WTh
 Bania, Magda – 3368 WTh
 Banich, Marie – 4084 WTh
 Banks, Matthew – 2095 MT

Banks, Sarah – 2015 MT, 3038 WTh, 3178 WTh, 3208 WTh, 3478 WTh, 4054 WTh
 Bansal, Priya – 1046 MT
 Bapi, Raju – 3835 WTh
 Baquero, Katherine – 3167 WTh
 Bär, Karl-Jürgen – 1517 MT, 1796 MT
 Baran, Bengi – 1169 MT, 3690 WTh
 Baranov, Alexandr – 1275 MT, 1277 MT
 Barban, Francesco – 3063 WTh
 Barber, Peter – 3244 WTh
 Barber, Thomas – 3191 WTh
 Barber Foss, Kim – 1578 MT
 Barbieri, Riccardo – 1528 MT
 Barch, Deanna – 3371 WTh, **4000 WTh**
 Barch, Deanna – 1247 MT
 Bardien, Soraya – 3190 WTh
 Bardinet, Eric – 3175 WTh
 Bardouille, Timothy – 1955 MT, 1957 MT, 3396 WTh, 3549 WTh, 3741 WTh
 Barendse, Marjolein – 3849 WTh
 Barensse, Morgan – 3711 WTh
 Bareš, Martin – 1531 MT
 Bargalló, Núria – 3424 WTh, 3662 WTh, 3706 WTh
 Bari, Sumra – 3270 WTh, 4087 WTh
 Baria, Alex – 1799 MT
 Barilla, Holly – 1121 MT
 Barker, Gareth – 3582 WTh
 Barker, Roger – 3932 WTh
 Barkhof, Frederik – 3015 WTh
 Barkley-Levenson, Emily – 1545 MT
 Barlaam, Fanny – 1181 MT, 1972 MT
 Barlow, Karen – 3272 WTh
 Barman, Poulami – 3908 WTh
 Barmet, Christoph – 1521 MT
 Barnden, Leighton – 3085 WTh
 Barnes-Davis, Maria – 1638 MT, 2062 MT
 Barnett, Alexander – 3129 WTh
 Barnett, Jennifer – 1320 MT
 Barnett, Michael – 1661 MT, 2164 MT
 Baron-Cohen, Simon – 1161 MT, 3439 WTh
 Barone, Jordan – **3862 WTh**
 Barr, Alasdair – 1876 MT
 Barral, Jérôme – 3518 WTh
 Barreira, Christy – 3278 WTh
 Barrett, Frederick – 3413 WTh
 Barrett, Lisa – 3794 WTh
 Barrett, Rachel – 2068 MT, 4133 WTh
 Barrios, Fernando – 1523 MT, 2103 MT
 Barron, Daniel – 1663 MT
 Barry, Erica – 1328 MT
 Barteček, Richard – 1531 MT
 Bartels, Andreas – 3428 WTh

Barth, Markus – 1534 MT
 Bartha, Robert – 3248 WTh, 3278 WTh
 Bartha-Doering, Lisa – 3630 WTh, 3855 WTh
 Bartley, Jessica – **1674 MT**, 3415 WTh, **4226 WTh**
 BARTOLOMEI, Fabrice – 1635 MT, 1637 MT, 1762 MT
 Bartolomeo, Paolo – 2131 MT
 Barton, Brian – 1540 MT
 Bas-Hoogendam, Janna Marie – 1130 MT
 Başar Eroğlu, Canan – 3200 WTh
 Bashivan, Pouya – 3940 WTh
 Basilio, Rodrigo – 3245 WTh
 Baskak, Bora – 3589 WTh
 Bassett, Anne S. – 3318 WTh
 Bassett, Danielle – 1200 MT, **1302 MT**, 1821 MT, 3120 WTh, 3123 WTh, **4058 WTh**, 4092 WTh
 Bassett, Danielle – 1303 MT
 Basti, Alessio – 1775 MT
 Bastiaansen, Jojanneke – 1237 MT
 Bastiani, Matteo – 1748 MT, 1749 MT, 3868 WTh, 3884 WTh
 Bastin, Christine – 3894 WTh
 Bastin, Mark – 1306 MT
 Basu, Shinjini – 3174 WTh
 Batalla, Albert – 3451 WTh
 Batalle, Dafnis – 1148 MT, 1153 MT, 3846 WTh
 Bateman, Alain – 3310 WTh
 Bates, Sara – 1662 MT
 Batouli, Seyed Amir Hossein – 1452 MT, 1455 MT, 1541 MT, 1602 MT, 3581 WTh, 3688 WTh
 Batta, Ishaan – 1836 MT
 Battal, Ceren – 2177 MT
 Battistella, Giovanni – 1081 MT
 Baú, Claiton Henrique – 3139 WTh
 Bauer, Andrew – 3619 WTh
 Bauer, Anna-Katharina – 2130 MT
 Bauer, Clemens – 1368 MT, 2103 MT, 3374 WTh
 Bauer, Markus – 1763 MT
 Baum, Graham – 1821 MT
 Baum, Stefi – 1119 MT, 1157 MT
 Baumeister, Sarah – 1156 MT
 Baumeister, Tobias – 3207 WTh
 Baumgarten, Thomas – 1273 MT
 Baumgärtner, Ulf – 2141 MT
 Baune, Bernhard – 1241 MT
 Bause, Jonas – 2211 MT
 Baxter, Leslie – 3105 WTh
 Bayen, Ute – 3790 WTh
 Bayer, Mareike – 1632 MT
 Bayram, Ali – 3080 WTh, 3126 WTh
 Bazin, Pierre-Louis – **2022 MT**
 Bazinet, Alissa – 1508 MT

Beadle, Janelle – 4227 WTh
 Beall, Erik – 1478 MT, 1807 MT, 3162 WTh
 Bearden, Carrie – 1324 MT
 Bearden, Carrie – 1335 MT
 Bearden, Carrie E. – 3318 WTh, **3320 WTh**, 3321 WTh, 3474 WTh, 4076 WTh
 Beardsley, Scott – 1644 MT
 Beare, Richard – 3829 WTh, 3833 WTh
 Beare, Richard – 2029 MT, 3864 WTh
 Beaton, Derek – 3248 WTh
 Beatrice, Kirsch – 1256 MT
 Beauchamp, Michael – 3668 WTh, 3675 WTh, 3676 WTh
 Beaujoin, Justine – 1733 MT, 2039 MT
 Beaulieu, Christelle – 3285 WTh
 Beaulieu, Christian – 3059 WTh, 3925 WTh
 Beaulieu, Christian – 1606 MT
 Bebin, E – 3110 WTh
 Beccio, Cristina – 4233 WTh
 Becerra, Edward – 4176 WTh
 Becerra, Lino – 2135 MT
 Beck, Anne – 4163 WTh
 Beck, Desiree – 3578 WTh
 Beck, Jonas – 3720 WTh
 Beck, Natacha – 1679 MT, 1714 MT, 3483 WTh
 Becke, Andreas – 3734 WTh
 Becker, James – 3488 WTh, 4195 WTh
 Becker, Robert – 1921 MT
 Beckmann, Christian – 1912 MT, 1987 MT, 3439 WTh, 3865 WTh, 3868 WTh
 Beckmann, Christian – 1149 MT, 1167 MT, 1190 MT
 Beckmann, Christian – 1843 MT, 3712 WTh, 3884 WTh, 3994 WTh, 4034 WTh
 Bédard, Patrick – 1980 MT, 3348 WTh
 Bede, Peter – 3506 WTh
 Bedetti, Christophe – 1582 MT
 Bedford, Alexandra – 1158 MT
 Bednarska, Olga – 1260 MT, 1456 MT
 Bedny, Marina – 3731 WTh, 3732 WTh
 Beeghly, Marjorie – 3878 WTh, 3887 WTh
 Beer, Anton – 1591 MT
 Beers, Craig – 3103 WTh, 3119 WTh
 Beese, Caroline – 3624 WTh
 Beevers, Christopher – 3997 WTh
 Beg, Mirza Faisal – 3036 WTh, 4189 WTh
 Beglinger, Christoph – 1474 MT
 Begnel, Erin – 1610 MT
 Behrens, Timothy – 1749 MT
 Behzad, Ibrahim – 3688 WTh
 Beissner, Florian – 1925 MT, 2137 MT
 Beisteiner, Roland – 1825 MT, 2035 MT, 4023 WTh
 Bekha, Dhaif – 3869 WTh

Bekkers, Eline – 3406 WTh, 3412 WTh
 Belden, Andy – 1247 MT
 Belger, Aysenil – 3757 WTh, 4076 WTh
 Belin, Pascal – 4208 WTh
 Beliveau, Vincent – 1234 MT
 Bell, Peter – 3209 WTh
 Bellana, Buddhika – 3711 WTh
 Bellec, Pierre – 1704 MT, 1713 MT, 3313 WTh
 Bellec, Pierre – 3941 WTh, 3950 WTh
 Bells, Sonya – 3060 WTh
 Bells, Sonya – 3573 WTh
 Beltzer, Miranda – 1436 MT
 Belyaev, Mikhail – 1275 MT, 1277 MT
 Ben Amitay, Shany – 3436 WTh
 Ben Zion, Ziv – 1381 MT
 Benali, Habib – 1785 MT, 1947 MT, 3749 WTh
 BENAR, Christian – 1013 MT, 1635 MT, 1637 MT
 Benavides, Caridad – 2217 MT
 Bencurova, Petra – 3836 WTh
 Bender, Stephan – 1173 MT, 3253 WTh
 Benders, Manon – 3867 WTh
 Bendfeldt, Kerstin – 1720 MT
 Bendová, Marie – 1963 MT
 Benedetti, Francesco – 1291 MT, 1292 MT
 Benhajali, Yassine – 1713 MT
 Benitez, Amaia – 3466 WTh
 Benjamin, Christopher – 3105 WTh
 Benjamins, Caroline – 1530 MT, 3384 WTh
 Bennett, Daniel – 1761 MT
 Bennett, David – 1798 MT, 3051 WTh, 3534 WTh, 3792 WTh, 3799 WTh
 Bennett, Jean – 1479 MT, 2028 MT
 Bennett, Matthew – 2180 MT, 2192 MT
 Bennett, Maxwell – 3830 WTh
 Bennett, Monica – 3629 WTh
 Benson, Brian – 3599 WTh
 Bento, Mariana – 3073 WTh
 Beregi, Jean-Paul – 1268 MT
 Berg, Jeffrey – 3728 WTh
 Bergamino, Maurizio – 1226 MT, 1559 MT
 Berger, Isabelle – 1081 MT
 Berger, Jonathan – 3511 WTh
 Berger, Mitchel – 1710 MT
 Bergmann, Johanna – 2107 MT
 Berl, Madison – 1944 MT, 3105 WTh
 Berleant, Shoshana – 1820 MT
 Berlim, Marcelo – 3299 WTh
 Berlow, Rustin – 3529 WTh
 Berman, Gordon – 1945 MT
 Berman, Karen – 1326 MT, 3704 WTh
 Berman, Karen – 1329 MT, 3311 WTh, **3862 WTh**
 Berman, Rebecca – 4220 WTh

Bermudez, Patrick – 3432 WTh, 3440 WTh, 4159 WTh, 4166 WTh, 4168 WTh
 Berna, Fabrice – 1346 MT
 Bernacchia, Alberto – 3324 WTh
 Bernadel-Huey, Olivia – 1804 MT
 Bernal, Jorge – 1711 MT
 Bernard, Jérémy – 2039 MT
 Bernard, Katy – 3025 WTh
 Bernarding, johannes – 1555 MT
 Bernasconi, Andrea – 3123 WTh
 Bernasconi, Neda – 3123 WTh
 Berner, Laura – 3098 WTh
 Bernhard, Anka – 4210 WTh
 Bernhardt, Boris – **1172 MT**, 2091 MT
 Bernhardt, Boris – 3123 WTh
 Bernick, Charles – 2015 MT
 Bernier, Pierre-Michel – 1626 MT, 1770 MT
 Berrington, Adam – 1052 MT
 Berron, David – 3734 WTh
 Bertoldo, Alessandra – 3519 WTh
 Bertolero, Maxwell – 2034 MT
 Bertolino, Alessandro – 1324 MT
 Besseling, Rene – 1064 MT
 Besson, Pierre – 1637 MT
 Bethlehem, Richard – 1161 MT
 Bethune, Allison – 3290 WTh
 Betts, Matthew – 3697 WTh
 Betzel, Richard – **1302 MT**, **4058 WTh**, 4075 WTh
 Beucke, Jan – 1291 MT, 1292 MT
 Beume, Lena – **3243 WTh**
 Beutner, Frank – 1257 MT
 Bevan-Jones, William – 3048 WTh
 Bey, Katharina – 1298 MT, 1299 MT
 Beyea, Steven – 1465 MT, 3549 WTh
 Beyer, Frauke – 3783 WTh, 3800 WTh, 3812 WTh
 Beyh, Ahmad – 1858 MT, **2050 MT**, 2065 MT, 2167 MT
 Beynel, Lysianne – 3772 WTh, 3773 WTh
 Bezdíček, Ondřej – 3166 WTh, 3171 WTh
 Bezgin, Gleb – 1177 MT, 1676 MT
 Bhagwat, Nikhil – 3021 WTh
 Bhatia, Sanjay – 1620 MT, 3964 WTh
 Bhatnagar, Seema – 1121 MT
 Bhatt, Ravi – 3141 WTh
 Bhatt, Ravi – 1278 MT
 Bhattacharyya, Pallab – 2046 MT, 3043 WTh, 3583 WTh
 Bhattra, Avnish – 2063 MT
 Bhide, Sayuli – **3678 WTh**
 Bhogawar, Suyash – 1680 MT
 Bhushan, Chitresh – 3266 WTh
 Bhuta, Sandeep – 3085 WTh

Bhutta, Muhammad Raheel – 3597 WTh
 Bi, Kun – 3550 WTh
 Bi, Qiuhui – 3027 WTh
 Biancardi, Marta – 3992 WTh
 Bianchi, Diana – 3859 WTh
 Bianchi, Frederick – 3403 WTh
 Bianco, Roberta – 1970 MT
 Biazoli Jr, Claudinei – 1916 MT, 3854 WTh
 Bibikov, Sergei – 1690 MT
 Bick, Atira – 1887 MT
 Bickel, Stephan – 1937 MT
 Bickel, Warren – 1082 MT
 Bickerton, Wai-Ling – 3380 WTh
 Bieck, Silke – 3418 WTh
 Bielecki, Maksymilian – 3493 WTh
 Bienkowski, Przemyslaw – 1442 MT
 Biermann-Ruben, Katja – 3634 WTh
 Bigdely Shamlo, Nima – 1678 MT
 Biggs, Emma – 1460 MT
 Biggs, Emma – 1393 MT
 Bijsterbosch, Janine – 1859 MT, 1890 MT, 1911 MT, 4020 WTh, 4036 WTh
 Bikson, Marom – 1019 MT, 1022 MT
 Bilek, Edda – **4239 WTh**, 4245 WTh
 Bilgic, Basar – 3187 WTh, 3200 WTh, 3584 WTh, 3585 WTh, 4039 WTh
 Bilgic, Berkin – 1296 MT
 Billeke, Pablo – 3531 WTh
 Billey, Roxane – 1606 MT
 Billiet, Thibo – 1263 MT
 Billings, Jacob – 1945 MT, 2208 MT
 Binder, Ellen – **3189 WTh**
 Binder, Jeffrey – 2100 MT, 2104 MT, 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh
 Binkofski, Ferdinand – 1044 MT
 Bird, Christopher – 2069 MT, 2071 MT, 3038 WTh, 3208 WTh, 3210 WTh, 3211 WTh, 3478 WTh, 4054 WTh
 Birdsill, Alex – 3822 WTh, 3825 WTh
 Biringen, Erin – 2148 MT
 Birn, Rasmus – 3128 WTh, 3130 WTh, 4071 WTh, 4170 WTh
 Birn, Rasmus – 1432 MT, 3645 WTh
 Birsoy, Tansu – 3427 WTh
 Bischof, Gerard – 3008 WTh
 Bisenius, Sandrine – 3034 WTh, 3173 WTh
 Bissett, Patrick – 3375 WTh
 BISWAL, BHARAT – 1442 MT, 1590 MT, 1899 MT
 Biswal, Bharat – 1317 MT, 3107 WTh
 Bittner, Kelsey – 3473 WTh
 Bittner, Nora – 3790 WTh
 Bizzi, Alberto – 3683 WTh

Björnholm, Lassi – 2044 MT
 Bjornsdotter, Malin – 2152 MT, 3095 WTh
 Bjornson, Bruce – 1213 MT, 1737 MT, 4189 WTh
 Bjornson, Bruce – 1736 MT
 Black, Sandra – 3237 WTh, 3248 WTh
 Black, Shana – 3292 WTh
 Blackwood, Mallory – 3109 WTh
 Blain-Moraes, Stefanie – 2102 MT
 Blair, Ross – 1680 MT, 1820 MT, 1951 MT, 3375 WTh
 Blakely, Timothy – 3521 WTh
 Blamire, Andrew – 1914 MT, 3195 WTh
 Blangero, John – 2009 MT, 3308 WTh, 3313 WTh
 Blankenburg, Felix – 1981 MT, 2105 MT, 3347 WTh, 3753 WTh
 Blasi, Anna – 3598 WTh
 Blazejewski, Anna – 4137 WTh
 Bleich-Cohen, Maya – 4214 WTh
 Blessing, Esther – 3145 WTh
 Bletsch, Anke – 1166 MT, 3444 WTh
 Bloechle, Johannes – 3418 WTh, 3429 WTh
 Blommaert, Jeroen – 1263 MT
 Bloom, Steve – 1438 MT
 Bludau, Sebastian – 1862 MT
 Blumberger, Daniel – 1065 MT, 1243 MT
 Blumberger, Daniel – 1037 MT
 Blumcke, Ingmar – 3477 WTh
 Boada, Fernando – **1741 MT**, 2060 MT
 Bobes, María – 1589 MT
 Bobes, María – 3389 WTh
 Bobes, María Antonieta – 2170 MT, 3091 WTh
 Bock, Elizabeth – 2171 MT
 Bock, Nicholas – 1203 MT
 Bockholt, H. Jeremy – 1932 MT, 2064 MT
 Bockholt, Jeremy – 3168 WTh, 3301 WTh
 Boddaert, Nathalie – 1560 MT, 3607 WTh
 Bode, Stefan – 1761 MT
 Bodi, Istvan – 4133 WTh
 Bodurka, Jerzy – 1128 MT, 1228 MT, 1229 MT, 1301 MT, 1459 MT, 1462 MT, **1613 MT**, 1614 MT, 3138 WTh
 Boe, Shaun – 1955 MT, 1957 MT, 3396 WTh, 3741 WTh, 3748 WTh
 Boedhoe, Premika – 1292 MT, 1463 MT
 Boegle, Rainer – 2115 MT, 2122 MT, 3499 WTh
 Boegle, Rainer – 2011 MT, 2118 MT
 Boeke, Emily – 1311 MT
 Boerwinkle, Varina – 3100 WTh
 Boes, Aaron – 1907 MT
 Boesen, Mikael – 2135 MT
 Boeve, Jordan – 3878 WTh, 3887 WTh
 Boevig, Emily – 1942 MT, 3415 WTh, **4226 WTh**

Bogler, Carsten – 3692 WTh
 Bogorodzki, Piotr – 3579 WTh
 Bohlhalter, Stephan – 1343 MT, 1344 MT, 3184 WTh
 Bohon, Cara – 3096 WTh
 Bohr, Lara – 3796 WTh
 Boiteau, Tim – 3636 WTh
 Boix, Cristina – 3424 WTh, 3662 WTh, 3706 WTh
 Bokde, Arun – 3151 WTh, 3469 WTh
 Bola, Michal – 3990 WTh
 Bola, Łukasz – 2127 MT, 3616 WTh, 3617 WTh
 Bolhuis, Koen – 3870 WTh
 Bolin, David – 1727 MT
 Bollmann, Saskia – 1534 MT
 Bollmann, Steffen – 1997 MT
 Bolt, Taylor – 4129 WTh
 Bölte, Sven – 1168 MT, 1170 MT, 1174 MT
 Bolton, Thomas – 4025 WTh, **4122 WTh**, 4161 WTh
 Boly, Melanie – 2095 MT
 Bonath, Björn – 3697 WTh
 Bonavia, Grant – 3261 WTh
 Bonetti, Gaia – 3250 WTh
 Bonhomme, Vincent – 2095 MT
 Bonmassar, Giorgio – 1641 MT
 Bonvino, Aurora – 1324 MT
 Bookheimer, Susan – 1155 MT, 1182 MT, 3105 WTh
 Bookheimer, Susan – 1164 MT, 1594 MT
 Boomsma, Dorret – 3853 WTh
 Boon, Paul – 1064 MT, 3114 WTh
 Boop, Frederick – 3569 WTh
 Boos, Amy – 3219 WTh
 Bopp, Miriam – 1233 MT
 Boraxbekk, Carl-Johan – 1130 MT
 Borchardt, Viola – 1041 MT, 3385 WTh, 3990 WTh
 Borchert, Robin – 3048 WTh
 Boré, Arnaud – 1582 MT
 Borges, Victor – 3244 WTh
 Borgwardt, Stefan – 1474 MT
 Borhani, Soheil – 2084 MT
 Borich, Michael – 1055 MT, 1070 MT, 1923 MT, 2072 MT, 3081 WTh, 3254 WTh
 Borne, Léonie – 2001 MT
 Bornfleth, Harald – 1765 MT
 Bornstein, Robert – 1442 MT
 Boroshok, Austin – **3862 WTh**
 Borowiak, Kamila – 1146 MT
 Borowsky, Ron – 1503 MT, 3654 WTh
 Borst, Grégoire – 2001 MT
 Borst, Jelmer – 4180 WTh
 Borzage, Matt – 1272 MT
 Bosco, Paolo – 1176 MT, 1878 MT
 Bosma, Rachael – 2138 MT
 Bosnyak, Daniel – 3563 WTh

Bosseler, Alexis – 3677 WTh
 Bossert, Meija – 3190 WTh
 Bottenhorn, Katherine – **1428 MT, 1674 MT, 1942 MT, 4226 WTh**
 Bottlaender, Michel – 3485 WTh
 Botvinik-Netzer, Rotem – 3331 WTh
 Boucetta, Soufiane – 1370 MT
 Boudes, Elodie – 1241 MT
 Boudrias, Marie-Hélène – 1801 MT, 1826 MT, 3798 WTh
 Bouffet, Eric – 1276 MT, 1417 MT, 3449 WTh
 Bouffet, Eric – 3573 WTh, 3890 WTh
 Bougacha, Salma – 3609 WTh
 Bouix, Sylvain – 1611 MT
 Boukadi, Mariem – 1582 MT
 Boukrina, Olga – 3944 WTh
 Boulet-Craig, Aubrée – 3767 WTh
 Bourdet, Dorothy – 1745 MT
 Bourguignon, Mathieu – 3572 WTh
 Bourke, Niall – 3279 WTh
 Bourque, Josiane – 1896 MT
 Bouts, Mark – 1595 MT, 3015 WTh
 Bouwsema, Hanneke – 1460 MT
 Bouyeure, Antoine – 3867 WTh, 3869 WTh
 Bowden, Stephen – 1948 MT
 Bowden-Jones, Henrietta – 1107 MT, 1109 MT
 Bowman, DuBois – 3917 WTh, 3982 WTh, 4061 WTh
 Bowman, Hilary – 1182 MT
 Bowring, Alexander – 1708 MT, **4171 WTh**
 Boyd, Emma – 3473 WTh
 Boyd, Lara – 1056 MT, 1057 MT, 1627 MT, 2111 MT, 3224 WTh, 3237 WTh, 3267 WTh, 3486 WTh, 3742 WTh, 4085 WTh
 Boyd, Lara – 3229 WTh, 3240 WTh
 Boylan, Maria – 3787 WTh
 Boyle, Christina – 4195 WTh
 Boyle, D. Ellen – **3862 WTh**
 Boyle, Stephanie – 3494 WTh
 Bozek, Jelena – 3868 WTh, 3884 WTh
 Bracht, Tobias – 1563 MT
 Brack, Ivan – 1241 MT
 Braeckman, Kim – 1565 MT
 Brain, Ursula – 1213 MT
 Brain, Ursula – 1736 MT
 Brambati, Simona – 1582 MT
 Bramon, Elvira – 1324 MT
 Brams, Stephanie – 1962 MT
 Branco, Mariana – 3544 WTh
 Brandeis, Daniel – 1156 MT, 3586 WTh
 Brandes, Mirko – 3366 WTh
 Brandi, Marie-Luise – 4233 WTh

Brandi, Marie-Luise – 4246 WTh
 Brandl, Eva – 4163 WTh
 Brandt, Anthony – 3408 WTh
 Brandt, Thomas – 2118 MT
 Braskie, Meredith N. – 4128 WTh
 Brau, Kaitlin – 3770 WTh
 Braver, Todd – 1469 MT
 Bravo, Elsa – 3415 WTh
 Bray, Signe – 1532 MT, 3582 WTh
 Bray, Signe – 3272 WTh
 Brazdil, Milan – 3836 WTh
 Breakspear, Michael – 1200 MT, 1201 MT, 1420 MT, 1772 MT, 3047 WTh, 4072 WTh
 Breda, Vitor – 3139 WTh
 Breeden, Andrew – 4080 WTh
 Breiger, David – 3286 WTh
 Breitling, Carolin – 3152 WTh, 3697 WTh
 Brennan, Patricia – 2032 MT
 Brennan, Tegan – 1750 MT
 Brenner, Colleen – 1037 MT
 Breukelaar, Isabella – 3948 WTh
 Brew, Bruce – 1261 MT
 Brewe, Eric – 3415 WTh
 Brewer, Alyssa – 1540 MT
 Brichant, Jean-Francois – 2095 MT
 Bridwell, David – 3407 WTh
 Brien, Donald – 1480 MT
 Brietzke, Sasha – 1094 MT
 Bringas, Maria – 1612 MT
 Brittain, Philip – 1623 MT
 Britton, Jennifer – 3370 WTh
 Broce, Iris – 1558 MT
 Brodaty, Henry – 3047 WTh
 Broderick, Michael – 3506 WTh
 Brodmann, Katja – **1504 MT**, 1926 MT
 Brodt, Svenja – 3720 WTh
 Brodtmann, Amy – 3024 WTh, 3236 WTh
 Broehl, Henrike – 1233 MT
 Bromberg, Uli – 3151 WTh, 3469 WTh
 Brookes, Matthew – 1763 MT, 1892 MT
 Brooks, Dana – 1014 MT, 1791 MT
 Brosnan, Méadhbh – 3234 WTh
 Brossard, Nicolas – 1714 MT
 Brotman, Melissa – 4135 WTh
 Brouwer, Rachel – 1324 MT, 1340 MT, 3853 WTh, 4121 WTh
 Browd, Samuel – 3286 WTh
 Brown, Arthur – 3278 WTh
 Brown, James – 3947 WTh
 Brown, Jesse – 3018 WTh, **3050 WTh**
 Brown, Katlyn – 1056 MT, 1057 MT, 2111 MT, 3224 WTh, 3267 WTh

Brown, Matthew – 3939 WTh
 Brown, Stephanie – 3174 WTh
 Brown, Tanya – 3406 WTh, 3412 WTh
 Brown, Vanessa – 1244 MT, 3333 WTh
 Brown, Vanessa – 1249 MT
 Browning, Philip – 3730 WTh
 Brownlow, Janeese – 1121 MT
 Bruce, Rachel – 3251 WTh
 Bruce, Stephen – 1303 MT
 Brück, Carolin – 2123 MT
 Brücklmeier, Benedikt – 2221 MT
 Bruder, Barry – 1024 MT
 Bruecklmeier, Benedikt – 1466 MT
 Bruffaerts, Rose – 2077 MT
 Brühl, Annette – 1397 MT, 1493 MT, 4202 WTh
 Bruhl, Rudiger – 3151 WTh, 3469 WTh
 Bruin, Willem – 3028 WTh, 3031 WTh
 Bruña, Ricardo – 3009 WTh
 Brunec, Iva – 3711 WTh
 Brunelle, Francis – 1560 MT, 3607 WTh
 Brunetti, Arturo – 1520 MT, 3194 WTh
 Brüning, Jens – 1509 MT, 3297 WTh
 Brunner, Hermine – 1265 MT
 Bruno, Marie-Aurelie – 2095 MT
 Bruns, Andreas – 2214 MT
 Brunstrom, Jeff – 3337 WTh
 Brunton, Bingni – 1697 MT
 Brusini, Irene – 2059 MT
 Bruzzzone, Maria Grazia – 3079 WTh
 Bryant, Lauren – 1163 MT
 Bryant, Natalie – 3726 WTh
 Brymer, Kyle – 1503 MT
 Brzezicka, Aneta – 3458 WTh
 Brzyski, Damian – 4173 WTh
 Bu, Junjie – 1075 MT
 Bu, Xuan – 3150 WTh
 Buccigrossi, Robert – 1665 MT
 Buchanan, Robert – 1700 MT
 Büchel, Christian – 3151 WTh, 3469 WTh
 Buckle, Channele – 3190 WTh
 Buckless, Colleen – 1159 MT
 Buckner, Randy – 1197 MT
 Budech, Christopher – 3286 WTh
 Budhdeo, Sanjay – 3838 WTh
 Budisavljevic, Sanja – 2070 MT
 Bueckner, Melanie – 2158 MT
 Bueichekú, Elisenda – 1940 MT
 Bueler, Charles – 3067 WTh
 Bueno-Conde, Jose – 1148 MT, 1153 MT, 1748 MT, 3868 WTh, 3884 WTh
 Buentjen, Lars – 3385 WTh
 Buhmann, Joachim – 3989 WTh

Buitelaar, Jan – 1149 MT, 1167 MT, 1190 MT, 1290 MT, 1562 MT, 3144 WTh, 3586 WTh, 3865 WTh
 Buker, Seda – 3187 WTh, 3200 WTh, 3584 WTh, 3585 WTh
 Bulgarelli, Chiara – 3598 WTh, 3874 WTh
 Bullmore, Ed – 1161 MT
 Bullmore, Edward – 1645 MT, 3439 WTh, **3860 WTh**
 Bulthé, Jessica – 3419 WTh
 Bunai, Tomoyasu – 2219 MT
 Burdette, Jonathan – 1108 MT
 Burgess, Ashley – 1283 MT, 1285 MT, 1448 MT, 3070 WTh
 Burghy, Cory – 1418 MT
 Burke, Jeffrey – 1639 MT, 3154 WTh
 Burles, Ford – 3423 WTh
 Burles, Ford – 2199 MT
 Burmeister, Margit – 3292 WTh
 Burns, Thomas – 1266 MT
 Burrasch, Caroline – **4032 WTh**
 Burrows, Catherine – 1180 MT
 Burt, Joshua – 1928 MT, 3324 WTh
 Burt, S. Alexandra – 3878 WTh
 Burton, Phillip – 1347 MT
 Burwell, Scott – 1104 MT
 Burzynska, Agnieszka – 3736 WTh
 Busby, Natalie – 2049 MT
 Buschkuehl, Martin – 3816 WTh
 Buschmann, Tilo – 4149 WTh
 Bush, Adam – 1272 MT
 Bush, Keith – 1040 MT, 3921 WTh
 Bushnell, Mary Catherine – 2146 MT, 2147 MT
 Busler, Jessica – 1511 MT, 1884 MT
 Bustillo, Juan – **1330 MT**, 1351 MT, 3757 WTh, 3953 WTh, 3965 WTh
 Butcher, Nancy – 3318 WTh
 Butera, Christiana – 1189 MT
 Butler, Russell – 1626 MT, 1770 MT, 3532 WTh
 Butler, Russell – 1538 MT
 Butson, Christopher – 1001 MT, 1754 MT
 Butterworth, Brian – 3701 WTh
 Butz, Markus – 1273 MT, 3538 WTh, 3558 WTh
 Buyukturkoglu, Korhan – 3996 WTh
 Byblow, Winston – 3244 WTh
 Bydlinski, Bella – 3750 WTh
 Byrd, Richard – 4142 WTh
 Byrne, Aine – 1763 MT
 Byrne, Gerard – 3163 WTh, 3164 WTh
 Byrne, Michelle – 3849 WTh, 4211 WTh
 Bzdok, Danilo – 1829 MT, 1833 MT, 3934 WTh, **4203 WTh, 4226 WTh**, 4251 WTh
 Błaziński, Piotr – 1304 MT

C

- C.Sotero, Roberto – 1780 MT
 Caballero, Camila – 3374 WTh
 Caballero Gaudes, Cesar – 1655 MT, 1803 MT
 Cabeen, Ryan – 1743 MT
 Cabeza, Roberto – 3772 WTh, 3773 WTh
 Cabral, Carlos – 1319 MT
 Caceda, Ricardo – 1083 MT
 Cachia, Arnaud – 2001 MT, 2004 MT
 Cadenhead, Kristin – 4076 WTh
 Caeyenberghs, Karen – 1042 MT, 1274 MT, 1565 MT, 3256 WTh, 3447 WTh
 Cagnie, Barbara – 1274 MT, 3447 WTh
 Cahn, Wiepke – 1324 MT, 1340 MT, 1615 MT
 Cai, Biao – 3963 WTh
 Cai, Lin – 1905 MT
 Cai, Weidong – 1729 MT
 Cakar, Tuna – 3641 WTh
 Calabro, Finnegan – 3765 WTh, 3875 WTh
 Calarco, Navona – 1924 MT
 Caldarazzo Ienco, Elena – 3480 WTh
 Caldarelli, Guido – 2075 MT
 Calderoni, Sara – 1176 MT, 1878 MT
 Caldú, Xavier – 3424 WTh, 3662 WTh, 3706 WTh
 Caldwell, David – 1009 MT, 1010 MT, 1014 MT, 3521 WTh
 Calhoun, Vince – 1119 MT, 1307 MT, **1330 MT**, 1365 MT, 1505 MT, 1553 MT, 1688 MT, 1756 MT, 1866 MT, 1894 MT, 3371 WTh, 3757 WTh, 3883 WTh, 3885 WTh, 3926 WTh, 3946 WTh, 3965 WTh, 3974 WTh, 4083 WTh, 4191 WTh, 4227 WTh
 Calhoun, Vince – 1110 MT, 1157 MT, **1215 MT**, 1217 MT, 1319 MT, 1332 MT, 1345 MT, 1351 MT, 1491 MT, 1516 MT, 1752 MT, 1808 MT, 1841 MT, 2064 MT, 3144 WTh, 3168 WTh, 3301 WTh, 3407 WTh, 3886 WTh, 3905 WTh, 3953 WTh, 3963 WTh, 4028 WTh, 4051 WTh, 4052 WTh, 4098 WTh, 4140 WTh
 Calhoun, Vince – 1519 MT, 1932 MT, 1935 MT
 Calkins, Eli – 1114 MT
 Calkins, Monica – **1302 MT**, 3153 WTh
 Callaghan, Martina – 3448 WTh, 3804 WTh, 3972 WTh, 4109 WTh
 callara, alejandro luis – 1778 MT
 Callicott, Joseph – 3704 WTh
 Calmon, Raphael – 1560 MT, 3607 WTh
 Calzada-Reyes, Ana Agustina – 3430 WTh
 Cam-CAN, . – 1831 MT, 3987 WTh
 Camacho, Alejandra – 3424 WTh
 Camilleri, Julia – **3355 WTh**
 Campbell, Justin – 4200 WTh, 4225 WTh, 4250 WTh
 Campbell, Kayleigh – 1736 MT
 Campbell, Linda E. – 3318 WTh, **3320 WTh**
 Campbell, Tara – 1693 MT
 Campbell-Meiklejohn, Daniel – 4222 WTh
 Campos Cardoso, Luis – 3792 WTh
 Canales-Rodríguez, Erick – 1865 MT, 3464 WTh, 3899 WTh, 4125 WTh
 Canna, Antonietta – 1929 MT, 4109 WTh, 4185 WTh
 Cannito, Michael – 3750 WTh
 Cannon, Tyrone – 4076 WTh
 Cant, Jonathan – 2179 MT
 Cao, Bo – 3841 WTh
 Cao, Chunyan – 1004 MT
 Cao, Fan – 1961 MT
 Cao, Hengyi – 4076 WTh
 Cao, Miao – 1183 MT, 1495 MT, 4007 WTh
 CAO, Wei-Fang – 1489 MT
 Cao, Weifang – 3803 WTh
 Capalbo, Michael – 2026 MT
 Caparelli, Elisabeth – 1100 MT
 Capota, Mihai – 1704 MT
 Capotosto, Paolo – 3508 WTh
 Cappelletti, Marinella – 3804 WTh
 Caprihan, Arvind – 1752 MT, 1932 MT, 2064 MT, 3946 WTh, 4098 WTh
 Cardenas-Blanco, Arturo – 3734 WTh
 Cardoso, Jean-François – 1760 MT
 Carhart-Harris, Robin – 1208 MT, 2152 MT, 3413 WTh
 Carius, Daniel – 3740 WTh
 Carlbring, Per – 1130 MT
 Carless, Melanie – 3313 WTh
 Carlson, Barbara – 3037 WTh
 Carlson, Chad – **3379 WTh**
 Carlson, Helen – 3228 WTh
 Carlson, Helen – 1053 MT, 3255 WTh
 Carlson, Thomas – 3548 WTh
 Carmichael, David – 1506 MT, 1805 MT, 3104 WTh, 3115 WTh, 4138 WTh
 Carmichael, David W – 3131 WTh, 4172 WTh
 Carpenter, Jeff – 1620 MT, 3964 WTh
 Carpentier, Sarah – 3406 WTh, 3412 WTh
 Carper, Ruth – 1194 MT
 Carr, Jonathan – 3190 WTh
 Carrasco, Ximena – 3776 WTh
 Carreiras, Manuel – 3665 WTh
 Carrette, Evelien – 1064 MT, 3114 WTh
 Carrette, Sofie – 1064 MT
 Carrier, Micaël – 3620 WTh
 Carrier-Toutant, Frédérique – 3285 WTh
 Carrillo-Pena, Alan – 3643 WTh
 Carron, Romain – 1635 MT
 Carter, Cameron – **4000 WTh**
 Carter, Kerry – 3582 WTh
 Carter, Rawle – 3723 WTh, 3802 WTh
 Carvalho, Fabiana – 2188 MT
 Carvalho, Joana – 2181 MT
 Casado, Pilar – 3507 WTh, 3623 WTh, 3626 WTh, 4252 WTh, 4260 WTh
 Casaubon, Leanne – 3248 WTh
 Cascio, Carissa – 1163 MT
 Caseras, Xavier – 1324 MT
 Cash, David – 3019 WTh, 3838 WTh
 Cashaback, Joshua – 1967 MT
 Casimo, Kaitlyn – 1936 MT, 3521 WTh, 3863 WTh
 Caspers, Julian – 3179 WTh, 3185 WTh, 3815 WTh
 Caspers, Svenja – **1567 MT**, 1999 MT, 2045 MT, 3297 WTh, 3790 WTh, 3796 WTh, 3815 WTh, **3915 WTh**
 Cassidy, Ben – 4061 WTh, 4174 WTh
 Cassidy, Clifford – 2217 MT
 Castelhana, Joao – 1160 MT, 3338 WTh
 Castellano, Christian-Alexandre – 3961 WTh
 Castellanos, Francisco – 3950 WTh
 Castellanos, Gabriel – 4024 WTh
 Castelo-Branco, Miguel – 1160 MT, 3338 WTh
 Castiello, Umberto – 2070 MT
 Castrellon, Jaime – 3326 WTh, 3611 WTh
 Castro, Ana – 1589 MT
 Castro Laguardia, Ana Maria – 2170 MT
 Catani, Marco – 1858 MT, **2050 MT**, 2054 MT, 2065 MT, 2068 MT, 2167 MT, **3001 WTh**, 3241 WTh, **3632 WTh**, 3642 WTh, 4133 WTh
 Cath, Danielle – 1284 MT
 Catheline, Gwenaëlle – 1498 MT
 Cattrell, Anna – 3151 WTh, 3469 WTh
 Cauda, Franco – 1171 MT, 3076 WTh, 3445 WTh, 3450 WTh
 Cauvet, Élodie – 1168 MT, 1170 MT, 1174 MT
 Cavaliere, Carlo – 1631 MT
 Cavanagh, James – **3566 WTh**
 Caverzasi, Eduardo – 1710 MT
 Ceccarini, Jenny – 1106 MT, 1839 MT, 1854 MT
 Cecchetti, Luca – 2075 MT, 2182 MT, **3635 WTh**
 Cecchi, Guillermo – 3939 WTh
 CECCHIN, Thierry – 1012 MT
 Cechnicki, Andrzej – 1304 MT
 Cedden, Gülay – 3641 WTh
 Cedersund, Gunnar – 1533 MT
 Ceko, Marta – 2146 MT, 2147 MT
 Ceko, Marta – 2148 MT
 Cella, David – 1262 MT
 Cengiz, Sevim – 3187 WTh, 3200 WTh, 3584 WTh, 3585 WTh
 Centeno, Maria – 3115 WTh, 3131 WTh, 3496 WTh
 Cepuch, Kamil – 1304 MT
 Cercignani, Mara – 3063 WTh
 Ceritoglu, Can – 2203 MT
 cerliani, leonardo – 2005 MT, 2038 MT, **2040 MT**, 3476 WTh, 3683 WTh
 Cermak, Sharon – 1189 MT
 Cerritelli, Francesco – 2109 MT
 Cha, Jiook – 2066 MT
 Cha, Jungho – 1370 MT
 Chaarani, Bader – 1136 MT, 3146 WTh, 3151 WTh, 3317 WTh, 3360 WTh, 3469 WTh, 3470 WTh, 3871 WTh
 Chabane, Nadia – 1560 MT
 Chachamovich, Eduardo – 3299 WTh
 Chachra, Parul – 1910 MT
 Chaganti, Joga – 1261 MT
 Chahal, Rajpreet – 2061 MT
 Chai, Xiaoqian – 1500 MT
 Chai, Yuhui – **1015 MT**
 Chaimow, Denis – **1483 MT**, 1830 MT
 Chaix, Yves – 3858 WTh
 Chakravarty, M. Mallar – 2058 MT, 3890 WTh, 4163 WTh
 Chakravarty, Mallar – 1089 MT, 1158 MT, 1704 MT, 3021 WTh
 Chalak, Lina – 1495 MT, 3879 WTh
 Chan, Chetwyn – 3810 WTh
 Chan, Kimberly – 3577 WTh
 Chan, Pei-Ying Sarah – 1492 MT
 Chan, Sam Chi Chung – 3394 WTh
 Chan, Shing Chow – 1899 MT
 Chan, Shing Chow – 3523 WTh
 Chan, Yu-Chen – 4255 WTh
 Chan, Yu-Chen – 1388 MT
 Chancel, Marie – 1496 MT
 Chang, Catie – 1543 MT, **2201 MT**
 Chang, Chun Yuan – 3032 WTh
 Chang, Chunqi – 3523 WTh
 Chang, Chunyun – 3929 WTh
 Chang, Claire Hui-Chuan – 4235 WTh
 Chang, Hui-Chuan – 3402 WTh
 Chang, Linda – 1093 MT, 1486 MT, 1819 MT
 Chang, Maio – 1357 MT
 Chang, Soo-Eun – 3087 WTh
 Chang, Soo-Eun – 3090 WTh
 Chang, Ting-Ting – 3376 WTh
 Chang, Welton – 3952 WTh
 Chang, Won Hyuk – 1605 MT, 3238 WTh, 3239 WTh, 3252 WTh

Chang, Yu-Teng – 1184 MT
 Chang, Yu-Wen – 1214 MT, 1216 MT
 Chao, Pei-Chun – 3657 WTh
 Chao, Yi-Ping – 1692 MT, 1746 MT
 Chapleau, Marianne – 1582 MT
 Chapman, Sandra – **3262 WTh**
 Charest, Ian – 2186 MT
 Charlet, Katrin – 4163 WTh
 Chau, Tom – 3602 WTh
 Chaudhary, Umair – 3496 WTh
 Chauvin, Roselyne – 1843 MT, 3865 WTh
 Chavent, Marie – 3639 WTh
 CHAVEZ, Mario – 1629 MT
 Chavez, Sofia – 1700 MT, 3543 WTh
 Chebat, Daniel – 3425 WTh
 Chee, Michael – 2081 MT, 2194 MT, 2195 MT, **3778 WTh**
 Chee, Nicholas – 2194 MT
 Chein, Jason – 1279 MT
 Chekroud, Adam – 1357 MT
 Chella, Federico – 1775 MT, 4101 WTh
 Chella, Federico – 2083 MT
 Chen, Alex – 1070 MT
 Chen, Bihong – 1267 MT
 Chen, Chang-Le – 3378 WTh, 3383 WTh
 Chen, Chi Chuan – 3813 WTh
 Chen, Chi-Ming – 1639 MT, 3154 WTh
 Chen, Chien-Chung – 1996 MT
 Chen, Chiu-Yueh – 1471 MT, 4244 WTh
 Chen, Christina – 1165 MT, 3452 WTh
 Chen, Chuansheng – 3422 WTh
 Chen, David Yen-Ting – 1315 MT, 3227 WTh
 Chen, Eunice – 1279 MT, 2090 MT, 3099 WTh
 Chen, Feiyan – 3528 WTh, 3739 WTh
 Chen, Fuqin – 3161 WTh
 Chen, Gang – 4097 WTh, 4135 WTh
 Chen, Geng – 1593 MT
 Chen, Gongxiang – 1400 MT
 Chen, Guanqun – 1903 MT
 Chen, Guoliang – 1358 MT
 Chen, Haobo – 3380 WTh
 Chen, He – 1004 MT
 Chen, Hegang – 3219 WTh
 Chen, Hong – 3150 WTh
 Chen, Hsin-Yung – 3755 WTh
 Chen, Hsiu-Ling – 3159 WTh, 3201 WTh
 Chen, Hua – 1183 MT
 Chen, Huafu – 3985 WTh
 Chen, Huaihou – 1544 MT
 Chen, I-Fei – 4255 WTh
 Chen, Jhih-Rong – 1692 MT
 Chen, Jian – 3829 WTh, 3833 WTh

Chen, Jiayu – 1217 MT, **1330 MT**, 1345 MT, 1351 MT, 1688 MT, 3144 WTh, 3295 WTh, 3757 WTh, 3905 WTh, 3953 WTh
 Chen, Jie – 1721 MT
 Chen, Jingyuan – 2018 MT, 2145 MT
 Chen, Jingyuan – 1851 MT
 Chen, Jingyun – 3145 WTh
 Chen, Jinkai – 1222 MT
 Chen, Jun – 1361 MT, 1362 MT, 3295 WTh
 Chen, Jyh-Horng – 2212 MT
 Chen, Lang – 4037 WTh
 Chen, Lawrence – 1714 MT
 Chen, Li – 1449 MT
 Chen, Li Min – **1481 MT**
 Chen, Li-Fen – 1794 MT
 Chen, Lidian – 1988 MT, 3810 WTh
 Chen, Lifang – 3026 WTh, 3912 WTh
 Chen, Lijun – 1086 MT
 Chen, Lirong – 1123 MT
 Chen, Lixiang – 1223 MT, 1461 MT, 1487 MT, 3078 WTh, 3170 WTh
 Chen, Luonan – 1903 MT
 Chen, Meng-Hsiang – 3159 WTh, 3201 WTh
 Chen, Minggui – 2185 MT
 Chen, Nai-Chi – 3784 WTh
 Chen, Nan-kuei – 3787 WTh
 Chen, Pei-Chin – 3159 WTh
 Chen, Ping – 1223 MT, 1487 MT, 1586 MT, 3078 WTh
 Chen, Qian – 3117 WTh
 Chen, Qiang – 3311 WTh
 Chen, Rui – 1373 MT, 1376 MT
 Chen, SH Annabel – 1300 MT, 3621 WTh, 3952 WTh
 Chen, Shanshan – 2099 MT
 Chen, Shen-Hsing Annabel – 1382 MT
 Chen, Sheng-Chang – 3364 WTh
 Chen, Sophie – 1635 MT
 Chen, Taolin – 1224 MT
 Chen, Tianwen – 1729 MT, **3678 WTh**
 Chen, Wei-Fan – 3657 WTh
 Chen, Xi – 1510 MT
 Chen, Xi – 2209 MT
 Chen, Xi – 1316 MT, 1317 MT
 Chen, Xiao – 4091 WTh
 Chen, Xiaodan – 4009 WTh
 Chen, Xin – 1439 MT
 Chen, Xu – 1640 MT
 Chen, Yang – 3895 WTh
 Chen, Yen-Ling – 1366 MT
 Chen, Yong-Sheng – 1794 MT
 Chen, Yongchang – 4105 WTh

Chen, Yu-Chieh – 1184 MT
 Chen, Yu-Jen – 1198 MT
 Chen, Yuanyuan – 3638 WTh
 Chen, Yueh-Cheng – 3201 WTh
 Chen, Yufen – 1804 MT, 1895 MT
 Chen, Yunchun – 1361 MT, 1362 MT, 3295 WTh
 Chen, Yung-Chan – 1315 MT
 chen, zikuan – 3946 WTh
 Cheng, Bochao – 1206 MT
 Cheng, Chia-Hsiung – 2156 MT
 Cheng, Chin-Han – 1794 MT
 Cheng, Chou-Ming – 1685 MT
 Cheng, Dazhi – 3117 WTh
 Cheng, Fan – 3991 WTh
 Cheng, Hu – 1114 MT
 Cheng, Joshua – 2138 MT
 Cheng, Lan – 3161 WTh
 Cheng, Philip E. – 2125 MT
 Cheng, Sheung-Tak – 3020 WTh
 Cheng, Theresa – 4211 WTh
 Cheng, Wei – 4127 WTh
 Cheng, Xuemei – 4254 WTh
 Cheng, Yuqi – 1241 MT, 1291 MT, 1292 MT
 Chenji, Sneha – 3088 WTh
 Cheong, Chaejoon – 1473 MT
 Cheong, Jeanie – 3829 WTh, 3833 WTh
 Cherbuin, Nicolas – 3404 WTh
 Cherrier, Monique – 3766 WTh
 Cherrier, Monique – 3760 WTh
 Cherry, J. Brad – 3357 WTh
 Chervyakov, Alexander – 1934 MT
 Cheung, Brian – 3950 WTh
 Cheung, Teresa – 1787 MT, 3387 WTh, 3388 WTh, 3563 WTh, 3574 WTh, 3575 WTh, 3576 WTh
 Cheyne, Douglas – 1767 MT, 1777 MT
 Cheyne, J. Allan – 1777 MT
 Chi, Nai-Fang – 1315 MT, 3227 WTh
 Chi-Hung, Juan – 4192 WTh
 Chiacchiaretta, Piero – 2109 MT
 Chiang, Jeffrey – 3268 WTh, 3414 WTh
 Chiang, Jessica – 1423 MT
 Chiang, Pi-Ling – 3159 WTh, 3201 WTh
 Chiao, Ping – 1984 MT
 Chiappino, Dante – 2075 MT
 Chiba, Yuhei – 3839 WTh
 Chiesa, Patrizia – 4215 WTh
 Chiew, Mark – 1453 MT, 1507 MT, **1546 MT**, 1619 MT
 Ching, Christopher – 1261 MT, 3282 WTh, 3321 WTh
 Ching, Christopher – 1205 MT, 3055 WTh, 3318 WTh, **3320 WTh**

Ching, Fiona – 1852 MT
 Chioffi, Franco – 1985 MT, 2047 MT
 Chiron, Catherine – 3867 WTh, 3869 WTh
 Chirumamilla, Ventaka Chaitanya – 1038 MT
 Chiu, Pearl – 1244 MT, 3333 WTh, 3341 WTh, 3349 WTh
 Chiu, Pearl – 1249 MT
 Chkonia, Eka – 1321 MT
 Cho, Hohyun – 1406 MT
 Cho, Jae-Hyun – 3556 WTh
 Cho, Sang-Soo – 3197 WTh
 Cho, Shinho – 1008 MT
 Cho, Wan-chi Valda – 1245 MT
 Cho, Youngsun – 1431 MT
 Choe, Jaehoon – 3726 WTh
 Choi, Aruem – 1080 MT
 Choi, Byung-Ok – 3319 WTh
 Choi, Hanseul – 4056 WTh
 Choi, Hongyoon – 1855 MT
 Choi, Ja Young – 3647 WTh
 Choi, Joon Yul – 3273 WTh, **3453 WTh**
 Choi, Jung-Seok – 1078 MT, 1080 MT, 1085 MT
 Choi, Justin Jangyoon – 3101 WTh
 Choi, Ki Sueng – 1006 MT, 1252 MT
 Choi, Kwang-Yeon – 3039 WTh
 Choi, Mi-Hyun – 2157 MT
 Choi, Soo-Hee – 1141 MT
 Choi, Soyoung – 1272 MT, 1650 MT, 1868 MT
 Choi, Woo Hee – 3030 WTh
 Choi, Yong-Ho – 3463 WTh, 4158 WTh
 Choi, Yoon Kyoung – 4088 WTh
 Choi, Yoon-Kyoung – 4056 WTh
 Choi, Yoonkyoung – 4096 WTh
 Choi, Yun Seo – 3113 WTh, 3319 WTh
 Choinski, Mateusz – 1442 MT
 Chong, Joanna Su Xian – 1904 MT, **3778 WTh**
 Chong, Minki – 1650 MT, **3966 WTh**
 Choo, Boon Linn – 1904 MT
 Chou, Joseph – 1662 MT
 Chou, Tai-Li – 4236 WTh
 Chou, Wen-Chi – 3364 WTh
 Chou, Ying-hui – 3787 WTh
 Chou, Yuan-Hwa – 4005 WTh
 Choudhri, Asim – 3750 WTh
 Chouinard-Decorte, Francois – 3313 WTh, 3852 WTh
 Chow, Eva W. C. – 3318 WTh
 Chow, Ho Ming – 3087 WTh, 3090 WTh
 Chowdury, Asadur – 1352 MT, 1745 MT, 3070 WTh, 4182 WTh
 Christakou, Anastasia – 4177 WTh
 Christen, Thomas – 4141 WTh

Christensen, Anders – 2135 MT
 Christiaens, Daan – 1263 MT
 Christoff, Kalina – 3358 WTh
 Christopher, Leigh – 3010 WTh, 3296 WTh
 Christopher, Pittenger – 1297 MT
 Christopher-Hayes, Nicholas – 3883 WTh
 Christopher-Hayes, Nicholas – 3886 WTh
 Chtioui, Haithem – 1081 MT
 Chu, Ying-Hua – 3402 WTh, 4235 WTh
 Chuang, Jimmy Ming Jung – 3569 WTh
 Chun, Marvin – 4040 WTh
 Chung, Ai Wern – 1742 MT, 3265 WTh
 Chung, Chun Kee – 1969 MT, 3106 WTh, 3409 WTh
 Chung, Dongil – 3349 WTh
 Chung, Ming-Hua – 3921 WTh
 Chung, Moo – 1855 MT, 4130 WTh
 Chung, Soon-Cheol – 2157 MT
 Chung, Yu Sun – 3142 WTh, 3356 WTh
 Chunn, Michael – 3088 WTh
 Churchill, Nathan – 1234 MT, 1704 MT, 1818 MT, 3291 WTh, 3664 WTh
 Chye, Yann – 1079 MT, 3451 WTh
 Chyl, Katarzyna – 3658 WTh, 3667 WTh
 Chyzhyk, Darya – 3916 WTh
 Ciaramidaro, Angela – 4212 WTh
 Ciarochi, Jennifer – 1932 MT, 2064 MT, 3168 WTh, 3301 WTh
 Ciarrusta, Judit – 1148 MT, 1153 MT, 3846 WTh
 Ciccarelli, Gregory – 3686 WTh
 Çiçek, Metehan – 3427 WTh
 Cichon, Sven – 3297 WTh
 Ciechanski, Patrick – 1053 MT
 Cieslak, Matthew – 1750 MT
 Cignetti, Fabien – 3858 WTh
 Ciou, Yun-Ting – 1746 MT
 Ciric, Rastko – **1302 MT**, 1821 MT, 3153 WTh, 4179 WTh
 Cisler, Josh – 1040 MT, 1083 MT
 Ciuciu, Philippe – 3609 WTh
 CIUCIU, PHILIPPE – 3025 WTh
 Claassen, Daniel – 3199 WTh
 Clark, Christopher – 4172 WTh
 Clark, Darren – 1001 MT
 Clark, Kristi – 1743 MT, 3889 WTh
 Clark, Kristi – 3307 WTh, 4194 WTh
 Clark, Luke – 1107 MT, 1109 MT
 Clark, Michael – 3086 WTh
 Clark, Sarah – 1365 MT
 Clark, Vincent – 3726 WTh
 Clarke, Sophie – 1438 MT
 Claus, Eric – 1505 MT
 Clausen, Ashley – 1559 MT

Clauw, Daniel – 2150 MT, 4077 WTh
 Clayton, David – 3056 WTh
 Clemens, Benjamin – 4253 WTh
 Clementz, Brett – 3953 WTh
 Clifford, Katherine – 1261 MT
 Cloos, Martijn – **1741 MT**
 Clopath, Claudia – 4016 WTh
 Clothier, Jeffrey – 2036 MT
 Coakeley, Sarah – 3197 WTh
 Coalson, Rebecca – 3728 WTh
 Coalson, Timothy – 1864 MT, 1998 MT
 Coates, Thomas – 1272 MT
 Cocchi, Luca – 4066 WTh
 Cocjin, Sally – 3787 WTh
 Cocks, Rachel – 1107 MT, 1109 MT
 Coccozza, Sirio – 1520 MT, 1877 MT, 3194 WTh, 3468 WTh, 3996 WTh
 Coelho, Gonçalo – 3338 WTh
 Coenen, Volker – **1000 MT**
 Coffman, Brian – **3566 WTh**
 Cohen, Alexander – 3608 WTh
 Cohen, Avihay – 4214 WTh
 Cohen, Bruce – 1043 MT
 Cohen, Laurent – 2131 MT
 Cohen, Ronald – 1261 MT, 1544 MT
 Cohen-Adad, Julien – 1947 MT
 Coiner, Benjamin – 3629 WTh
 Colarusso, Enzo – 1985 MT
 Colcombe, Stan – **1882 MT**
 Cole, David – 3344 WTh
 Cole, James – 3258 WTh, 3276 WTh, 3279 WTh, 4157 WTh
 Colino, Francisco – 3497 WTh, 3502 WTh, 3512 WTh, 3615 WTh, 3693 WTh
 Collignon, Olivier – 2177 MT
 Collins, Francis – 1598 MT
 Collins, Kelly – 2133 MT, 3521 WTh
 Collins, Louis – 1258 MT, 3202 WTh, 3204 WTh, 3373 WTh
 COLNAT-COULBOIS, Sophie – 1012 MT, 1013 MT, 1762 MT
 Coloigner, Julie – 1272 MT, 4050 WTh
 Colomé, Roser – 3424 WTh, 3662 WTh, 3706 WTh
 Coman, Ioana – 1611 MT
 Combrisson, Etienne – 2088 MT, 2102 MT
 Combs, Angela – 3726 WTh
 Comninos, Alexander – 1438 MT
 Conant, Lisa – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh
 Concha, Alyssa – 1189 MT
 Confort-Gouny, Sylviane – 1637 MT
 Cong, Fengyu – 3942 WTh

Conklin, Heather – 3768 WTh, 3910 WTh
 Connolly, Colm – 1241 MT
 Connolly, Patrick – 1788 MT
 Conrad, Julian – 2118 MT
 Conrod, Patricia – 1100 MT, 1896 MT, 3151 WTh, 3469 WTh
 Conroy, Susan – 3219 WTh
 Consortium, Imagen – 3146 WTh, 3317 WTh
 Consortium, CHARGE – 3303 WTh
 Consortium, ENIGMA – 3303 WTh
 Consortium, MRC AIMS – 3439 WTh
 Consortium, NSPN – 1645 MT, 1822 MT, 1832 MT
 Consortium, the 16p11.2 European – 3315 WTh
 Constable, R – 3105 WTh, 4040 WTh, 4042 WTh
 Conti, Bettina – 3064 WTh
 Contini, Erika – 3548 WTh
 Conway, Mike – 3546 WTh
 Cook, Alexandria – 1270 MT
 Cook, Philip – **1302 MT**
 Cook, Philip – 1303 MT, 2067 MT
 Cooke, Katherine – 3816 WTh
 Coolidge, Nathan – 1027 MT, 3568 WTh, 3570 WTh
 Coombes, Stephen – 1763 MT
 Coombs III, Garth – 1311 MT
 Cooper, Elisa – 3638 WTh
 Cooper, Scott – 3218 WTh
 Copen, William – 1742 MT
 Copland, David – 3163 WTh, 3164 WTh
 Coppel, David – 3286 WTh
 Coppieters, Iris – 1274 MT, 3447 WTh
 Coppola, Giovanni – 3018 WTh
 Coppola, Richard – 1231 MT
 Coras, Roland – 3477 WTh
 Corben, Louise – 3213 WTh
 Corbin, Conor – 1600 MT, **3320 WTh**
 Corcoran, Cheryl – 4220 WTh
 Cordero-Grande, Lucilio – 1153 MT, 1748 MT, 3868 WTh, 3884 WTh
 Cordes, Dietmar – 1898 MT, 1939 MT, 2015 MT, 2069 MT, 2071 MT, 3038 WTh, 3169 WTh, 3178 WTh, 3208 WTh, 3210 WTh, 3211 WTh, 3478 WTh, 4054 WTh, 4142 WTh, 4144 WTh, 4160 WTh, 4165 WTh
 Cordova, Michaela – 1179 MT, 1196 MT, 3978 WTh
 Cornblatt, Barbara – 4076 WTh
 Cornelissen, Frans – 3977 WTh
 Cornier, Marc-Andre – 1542 MT
 Correia, Marta – 1831 MT
 Corrigan, Neva – 1186 MT
 Cortes, Carlos – 1094 MT
 Cortes, Jesus – 3959 WTh
 Cortese, Aurelio – 2093 MT

Cosottini, Mirco – 3480 WTh
 Costa, Danielle – 3601 WTh
 Costa, Tommaso – 1171 MT, 3076 WTh, 3445 WTh, 3450 WTh
 Costabile, Teresa – 1520 MT, 3194 WTh
 Costagli, Mauro – 3480 WTh
 Cottaar, Michiel – 1749 MT
 Cotton, Mark – 1590 MT, 1900 MT, 4108 WTh
 Counsell, Serena – 1148 MT, 3298 WTh, 3846 WTh, 3856 WTh, 3884 WTh
 Courson, Melody – 3620 WTh
 Courtemanche, Matthew – 1527 MT
 Courtney, Susan – 1643 MT, 3484 WTh, 3536 WTh
 Cousijn, Janna – 3451 WTh
 Cowan, Ronald – 3611 WTh
 Cox, Elizabeth – 3573 WTh
 Cox, Robert – 4117 WTh
 Cox, Robert – 4135 WTh
 Cox, Simon – 1306 MT, 3438 WTh
 Coxon, James – **1026 MT**, 3244 WTh
 Craddock, Cameron – 1704 MT, **3844 WTh**, 3950 WTh
 Craddock, Kirsten – 1313 MT
 Craft, Melissa – 3037 WTh
 Craig, Alexa – 3859 WTh
 Craig, Michael – 3318 WTh, 3439 WTh, 3474 WTh
 Craig, Rebecka – 3891 WTh
 Cramer, Claudia – 3241 WTh
 Cramer, Steve – 3230 WTh
 Creatura, Gina – 1309 MT
 Cremers, Henk R. – 1130 MT
 Criaud, Marion – 3197 WTh
 Crimi, Alessandro – 3957 WTh
 Crippa, Alessandro – 1193 MT
 Cristante, Caitlin – 3509 WTh
 Crivello, Fabrice – 1646 MT, 2023 MT, 3433 WTh, 3434 WTh
 Croce, Pierpaolo – 3508 WTh, 4132 WTh
 Crocetti, Deana – 1159 MT, 1185 MT, 1193 MT, 1975 MT, 3156 WTh
 Croizé, Anne-Claire – 2112 MT
 Crone, Julia – 3268 WTh, 3289 WTh
 Cronin, Jeneva – 1009 MT, 1010 MT, 1014 MT, 2133 MT, 3521 WTh
 Cross, Helen – 3104 WTh
 Cross, J Helen – 3131 WTh
 Cross, Nathan – 3053 WTh
 Crosson, Bruce – 3069 WTh
 Crowell, Courtney – 3772 WTh, 3773 WTh
 Crowley, Thomas – 3907 WTh
 Croxson, Paula – 2005 MT, 3730 WTh
 Croy, Ilona – 1120 MT, 1219 MT, 3435 WTh

Csernansky, John – 2033 MT
 Cudemus-Deseda, Gaston – 1742 MT
 CUI, Dong – 1489 MT
 Cui, Yue – 3295 WTh
 Cui, Zhuoya – 1244 MT, 3333 WTh
 Çukur, Tolga – 2079 MT
 Cullen, Harriet – 3298 WTh
 Culver, Joseph – 1634 MT
 Cummiford, Chelsea – 2150 MT, 4077 WTh
 Cumming, Toby – 3236 WTh
 Cunnane, Stephen – 3961 WTh
 Cunningham, David – 1976 MT, 3399 WTh
 Cunningham, Ross – 1534 MT
 Ćurčić-Blake, Branislava – 1338 MT, 1349 MT
 Curran, Joanne – 2009 MT, 3313 WTh
 Curran, Tim – 4142 WTh
 Curry, Daniel – 3100 WTh
 Curt, Armin – 3578 WTh
 Cusack, Rhodri – 3731 WTh
 Custo, Anna – 3505 WTh
 Custovic, Darije – 4079 WTh
 Cutler, Jo – 4222 WTh
 Cutting, Laurie – 3637 WTh
 Cuypers, Koen – 3807 WTh
 Cybulska-Kłosowicz, Anita – 3493 WTh
 Cyr, Marilyn – 3098 WTh
 Cysique, Lucette – 1261 MT
 Czamara, Darina – 1466 MT
 Czarapata, Jasmin – 1326 MT, **3862 WTh**
 Czarnecki, Jakob – 1442 MT
 Czisch, Michael – 1254 MT, 1394 MT, 1466 MT, 2221 MT, 4074 WTh

D
 D'Alberto, Nicholas – 1136 MT, 3146 WTh, 3151 WTh, 3317 WTh, 3360 WTh, 3871 WTh
 D'Andrea, Antea – 2083 MT
 D'Anna, Lucio – **3001 WTh, 3632 WTh**
 D'Arcy, Mike – 3307 WTh
 D'Arcy, Ryan – 1527 MT, 3040 WTh, 3084 WTh, 3281 WTh, 3387 WTh, 3388 WTh, 3563 WTh
 D'Esposito, Mark – 1485 MT, 1683 MT, 2034 MT
 d'Incerti, Ludovico – 3079 WTh
 D'Rozario, Angela – 3053 WTh
 D.Calhoun, Vince – 3295 WTh
 Da Costa, Leodante – 3290 WTh
 da Silva Jr, Neivo – 3139 WTh
 Dabbs, Kevin – 2006 MT
 Dacosta-Aguayo, Rosalia – 3706 WTh
 Dadachanji, Shiroy – 1601 MT, 3269 WTh, 3271 WTh
 Dadar, Mahsa – 3202 WTh, 3204 WTh, 3373 WTh

Dadi, Kamalaker – 3916 WTh
 Daffertshofer, Andreas – 3226 WTh, 3525 WTh
 Dafflon, Jessica – 3970 WTh
 Dager, Stephen – 1186 MT
 Dagher, Alain – 1625 MT, 1863 MT, 1896 MT, **3212 WTh**, 3350 WTh, 3373 WTh
 Dagher, Alain – 3202 WTh, 3204 WTh, 3339 WTh, 3410 WTh, 3612 WTh
 Dahl, Jørgen – 2135 MT
 Dahmen, Brigitte – 2196 MT
 Dahnke, Robert – 1872 MT, 4107 WTh
 Dai, Tian – 3909 WTh
 Dai, Zhengjia – 1127 MT, 1477 MT, 4009 WTh
 Daitch, Amy – 2010 MT, 3716 WTh
 Daitch, Amy – 1990 MT
 Dajani, Dina – 1178 MT, 1180 MT, 3353 WTh
 Dalal, Sarang – 2190 MT
 Dalboni da Rocha, Josue Luiz – 3674 WTh
 Dale, Anders – 3314 WTh
 Dale, Corby – 1197 MT
 Dalenberg, Jelle R. – 3949 WTh
 Dalgleish, Tim – 4243 WTh
 Daligault, Sebastien – 1181 MT, 1972 MT
 Dallabona, Monica – 1985 MT
 Dalwani, Manish – 3907 WTh
 Daly, Eileen – 1147 MT, 1166 MT, 3318 WTh, 3439 WTh, 3444 WTh, 3474 WTh
 Damaraju, Eswar – 1345 MT, 1505 MT, 1516 MT, 1553 MT, 1808 MT, 1866 MT, 1935 MT, 3757 WTh, 4191 WTh
 Damasio, Hanna – 1650 MT, 3232 WTh
 Danek, Adrian – 3034 WTh
 Dang, Chao – 1477 MT
 Dang, Linh – 3611 WTh
 Dang-Vu, Thien Thanh – 1370 MT, 2196 MT
 Daniel, Thomas – **1389 MT**
 Daniels, Judith – 2053 MT, 3435 WTh
 Daniels, Nicky – 3419 WTh
 Danneels, Lieven – 3447 WTh
 Dannhauer, Moritz – 1014 MT, 1791 MT, 3152 WTh
 Dannlowski, Udo – 1227 MT, 1233 MT, 1241 MT, 4157 WTh
 Dansereau, Christian – 1713 MT
 Dansereau, Christian – 3941 WTh
 Danyali, Habib Alah – 1875 MT
 Dapretto, Mirella – 1155 MT, 1164 MT, 1182 MT, 1423 MT
 Darboh, Bri – 3823 WTh
 Darby, Ryan – 3083 WTh
 Daren, Arur – 1304 MT
 Darki, Fahimeh – 3758 WTh
 Darracq, Matthieu – 2095 MT

Dartigues, Jean-François – 1498 MT
 Darwin, Benjamin – 1716 MT
 Das, Avilash – 2041 MT
 Das, Kumar – 1608 MT, 3108 WTh, 3121 WTh, 3122 WTh
 Das, Samir – 1673 MT, 1679 MT, 1682 MT, 1684 MT, 1693 MT, 1695 MT, 1714 MT
 Das, Sandhitsu – 3125 WTh
 Daskalakis, Zafiris – 1037 MT, 1065 MT, 1230 MT
 Datta, Esha – 1689 MT
 Davatzikos, Christos – 1821 MT, 1823 MT, 1827 MT, 1837 MT, 2031 MT, **3915 WTh**, 3960 WTh, 4145 WTh
 Davenport, Elizabeth – 1902 MT
 Davenport, Nicholas – 1610 MT
 Davey, Christopher – 1227 MT, 4157 WTh
 David, Gergely – 3075 WTh, 3250 WTh
 Davidesco, Ido – 2163 MT
 Davidovic, Monika – 3095 WTh
 Davidson, Alison – 3060 WTh
 Davidson, Matt – **3379 WTh**
 Davidson, Richard – 1401 MT, 1418 MT, 2202 MT
 Davis, Karen – 2138 MT
 Davis, Kathryn – 2067 MT, 3125 WTh
 Davis, Sarah – 3482 WTh
 Davis, Simon – 1831 MT, 3772 WTh, 3773 WTh
 Dawe, Robert – 3534 WTh
 Daws, Richard – 3932 WTh, 3933 WTh
 Dayan, Michael – 1019 MT, 4031 WTh
 De Beaumont, Louis – 3285 WTh
 De Benedictis, Alessandro – 2047 MT
 de Boer, Marrit – 1236 MT
 De Deyne, Simon – 2077 MT, 3627 WTh
 de Dreu, Miek – 3386 WTh
 De Gelder, Beatrice – 3091 WTh
 de Graaf, Robin – 2222 MT
 de Groot, Marius – 1844 MT
 de Haan, Michelle – 3700 WTh
 de Haas, Benjamin – 3395 WTh
 de Jong, Jeroen – 3735 WTh
 De Klerk, Carina – 3874 WTh
 De la Cruz, Feliberto – 1517 MT, 1796 MT
 de la Iglesia-Vayá, María – 1992 MT
 de la Vega, Alejandro – 1694 MT
 de los Angeles, Carlo – 3686 WTh
 De Lucia, Marzia – 2117 MT
 De Martino, Federico – 1596 MT, 2121 MT, 2183 MT, 2192 MT, 3467 WTh
 de Medeiros, Cynthia – 1417 MT, 3449 WTh, 3573 WTh
 de Medeiros, Cynthia – 3890 WTh
 de Paula, Jonas – 3601 WTh

de Paula, Renan – 1916 MT
 De Pauw, Robby – 1274 MT, 3447 WTh
 de Reus, Marcel – 4075 WTh
 de Ribaupierre, Anik – 3791 WTh
 de Ribaupierre, Sandrine – 1739 MT
 de Rooij, Mark – 3015 WTh
 De Rosa, Eve – 4035 WTh
 De Santiago Requejo, Francisco – 1858 MT, **2050 MT**, 2065 MT, 2068 MT, 2167 MT
 de Simoni, Sara – 3258 WTh, 3276 WTh, 3277 WTh, 3279 WTh
 De Smedt, Bert – 3419 WTh
 de Sousa, Paulo – 1346 MT
 De Stefano, Lisa – 3037 WTh
 de Vos, Annerieke – 1338 MT
 de Vries, Linda – 3867 WTh
 de Wit, Stella – 1284 MT
 de Zubicaray, Greig – 1241 MT, 1600 MT, 1848 MT, 3089 WTh
 de Zwart, Jacco – 1543 MT, **2201 MT**, 3604 WTh, 4038 WTh
 de Zwarte, Sonja – 1324 MT, 1340 MT
 Debbané, Martin – 4218 WTh
 Debener, Stefan – 2130 MT
 Debert, Chantel – 3593 WTh
 Deblieck, Choi – 1068 MT
 Dębska, Agnieszka – 3658 WTh, 3667 WTh
 DeBusschere, Sean – 1352 MT, 1745 MT, 4182 WTh
 DeCarli, Charles – 3024 WTh
 Deccy, Stephanie – 1253 MT
 Decety, Jean – 1935 MT
 Dechent, Peter – 1524 MT, 3082 WTh, 3580 WTh
 Děchtěrenko, Filip – 1943 MT
 Decker, Alexandra – 3890 WTh
 Decker, Leslie – 3858 WTh
 Deckert, Juergen – 1131 MT
 Deco, Gustavo – 3835 WTh, 3969 WTh, 3977 WTh
 DeCross, Stephanie – 1311 MT
 DeDuck, Kristina – 3650 WTh
 Deem, Michael – 4070 WTh
 Degryse, Jasper – 1950 MT
 Dehaene-Lambertz, Ghislaine – 4104 WTh
 Dehaes, Mathieu – 1920 MT
 Dehghani siahaki, Hamed – 1455 MT
 Dekaban, Gregory – 3278 WTh
 DeKraker, Jordan – 2012 MT
 Del Gratta, Cosimo – 4132 WTh
 deLacy, Nina – 1157 MT
 Delafield-Butt, Jonathan – 1878 MT
 Delattre, Victor – 3869 WTh
 Delatycki, Martin – 3213 WTh
 Delgado, María Luisa – 3009 WTh

Delgado, Mauricio – 3343 WTh
 Delgado, Pedro – 2036 MT
 Delgado-Alvarado, Manuel – 1803 MT
 Dell'Acqua, Flavio – 1858 MT, **2050 MT**, 2054 MT, 2065 MT, 2167 MT, **3001 WTh**, **3632 WTh**, 3642 WTh, 4133 WTh
 Dell'Acqua, Flavio – 2068 MT, 2070 MT
 Della Latta, Daniele – 2075 MT
 Della-Justina, Hellen – 2124 MT
 Dellarco, Danielle – 3370 WTh
 Delpuech, Claude – 1181 MT, 1972 MT
 DeLuca, John – 1384 MT
 Dembek, Till – 1005 MT
 Demertzi, Athena – 4024 WTh, 4176 WTh
 Demetriou, Lysia – 1208 MT
 Demetriou, Lysia – 1438 MT
 Demeyere, Nele – 3234 WTh, 3539 WTh
 Demeyere*, Nele – 3231 WTh
 Demiral, Sukru – 2205 MT, 4045 WTh
 Demiralp, Tamer – 3080 WTh, 3126 WTh, 3187 WTh, 3200 WTh, 3584 WTh, 3585 WTh, 4039 WTh
 Demiran, Hatice – 2024 MT
 Demirtas, Murat – 1928 MT, 3324 WTh
 Demirtas Tatlıdede, Asli – 4039 WTh
 Demopoulos, Carly – 1197 MT
 Dempuré, Domitille – 1597 MT
 Den, Ryosuke – 3722 WTh
 den Ouden, Lauren – 1079 MT
 Deng, Feng – 1218 MT, 1461 MT, 1586 MT
 Deng, Feng – 1568 MT
 Deng, Jersey – 3018 WTh, **3050 WTh**
 Deng, Wei – 1238 MT
 Deng, Xiao – 2142 MT
 Deng, Yaling – 1087 MT
 Deng, Zheng-Zheng – 1342 MT, 4229 WTh
 Deniz, Fatma – **1838 MT**
 Denney, Thomas – **1389 MT**
 Dennis, Emily – 1132 MT, 1138 MT, 3282 WTh
 Dennis, Laura – 1077 MT, 1901 MT
 Dennis, Laura – 1074 MT, 1508 MT
 Dentico, Daniela – 2202 MT
 Denys, Damiaan – 1281 MT
 Denys, Damiaan – 1291 MT, 1292 MT, 1293 MT
 Deoni, Sean – 3847 WTh
 Deouell, Leon – 2163 MT
 Depierreux, Frederique – 3167 WTh
 Depoorter, Antoinette – 1474 MT
 Deppe, Michael – 1241 MT
 Deprez, Sabine – 1106 MT, 1263 MT, 3112 WTh
 Depue, Brendan – 1399 MT, 1415 MT, 1416 MT
 Derbyshire, J. Andrew – 4155 WTh

Deriche, Rachid – 1659 MT, 3560 WTh
 Dern, Sebastian – 3253 WTh
 Derntl, Birgit – 1402 MT, 4199 WTh
 Dervent, Sevinç – 3080 WTh
 Desai, Rutvik – 3636 WTh
 Descamps, Benedicte – 1565 MT
 Descoteaux, Maxime – 1626 MT, 1770 MT
 Descoteaux, Maxime – 1582 MT, 3560 WTh
 Deserno, Lorenz – **2074 MT**
 Deshpande, Gopikrishna – **1389 MT**
 Deshpande, Harshawardhan – 1082 MT
 Deslauriers-Gauthier, Samuel – 3560 WTh
 Deslauriers-Gauthier, Samuel – 1582 MT
 Desouza, Cyrus – 3770 WTh
 Desowska, Adela – 1442 MT
 Desrivières, Sylvane – 3151 WTh, 3469 WTh
 Desseilles, Martin – 2196 MT
 Destrieux, Christophe – 2039 MT
 Detre, John – 3153 WTh
 Deutschl, Gunther – 1003 MT
 Devenyi, Gabriel – 1089 MT, 1704 MT
 Deverre, Jean-Robert – 3485 WTh
 Devinsky, Orrin – 1019 MT, **3379 WTh**
 Devlin, Joseph – 3699 WTh
 Devrome, Martijn – 1106 MT, 1839 MT, 1854 MT
 Dewey, Deborah – 1468 MT, 1968 MT
 DeWitt, Thomas – 3393 WTh
 Dewitte, Marieke – 1437 MT
 DeYoe, Edgar – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh
 Dhamala, Elvisha – 1801 MT
 Dhawan, Vijay – 3176 WTh, 3177 WTh
 Dhillon, Waljit – 1438 MT
 Dhollander, Thijs – 3850 WTh
 Di, Fu – 1938 MT
 Di, Hua – 3225 WTh
 Di, Qiqi – 3659 WTh
 Di, Xin – 1899 MT
 Di Giorgio, Annabella – 1324 MT
 Di Perri, Carol – 1631 MT, 2094 MT, 4024 WTh
 Di Rienzo, Franck – 1972 MT
 Di Salle, Francesco – 4109 WTh
 Diaconescu, Andreea – 3344 WTh
 Dias, Afonso – 3992 WTh
 Diaz, Michele – 3787 WTh
 Dicesare, Christopher – 1578 MT
 Dick, Anthony – 1558 MT
 Dickerson, Bradford – 3794 WTh
 Dickie, Erin – 1700 MT, 1924 MT
 Dickscheid, Timo – 1869 MT, 4104 WTh
 Diedrichsen, Jorn – **1654 MT**, 1657 MT, 3193 WTh, 4156 WTh

Diehl, Beate – 3496 WTh
 Diehl, Caroline – 1309 MT
 Diekhof, Esther – 1425 MT, **1504 MT**
 Dierks, Thomas – 1048 MT, 4011 WTh
 Diers, Kersten – 3097 WTh, 3435 WTh
 Diersch, Nadine – 3695 WTh
 Dieterich, Marianne – 2011 MT, 2114 MT, 2115 MT, 2118 MT, 2122 MT, 2134 MT, 3499 WTh
 Dietrich, Julia – 3418 WTh
 Dietsche, Bruno – 1233 MT
 Dietz, Martin – 2190 MT
 Díez Cirarda, María – 3197 WTh
 DiFrancesco, Mark – 1265 MT
 DiGangi, Julia – 1584 MT
 Dilharreguy, Bixente – 1498 MT
 Dillon, Daniel – **3566 WTh**
 Dima, Danai – 4157 WTh
 Dimitrov, Annika – 2198 MT
 Dimitrova, Rali – 1148 MT, 1153 MT, 3846 WTh
 Dimond, Dennis – 1532 MT
 DiMuzio, Jennifer – 3067 WTh
 Dimyan, Michael – 3219 WTh
 Dinelle, Katherine – 3183 WTh
 Ding, Jurong – 4002 WTh
 Ding, Lei – 3037 WTh
 Ding, Weina – 1090 MT
 Ding, Weiyan – 1358 MT
 Ding, Xiaoyu – 3923 WTh, 4120 WTh
 Ding, Xin – 4002 WTh
 Ding, Yi-Cen – 1685 MT
 Ding, Zhongxiang – 3225 WTh
 Dinkelacker, Vera – 3132 WTh
 Dinov, Ivo – 3307 WTh
 Dinse, Juliane – 1353 MT, **2022 MT**
 Dinter, Christina – 1102 MT
 Dionisio, Sasha – 1420 MT
 Dirlikov, Ben – 3526 WTh
 Disner, Seth – 1132 MT
 Dissanayaka, Nadeeka – 3163 WTh, 3164 WTh
 Ditzgen, Beate – 4245 WTh
 Divadkar, Vaibhav – 2128 MT
 Divanbeighi Zand, Amir – **2223 MT**
 Diwadkar, Vaibhav – 1283 MT, 1285 MT, 1286 MT, 1352 MT, 1448 MT, 1745 MT, 1978 MT, 3070 WTh, 3710 WTh, 4182 WTh
 Dixon, Matt – 3358 WTh
 Dixon, Roger – 1713 MT
 Dmochowski, Jacek – 1012 MT
 Dmochowski, Jacek – 1022 MT, 3511 WTh
 Do, Cao Tri – 1482 MT
 Dobbels, Els – 4108 WTh
 Dobkin, Bruce – 1068 MT

Dobrowolski, Paweł – 3458 WTh
 Dobryakova, Ekaterina – 1384 MT, 1426 MT, 3944 WTh
 Dockès, Jérôme – 4153 WTh
 Dockree, Paul – 3234 WTh
 Dockstader, Colleen – 3573 WTh
 Dodell-Feder, David – 4219 WTh
 Doderio, Luca – 3957 WTh
 Doeller, Christian – **1515 MT**
 Doesburg, Sam – 1162 MT, 1188 MT, 1787 MT, 2017 MT, 3127 WTh, 3563 WTh
 Doherty, Tim – 3278 WTh
 Dohmatob, Elvis – 4147 WTh
 Dohrmann, Merle – 3743 WTh
 Dolan, Ray – 1822 MT, 1832 MT
 Dols, Annemiek – 3028 WTh, 3031 WTh
 Domagalik, Aleksandra – 1304 MT
 Dombrovski, Alexandre – 3340 WTh, 3343 WTh, 3346 WTh
 Donahue, Chad – 1998 MT
 Donald, Kirsten – 1235 MT, 1271 MT
 Donald, Kirsty – 1599 MT
 Donatelli, Graziella – 3480 WTh
 Dong, Bin – 1593 MT
 Dong, Guangheng – 1391 MT
 Dong, Hao-Ming – 1946 MT, 4229 WTh
 Dong, Li – 3107 WTh
 Dong, Minghao – 1439 MT, 1440 MT, 3751 WTh
 Dong, Qi – 3422 WTh
 Donges, Maximilian – 4251 WTh
 Donhauser, Peter – 1753 MT, 3551 WTh
 Donker Kaat, Laura – 1595 MT
 Donnelly, Patrick – 3656 WTh
 Donohue, Brian – 3308 WTh
 Dopfer, Elise – 1595 MT, 3015 WTh
 Doran, Eric – 3035 WTh
 Dos Santos Gomes, Ana – 3884 WTh
 Dosenbach, Nico – 3728 WTh
 Dou, Rongshe – 3559 WTh
 Dou, Shewei – 1373 MT, 1376 MT
 Douard, Elise – 1560 MT
 Douaud, Gwenaëlle – 1666 MT
 Doucet, Gaele – 1350 MT, 1857 MT, 2119 MT, 3759 WTh
 Dougherty, Donald – 1113 MT
 Dougherty, Sara – 3647 WTh
 Douglas, Pamela – 3157 WTh
 Dousty, Mehdy – 1780 MT
 Douw, Linda – 2019 MT, 3057 WTh, 3061 WTh
 Dovrolis, Constantine – 1055 MT
 Dowlatshahi, Dar – 3248 WTh
 Downar, Jonathan – 1021 MT

Downar, Jonathan – 1065 MT, 1243 MT
 Downar, Jonathan – 1037 MT, 1230 MT
 Downey, Kaitlyn – 1930 MT
 Doyère, Valérie – 1759 MT
 Doyle, Andrew – 1679 MT
 Doyle, Lex – 3829 WTh, 3833 WTh
 Doyle, Olivia – 1179 MT
 Doyle, Werner – **3379 WTh**
 Doyon, Julien – 1947 MT, 3746 WTh, 3749 WTh
 Dragan, Wojciech – 1422 MT
 Draganski, Bogdan – 2117 MT
 Draganski, Bogdan – 3315 WTh
 Drake, Daniel – 3917 WTh, 4061 WTh
 Drakesmith, Mark – 2044 MT, 3554 WTh
 Drazen, Catherine – 3728 WTh
 Dresler, Martin – 3712 WTh
 Dressing, Andrea – **3243 WTh**
 Dretsch, Michael – **1389 MT**
 Drevets, Wayne – 1228 MT, 1229 MT, 1301 MT
 Dreyer, Felix – 1769 MT
 Driesen, Naomi – 1357 MT
 Drincic, Andjela – 3770 WTh
 Driskell, Sara – 3516 WTh
 Drobak, Carolyn – 2013 MT
 Dronkers, Nina – 1652 MT, 3241 WTh
 Drossinos Sancho, Niki – **3001 WTh, 3632 WTh**
 Drottat, Marie – 3265 WTh
 Droutman, Vita – 1545 MT
 Drożdziel, Dawid – 3368 WTh
 Drzezga, Alexander – 3008 WTh
 Du, Changde – **1723 MT**
 Du, Changying – **1723 MT**
 Du, Fei – 2209 MT
 Du, Lian – 1225 MT
 Du, Xiaoming – 3780 WTh
 Du, Yuhui – 1217 MT, **1330 MT**, 1351 MT, 1516 MT, 1688 MT, 1841 MT, 3757 WTh, 3905 WTh, 3953 WTh, 4052 WTh
 Du Pleiss, Stefan – 1138 MT
 du Plessis, Adre – 3509 WTh
 Du Plessis, Lindie – 1900 MT
 Du Plessis, Stefan – 1132 MT, 3190 WTh
 Duan, Dingna – 4105 WTh
 Duan, Dingna – 2008 MT
 Duan, Hongxia – 1390 MT
 Duan, KuaiKuai – 3144 WTh
 Duan, Mingjun – 1316 MT
 Duan, Mingjun – 1317 MT
 Duann, Jeng-Ren – 3364 WTh
 Duarte, Catarina – 3338 WTh
 Dubois, Bruno – 2052 MT
 Dubois, Jessica – 3867 WTh, 4104 WTh

Dubourg, Lydia – 4218 WTh
 Duca, Sergio – 1171 MT, 3076 WTh, 3445 WTh, 3450 WTh
 Duchesnay, Edouard – 2001 MT
 Duchesne, Simon – 1713 MT
 Duchin, Yuval – 3218 WTh
 Dudley, Jonathan – 1578 MT, 3393 WTh
 Dudley, Katerina – 1199 MT
 Duehlmeier, Leonie – 1073 MT
 Duff, Barbara – 1306 MT
 Duff, Eugene – 1748 MT, 1911 MT, 3868 WTh, 3884 WTh, 4036 WTh
 Duffley, Gordon – 1001 MT
 Duffy, Shantel – 3053 WTh
 Duggirala, Ravindranath – 2009 MT, 3313 WTh
 Dukart, Juergen – 2214 MT
 Dukelow, Sean – 3228 WTh
 Dukic, Stefan – 3506 WTh
 DUMONT, Victoria – 2159 MT
 Duncan, Dominique – 1881 MT
 Dunkley, Benjamin – 3290 WTh, 3842 WTh
 Dunlop, Boadie – 1252 MT
 Dunlop, Katharine – 1065 MT
 Dunn, Jeffrey – 3593 WTh, 3599 WTh
 DUPONT, Patrick – 1764 MT, 2077 MT, 3627 WTh
 Dupont, Patrick – 1874 MT, 2080 MT
 Dupont, Sophie – 3132 WTh
 Duprat, Romain – 1042 MT
 DuPre, Elizabeth – 4035 WTh
 Dupré la Tour, Tom – 1759 MT
 Dupret, David – 4192 WTh
 Duran, Fabio – 1227 MT
 DURDURAN, Turgut – 2159 MT
 Durnez, Joke – 1951 MT, 3375 WTh
 Dürschmid, Stefan – 3918 WTh
 Durston, Sarah – 1145 MT, 3586 WTh
 Dursun, Serdar – 3939 WTh
 Duszynski, Chris – 3593 WTh, 3599 WTh
 Duyck, Stefanie – 3419 WTh
 Duyn, Jeff – 1543 MT, **2201 MT**, 3604 WTh, 4038 WTh
 Düzel, Emrah – 3734 WTh
 Dwyer, Dom – 1319 MT
 Dyer, Tom – 3313 WTh
 Dyrby, Tim – 2068 MT
 Dzemidzic, Mario – 4063 WTh, 4173 WTh

E

Eads, Lou Ann – 2036 MT
 Eagleson, Roy – 3791 WTh
 Eagleson, Roy – 1739 MT
 Earl, Eric – 3951 WTh

Easson, Amanda – 1175 MT
 Easter, Phillip – 1283 MT, 1285 MT, 3070 WTh
 Eberle, Christopher – 2221 MT
 Ebmeier, Klaus – 1870 MT, 3461 WTh, 3828 WTh, 3975 WTh
 Ebner, Natalie – 1544 MT
 Ebrahimzadeh, Ata – 3017 WTh
 Eck, Judith – 1460 MT, 1530 MT
 Ecker, Christine – 1147 MT, 1166 MT, 3439 WTh, 3444 WTh, 3474 WTh
 Eckner, William – 3324 WTh
 Eckstein, Monika – 4245 WTh
 Edagawa, Kouki – 1965 MT
 Edde, Manon – 1498 MT
 Edden, Richard – 1050 MT, 3807 WTh
 Edden, Richard – 3577 WTh
 Eden, Guinevere – 1917 MT, 1930 MT, 3649 WTh, 3655 WTh
 Edlow, Brian – 1742 MT
 Edlow, Brian L. – 1732 MT
 Edwards, David – 1148 MT, 1153 MT, 1748 MT, 3298 WTh, 3846 WTh, 3856 WTh, 3868 WTh, 3884 WTh
 Edwards, Dylan – 1068 MT
 Edwards, Jodi – 3240 WTh
 Edwards, Michael – 1279 MT
 Edwin Thanarajah, Sharmili – 1509 MT
 Egan, Gary – 3213 WTh, 4095 WTh
 Egbert, Anna – 1442 MT
 Egger, Karl – 2043 MT
 Eggers, Carsten – 3205 WTh
 Egorova, Natalia – 3024 WTh, 3236 WTh, 3644 WTh
 Ehgoetz Martens, Kaylena – 3165 WTh, 3209 WTh
 Ehlis, Ann-Christine – 2132 MT
 Ehrlich, Stefan – 1311 MT, 3097 WTh
 Ehrsson, Henik – 2133 MT
 Ehses, Philipp – 2211 MT
 Eich, Teal – 3351 WTh
 Eickhoff, Claudia – 1669 MT
 Eickhoff, Simon – 1669 MT, 1719 MT, 1999 MT, 2000 MT, 3179 WTh, 3185 WTh, 3790 WTh, 4100 WTh, **4203 WTh**, 4251 WTh, **4258 WTh**
 Eickhoff, Simon – 1434 MT, 1821 MT, 1942 MT, 2014 MT, **3355 WTh**, 3815 WTh, 3820 WTh, 3821 WTh, **3915 WTh, 4226 WTh**
 Eidelberg, David – 3176 WTh, 3177 WTh, 3181 WTh, 3182 WTh
 Eidner, Ines – 1394 MT, 1466 MT, 2221 MT
 Eijlers, Anand – 1913 MT, 3057 WTh, 3074 WTh
 Eisenberg, Daniel – 1326 MT, 3704 WTh
 Eken, Aykut – 3589 WTh, 3641 WTh
 Eker, Mehmet Cagdas – 1324 MT

Ekhtiari, Hamed – 1226 MT, 1813 MT, 1815 MT
 Eklund, Anders – 1704 MT
 Ekstrand, Chelsea – 1503 MT, 3654 WTh
 El-Baba, Mazen – 3980 WTh
 El-Sourani, Nadiya – **3189 WTh**
 Elbau, Immanuel – 1466 MT, 2221 MT
 Elhalawani, Hesham – 1556 MT
 Elias, Rita – 1352 MT
 Eliassen, James – 1220 MT
 Eliez, Stephan – 1312 MT, 1363 MT, 1835 MT, 4218 WTh
 Elinder, Fredrik – 1533 MT
 Elisabeth, Binder – 1466 MT, 2221 MT
 Elkommos, Samia – 3122 WTh
 Ellamil, Melissa – 3400 WTh
 Ellchuk, Tasha – 1503 MT
 Ellegood, Jacob – 1248 MT
 Ellingson, Benjamin – 2144 MT
 Elliot, James – 1788 MT
 Elliott, Lloyd – 4033 WTh
 Elliott, Mark – 1577 MT, 1821 MT, 3153 WTh
 Elliott, Maxwell – 1326 MT
 Ellis, Jonathan – 1578 MT
 Ellmore, Timothy – 3702 WTh
 Elomaa, Viki-Veikko – 2160 MT
 Elsenbruch, Sigrid – 1260 MT, 1456 MT
 Elshiekh, Abdel – 3021 WTh
 Eltahir, Amnah – 1249 MT
 Elwell, Clare – 3598 WTh
 Ely, Benjamin – 4181 WTh
 Elzinga, Bernet – 4243 WTh
 Embury, Christine – 3770 WTh, 3885 WTh
 Emdin, Michele – 1778 MT
 Emery, Derek – 1606 MT
 Emilie, Kierig – 2011 MT
 Emir, Uzay – 1052 MT, **2223 MT**
 Emmerling, Franziska – 1437 MT
 Emmerling, Thomas – 1536 MT
 Emmersberger, Mirjam – **3762 WTh**
 Emmorey, Karen – 3617 WTh
 Emsley, Robin – 3190 WTh
 Enck, Paul – 1915 MT
 Eng, Goi Khia – 1300 MT
 Engel, Maria – 1521 MT
 Engelen, Jennifer – 1233 MT
 Engeli, Etna – 1072 MT
 Engelke, Greta – 3740 WTh
 Engemann, Denis – 1829 MT
 Engle, Elizabeth – 1598 MT
 Engman, Jonas – 1129 MT, 1130 MT
 Engström, Maria – 1260 MT, 1533 MT
 ENIGMA, Consortium – 1100 MT

Eom, Soyong – 3111 WTh, 3391 WTh, 4096 WTh
 Erb, Michael – 1239 MT, 1402 MT, 2123 MT, 3720 WTh
 Erbey, Miray – 3812 WTh
 Erdman, Alon – 1381 MT
 Erdogan, Sinem – 2207 MT
 Erdogdu, Emel – 3187 WTh, 3200 WTh, 3584 WTh, 3585 WTh
 Erhardt, Erik – 3974 WTh
 Eriksson, Johan – 3459 WTh
 Erk, Susanne – **1395 MT**, 4163 WTh
 Ermer, Elsa – 3219 WTh
 Ermolina, Yulia – 1275 MT, 1277 MT
 Ernst, Monique – 1139 MT
 Ernst, Thomas – 1093 MT, 1486 MT, 1819 MT
 Erritzoe, David – 2152 MT
 Ertl, Matthias – 2115 MT, 2118 MT, 3499 WTh
 Ertl-Wagner, Birgit – 1032 MT, **1049 MT**, 1256 MT, 1367 MT, 1718 MT, 2011 MT, 3580 WTh
 Erwin-Grabner, Tracy – 1926 MT
 Eryurek, Kardelen – 4039 WTh
 Escamilla, Michael – 1307 MT
 Eskildsen, Simon – 1089 MT
 Espensen-Sturges, Tori – 1347 MT
 Espinoza, Flor – 1932 MT, 1935 MT
 Espinoza, Flor – 2064 MT
 Espinoza, Randall – 1031 MT, 1217 MT, 1240 MT, 1255 MT
 Espinoza-Luna, Isabel – 1105 MT
 Esposito, Fabrizio – 1929 MT, 4109 WTh, 4185 WTh
 Espuny, Javier – 3507 WTh, 3623 WTh, 3626 WTh, 4252 WTh, 4260 WTh
 Essex, Ryan – 1881 MT
 Esteban, Oscar – **1677 MT**, 1704 MT, 1717 MT, 1820 MT, 3375 WTh
 Esterman, Michael – 3826 WTh
 Estournet, Delphine – 1733 MT
 Etchell, Andrew – 3090 WTh
 Ethofer, Thomas – 1239 MT, 2123 MT
 Etkin, Amit – 1036 MT, 1059 MT, 1784 MT
 Etzel, Jo – 1469 MT
 EU-AIMS, LEAP group – 1156 MT
 Evans, Alan – 1177 MT, 1341 MT, 1673 MT, 1676 MT, 1679 MT, 1682 MT, 1684 MT, 1693 MT, 1705 MT, 1713 MT, 1714 MT, 1845 MT, 1847 MT, 1862 MT, 1886 MT, 1896 MT, 3049 WTh, 3313 WTh, 3315 WTh, 3316 WTh, 3432 WTh, 3440 WTh, 3483 WTh, 3612 WTh, 3852 WTh, 3892 WTh, 4159 WTh, 4166 WTh, 4168 WTh
 Evans, Gemma – 3638 WTh
 Evans, Jen – 1221 MT, 1231 MT
 Evans, John – 2044 MT

Evans, Jonathan – 2220 MT
 Evans, Tanya – **3678 WTh**
 Evans, Travis – 3370 WTh
 Everling, Stefan – 3222 WTh
 Evia, Arnold – 1798 MT
 Evia Jr., Arnold – 3534 WTh, 3792 WTh, 3799 WTh
 Ewen, Joshua – 3526 WTh
 Ewencyk, Claire – 3175 WTh
 Eyler, Lisa – 3314 WTh

F
 Fabiani, Elie – 3653 WTh
 Fachada, Nuno – 3527 WTh
 Factor, Stewart – 3203 WTh, 3214 WTh
 Faes, Luca – 1766 MT
 Fagundes Lopes, Lucas – 3792 WTh
 Fahrenfort, Johannes Jacobus – 2176 MT
 Failla, Michelle – 1163 MT
 Fair, Brittany – 1136 MT, 3317 WTh, 3360 WTh, 3470 WTh
 Fair, Damien – 1179 MT, 1196 MT, **1882 MT**, 3951 WTh, 3978 WTh
 Fairhall, Scott – 3725 WTh
 Falahpour, Maryam – 1919 MT
 Falchier, Arnaud – **1882 MT**
 Falco, Richard – 3403 WTh
 Falcón, Carles – 3424 WTh, 3662 WTh
 Falkai, Peter – 1305 MT, 1319 MT, 1367 MT, 3580 WTh
 Falkiewicz, Marcel – 1833 MT
 Fall, Elizabeth – 3168 WTh
 Fallgatter, Andreas – 2132 MT
 Famili, Afarin – 1902 MT
 Fan, Fengmei – 1323 MT, 1336 MT
 Fan, Hongli – 2203 MT
 Fan, huanhuan – 1238 MT
 Fan, Jia – 1597 MT, 1599 MT
 Fan, Jie – 1289 MT, 1294 MT
 Fan, Lingzhong – **1660 MT**, 2014 MT
 Fan, Linlin – 1127 MT
 Fan, Linzhong – 3295 WTh
 Fan, Qianqian – 1662 MT
 fan, qing – 1288 MT
 Fan, Qiuyun – 1744 MT
 Fan, Siyan (Sarah) – 1284 MT
 Fan, Xiaoying – 2209 MT
 Fan, Xin – 3352 WTh
 Fan, Yan – 3990 WTh
 Fan, Yong – 1118 MT, 1359 MT, 1369 MT
 Fang, Arlene – 3049 WTh
 Fang, Fang – 3879 WTh
 Fang, Ji – 3000 WTh

Fang, Jingwan – 3528 WTh
 Fang, Shih-Chin – 3378 WTh, 3383 WTh
 Fang, Yan – 3069 WTh
 Fang, Zuo – 3980 WTh
 Fani, Negar – 1132 MT
 Faragó, Tamás – 1435 MT
 Farahibozorg, Seyedehrezvan – **1790 MT**, 3638 WTh
 Farhadi, Ali – 1697 MT
 Farhadi, Hamed – 4013 WTh
 Farhadi, Tahereh – 1452 MT
 Farhat, Nabgha – 3859 WTh
 Faria, Andreia – 2203 MT
 Farlow, Martin – 3016 WTh
 Farouj, Younes – 4062 WTh
 Farrell, Kyle – 3281 WTh
 Farrés Franch, Marcel – 3410 WTh
 Faskowitz, Joshua – 2020 MT, 3305 WTh, 3937 WTh
 Fatima, Zainab – 1175 MT
 Faul, Leonard – 1399 MT, 1415 MT
 Faull, Olivia – 1451 MT
 Fauvel, Baptiste – 1496 MT
 Favrat, Bernard – 1081 MT
 Favrod, Ophélie – 1321 MT
 Faymonville, Andrea – 1061 MT
 Fazal, Zahra – **1551 MT**
 Fears, Scott – 1324 MT
 Feczko, Eric – 1196 MT, **1882 MT**
 Fede, Samantha – 1119 MT
 Fedele, Tommaso – 1126 MT, 1419 MT
 Federico, Paolo – 3103 WTh, 3119 WTh
 Federspiel, Andrea – 3606 WTh
 Federspiel, Andrea – 1343 MT, 1344 MT, 1563 MT
 Fedorov, Alex – 1866 MT
 Feeney, Claire – 3277 WTh
 Fehr, Ernst – 3342 WTh
 Fei, Nanxi – 3631 WTh
 Fei, NingBo – 3058 WTh, 3065 WTh
 Fei, Ningbo – 2140 MT
 Feifel, David – 1544 MT
 Feige, Bernd – 3143 WTh
 Feigenbaum, Janet – 3140 WTh
 Feilding, Amanda – 2152 MT, 3413 WTh
 Feilding, Amanda – 2106 MT
 Feingold, Franklin W. – 4128 WTh
 Feis, Delia-Lisa – 3297 WTh
 Feiweier, Thorsten – 1555 MT
 Feldman, Samantha – 1056 MT, 3229 WTh
 Feldner, Matthew – 1128 MT, 3138 WTh
 Félician, Olivier – 1496 MT
 Felton, Elizabeth – 3128 WTh, 3130 WTh

Feng, Chunliang – 1400 MT
 Feng, Chunliang – 4238 WTh
 Feng, Jianfeng – 3625 WTh, 3913 WTh, 3991 WTh, 4131 WTh
 Feng, Jianfeng – 4127 WTh
 Feng, Jianfeng – 3986 WTh
 Feng, Jieyin – 1400 MT
 Feng, Shengchuang – 3333 WTh
 Feng, Yi – 3701 WTh
 Fengxia, Liang – 4111 WTh
 Fennema-Notestine, Christine – 1261 MT, 3314 WTh
 Ferber, Susanne – 2179 MT
 Ferbinteanu, Janina – 3033 WTh
 Ferdousi, Mariya – 4124 WTh
 Fereshtehnejad, Seyed-Mohammad – 3204 WTh, **3212 WTh**
 Ferguson, Bart – 4121 WTh
 Ferko, Kayla – 2012 MT
 Ferland, Tori – 1280 MT
 Fernández, Guillén – 1390 MT, **1515 MT**, 1912 MT, 3712 WTh
 Fernandez Rodriguez-Cabello, Sara – 4221 WTh
 Fernández-Corazza, Mariano – 1771 MT, 1781 MT
 Fernández-Corcuera, Paloma – 3899 WTh
 Fernandez-Ruiz, Juan – 3193 WTh
 Fernandino, Leonardo – 3645 WTh
 Ferrara, Marcello – 3450 WTh
 Ferrara, Michele – 2199 MT
 Ferrarelli, Fabio – 2202 MT
 Ferrari, Emanuele – 2217 MT
 Ferrari, Paul – 1767 MT
 Ferraro, Stefania – 3079 WTh
 Ferreira, Catarina – 3377 WTh
 Ferreira, Michael – 1625 MT
 Ferretti, Antonio – 2109 MT
 Ferris, Jennifer – 3240 WTh, 3486 WTh, 4085 WTh
 Fesi, Jeremy – 2171 MT
 Fettes, Peter – 1243 MT
 Feuerriegel, Daniel – 1761 MT
 Feusner, Jamie – 3096 WTh
 ffytche, Dominic – 2065 MT, 2167 MT
 Ficek, Bronte – 1050 MT
 Fickling, Shaun – 3281 WTh, 3388 WTh
 Fido, Dean – 1619 MT
 Fiebach, Jochen – 3250 WTh
 Fieggen, Graham – 1599 MT
 Fieremans, Els – 1463 MT, 1811 MT, 3064 WTh, 3780 WTh, 4111 WTh
 Fierro, Cassandra – 2072 MT
 Figee, Martijn – 1293 MT
 Figley, Chase – 3484 WTh, 3536 WTh
 Figley, Chase – 1643 MT

Figueiredo, Patrícia – 1321 MT, 3527 WTh, 3983 WTh, 3992 WTh
 Figueroa, Caroline – 1237 MT
 Fiksinski, Ania – 3318 WTh
 Filho, Geraldo Busatto – 1227 MT, 4157 WTh
 Filippi, Massimo – 4031 WTh
 Filippini, Nicola – 1870 MT, 3828 WTh, 3975 WTh
 Findon, James – 1147 MT
 Finegan, Kevin – 3085 WTh
 Fink, Gereon – **3189 WTh**, 3205 WTh, 3247 WTh, 3253 WTh
 Finke, Carsten – 3063 WTh
 Finn, Daniel – 4042 WTh
 Finn, Emily – 4040 WTh, 4042 WTh
 Finsterbusch, Jürgen – 1524 MT, 1947 MT
 Fiori, Laura – 3299 WTh
 Firat, Zeynep – 1548 MT
 Firat, Zeynep – 3149 WTh
 Firbank, Michael – 1914 MT
 Firlag-Burkacka, Ewa – 1442 MT
 Firumyants, Alexey – 1275 MT, 1277 MT
 Fischer, Clara – 2004 MT, 4104 WTh
 Fischer, Corinne – 1818 MT, 3664 WTh
 Fischer, Håkan – 1544 MT, 1909 MT
 Fischer, Lisa – 3278 WTh
 Fischer-Baum, Simon – 4070 WTh
 Fischl, Bruce – 1655 MT, **1703 MT**, 3441 WTh, 3473 WTh, 4100 WTh, 4118 WTh
 Fischmeister, Florian Ph.S – 1825 MT, 2035 MT, 3715 WTh, 4023 WTh
 Fishbein, Diana – 3832 WTh
 Fisher, Patrick – 1234 MT
 Fisher, Steffanie – 3520 WTh
 Fishman, Inna – 1150 MT
 Fisk, John – 3011 WTh, 3023 WTh
 Fitch, W. Tecumseh – 1825 MT
 Fitzgerald, Kate – 1292 MT
 Fitzgibbon, Sean – 1748 MT, 3868 WTh, 3884 WTh
 Fitzpatrick, Kevin – 4189 WTh
 Fitzpatrick, Shannon – 3520 WTh
 Fjell, Anders – **3703 WTh**
 Flanagan, Virginia – 3421 WTh
 Flandin, Guillaume – 1671 MT, 1695 MT, 1704 MT, 1706 MT
 Flannery, Jessica – 1098 MT, **1428 MT**, 1942 MT
 Flannery, Jessica – 4211 WTh
 Flechais, Remy – 1107 MT
 Flechtner, Hans-Henning – 3152 WTh
 Fleischmann, Dominik – **1581 MT**
 Fleishman, Greg – 4195 WTh
 Fletcher, James – 3016 WTh
 Fletcher, Paul – 1862 MT, 3104 WTh

Fleysher, Lazar – 3468 WTh, 3730 WTh
 Floeel, Agnes – 3250 WTh
 Floeter, Mary Kay – 3086 WTh
 Flor, Herta – 3151 WTh, 3469 WTh
 Florea, Cristina – 1484 MT
 Florin, Esther – 1753 MT
 Flory, Janine – 3145 WTh
 Flounders, Matthew – 2162 MT
 Flournoy, John – 4162 WTh, 4211 WTh
 Flueck, Daniela – 2204 MT
 Foa, Edna – 3153 WTh
 Foffani, Guglielmo – 1035 MT
 Fogel, Stuart – 3980 WTh
 Foki, Thomas – 2035 MT
 Folloni, Davide – **2042 MT**, 4207 WTh
 Fombonne, Eric – 1179 MT, 1196 MT
 Fonagy, Peter – 3140 WTh
 Fondevila, Sabela – 3507 WTh, 3623 WTh, 3626 WTh, 4252 WTh, 4260 WTh
 Fong, Christopher – 1150 MT
 Fonov, Vladimir – 3202 WTh, 3204 WTh
 Fontaine, Martine – 2066 MT
 Fontan, Aurélie – 3858 WTh
 Foran, William – 3875 WTh, 3880 WTh
 Forbes, Erika – 2061 MT, 3881 WTh
 Forbes, Florence – 3609 WTh
 Ford, Judith – 1345 MT
 Ford, Judith M. – **1330 MT**, 3757 WTh
 Forde, Natalie – 1290 MT, 1562 MT, 3586 WTh
 Forest, Marie – 1714 MT, 3310 WTh
 Forkel, Stephanie – 2005 MT, 2065 MT, **3001 WTh**, 3241 WTh, **3632 WTh**
 Formisano, Elia – 1640 MT, 2121 MT
 Fornari, Eleonora – 1081 MT
 Forné, Sussana – 3424 WTh, 3662 WTh
 Foster, Brett – 1937 MT
 Foster, Catherine – 2204 MT, 3060 WTh
 Foster, Ian – 3307 WTh
 Foster, Sheryl – 3948 WTh
 Fouche, Jean-Paul – 1235 MT, 1261 MT, 1271 MT
 Fouche, Jean-Paul – 1130 MT
 Foucher, Jack – 1346 MT
 Foulon, Chris – 2038 MT
 Fournier, Marc – 1886 MT
 Fox, Michael – 1907 MT, 3083 WTh
 Fox, Nick – 3019 WTh, 3838 WTh
 Fox, P. Mickle – 1663 MT
 Fox, Peter – 1719 MT, 1849 MT, 2000 MT, 3313 WTh, **3355 WTh**, 3747 WTh, 3976 WTh
 Fox, Peter – **4203 WTh**
 Fox, Peter – 1211 MT, 1663 MT, 4251 WTh
 Fox, Robert – 2046 MT

Foxley, Sean – **2042 MT**
 Fracasso, Alessio – 4121 WTh
 Fragola, Giulia – 3546 WTh
 Frahm, Jens – 2158 MT
 Franca, Lucas – 3496 WTh
 Francis, Alan – 1117 MT
 Francis, Jennifer – 1584 MT
 Francis, Susan – 1537 MT, 1624 MT, 4186 WTh
 Francisco, Beatrice – 1056 MT, 3237 WTh
 Francks, Clyde – 3472 WTh
 Frangakis, Constantine – 1050 MT
 Frangos, Eleni – 2146 MT, 2147 MT
 Frangou, Sophia – 1350 MT, 1353 MT, 1857 MT, 2119 MT, 3759 WTh
 Frank, Lawrence – 4114 WTh
 Frank, Robin – 1088 MT
 Frank, Sebastian – 1591 MT
 Frank-Podlech, Sabine – 1915 MT
 Franke, Barbara – 3144 WTh, 3586 WTh
 Franke, Katja – 3900 WTh, 3901 WTh
 Franklin, Crystal – 3747 WTh
 Franklin, Teresa – 1118 MT
 Fransson, Peter – 1168 MT, 1909 MT
 Franz, Carol – 3314 WTh
 Fraser, Douglas – 3278 WTh
 Frässle, Stefan – 3989 WTh
 Frau-Pascual, Aina – 3609 WTh
 Frayne, Richard – 1628 MT, 3073 WTh, 3817 WTh
 Frazier, Todd – 3408 WTh
 Frederick, Blaise – 1043 MT, 1497 MT
 Frederick, Blaise – 2207 MT
 Fredrikson, Mats – 1129 MT, 1130 MT
 Freiherr, Jessica – 1402 MT
 Freitag, Christine – 1173 MT, 4210 WTh, 4212 WTh
 Freitas, Lorena – 4161 WTh
 Freiwald, Winrich – **4223 WTh**
 Fremont, Wanda – 1611 MT
 French, Leon – 3323 WTh
 French, Louis – 3261 WTh
 Freudenburg, Zachary – 3544 WTh
 Freund, Patrick – 3075 WTh, 3578 WTh
 Freund, Patrick – 3250 WTh
 Frey, Benicio – 1203 MT
 Freytag, Jana – 3247 WTh
 Frick, Andreas – 1129 MT, 1130 MT
 Fridgeirsson, Egill Axfjord – 1293 MT
 Fridriksson, Julius – 3242 WTh
 Friedel, Eva – 1088 MT
 Friederici, Angela – 3354 WTh, 3624 WTh, 3737 WTh
 Friedman, Amy – 3070 WTh
 Friedman, Daniel – 1019 MT

Friedman, Naomi – 4084 WTh
 Friedman, Seth – 3286 WTh
 Friesen, Alexander – 3489 WTh
 Friesen, Christopher – 3741 WTh
 Friesen, Christopher – 1955 MT
 Frisch, Stefan – 1257 MT
 Friston, Karl – 1721 MT, 1724 MT, 2213 MT, 3972 WTh, 3989 WTh, 4022 WTh
 Fritsche, Andreas – 3337 WTh
 Fritz, Anne – 2054 MT
 Fritz, Francisco J. – **1567 MT**
 Fritz, Jessica – 4243 WTh
 Fritz, Thomas – 3405 WTh
 Frodl, Thomas – 1241 MT
 Froeling, Martijn – 1602 MT
 Fröhner, Juliane – 3877 WTh
 Frommer, Jörg – 3990 WTh
 Frosch, Matthew – 3473 WTh
 Frost, Martin – 1536 MT
 Frost, Stephen – 3587 WTh
 Froud, Karen – 1144 MT
 Froudish-Walsh, Sean – 1623 MT, 3730 WTh
 Frouin, Vincent – 1664 MT, 3151 WTh, 3469 WTh
 Fryer, Tim – 3048 WTh
 Fu, Cynthia – 4157 WTh
 Fu, Di – 4230 WTh
 Fu, Di – 1946 MT, 4228 WTh
 Fu, Jessie – 1853 MT, 3183 WTh
 Fu, Shinan – 1357 MT
 Fu, Xuemei – 1549 MT
 Fu, Yixiao – 1225 MT, 3985 WTh
 Fu, Zening – 1899 MT
 Fuentealba, Pablo – 3531 WTh
 Fuentes, Jorge – 1992 MT
 Fuertinger, Stefan – 3938 WTh
 Fuh, Jong-Ling – 3032 WTh
 Fujii, Seika – 2098 MT
 Fujino, Junya – 1151 MT
 Fujiwara, Hisako – 3133 WTh
 Fukuda, Masato – 1405 MT
 Fukuda, Masato – 3552 WTh
 Fukushima, Makoto – 1773 MT
 Fukutomi, Hikaru – 2021 MT
 Fulbright, Robert – 3587 WTh
 Fuller, Clifton – 1556 MT
 Fullerton, Janice – 1324 MT
 Fumagalli, Luca – 1518 MT
 Funck, Thomas – 3612 WTh
 Funnell, Margaret – 3360 WTh
 Furby, Hannah – 3160 WTh
 Furmark, Tomas – 1129 MT, 1130 MT
 Furuichi, Atsushi – 1334 MT

Futatshubashi, Masami – 2219 MT
 Færden, Ann – 1348 MT

G

Gabitov, Ella – 3746 WTh
 Gábor, Anna – 1435 MT, 4249 WTh
 Gabrieli, John – 3374 WTh
 Gácsi, Márta – 1435 MT, 4249 WTh
 Gadd, Brooke – 1578 MT
 GadElkarim, Johnson – 4130 WTh
 Gadeyne, Stefanie – 3114 WTh
 Gaebler, Michael – **1395 MT**, 2053 MT, 3812 WTh
 Gagoski, Borjan – 3859 WTh
 Gahm, Jin Kyu – 4110 WTh
 Gaillard, William – 1199 MT, 1944 MT
 Gais, Steffen – 1840 MT, 3718 WTh, 3720 WTh, **3762 WTh**
 Gajdoš, Martin – 4224 WTh
 Galaburda, Albert – 1154 MT
 Galán-García, Lídice – 3430 WTh
 Galdun, Emily – 3750 WTh
 Galinsky, Vitaly – 4114 WTh
 Gallagher, Louise – 1433 MT
 Gallagher, Peter – 1914 MT, 3195 WTh
 Gallant, Jack L – **1838 MT**, 1850 MT
 Gallardo, David – 2027 MT
 Gallardo, Guillermo – 1659 MT, 3560 WTh
 Gallea, Cecile – 3175 WTh
 Gallea, Cécile – 3215 WTh
 Gallen, Courtney – 1485 MT
 Gallinat, Jürgen – 3151 WTh, 3469 WTh
 Gallivan, Jason – 2179 MT
 Galuta, Ilia – 1191 MT
 Galvez, Marcelo – 1992 MT
 Gamba, Humberto – 2124 MT
 Gambi, Francesco – 2109 MT
 Gan, Jun – 1289 MT, 1294 MT
 Gandhi, Parina – 3069 WTh
 Gang, Li – 3902 WTh
 Ganger, Sebastian – 3454 WTh
 Ganjgahi, Habib – 3308 WTh, 3312 WTh, 4178 WTh
 Ganne, Chaitanya – 1642 MT
 Ganne, Chaitanya – 3120 WTh
 Ganz, Melanie – 1234 MT
 Ganzetti, Marco – 2214 MT, 3782 WTh, 4134 WTh
 Gao, Danqi – 3660 WTh
 Gao, Dong – 1371 MT
 Gao, Hui – 2165 MT
 Gao, Jia-Hong – **1015 MT**, 1549 MT, 1630 MT, 3275 WTh, 3547 WTh, 3559 WTh, 3631 WTh
 Gao, Jia-Qi – 4229 WTh
 Gao, Junling – 3522 WTh

Gao, Junling – 3523 WTh
 Gao, Kunxiu – 1941 MT
 Gao, Ming – 3058 WTh
 Gao, Tianyu – 4259 WTh
 Gao, Wei – 3861 WTh, 3979 WTh
 Gao, Wei-Jia – 1489 MT
 Gao, Yangfeifei – 1150 MT
 Gao, Yu – 3137 WTh
 Gao, Yue – 3660 WTh
 Gao, Yue – 3659 WTh
 Gao, Zhixian – 3349 WTh
 Garavan, Hugh – 1100 MT, 1136 MT, 1896 MT, 3146 WTh, 3151 WTh, 3317 WTh, 3360 WTh, 3469 WTh, 3470 WTh, 3871 WTh, 4120 WTh
 Garbusow, Maria – 1088 MT, 1095 MT
 Garcés, Pilar – 1156 MT, 3009 WTh
 Garcia, Ronald – 1528 MT
 Garcia, Samuel – 2088 MT
 Garcia de la Garza, Angel – **1302 MT**, 1577 MT, 3153 WTh
 Garcia-Garcia, Manu – 3950 WTh
 Garcia-Hernandez, Adriana – 1101 MT
 Garcia-Ramos, Camille – 2006 MT
 Garg, Amanmeet – 4189 WTh
 Garg, Rahul – 1836 MT
 Gargouri, Fatma – 3175 WTh, 3215 WTh
 Garland, S. Jayne – 2111 MT
 Garnaat, Sarah – 3348 WTh
 Garraux, Gaëtan – 3167 WTh
 Garren, Hideki – 3056 WTh
 Garrett, Douglas – 2176 MT, 4064 WTh
 Garrido, Marta – 1986 MT
 GARRISON, KATHLEEN – 3232 WTh
 Garza-Villarreal, Eduardo – 1089 MT, 1105 MT, 1111 MT, 1523 MT
 Garzon, Benjamin – 3779 WTh
 Gaser, Christian – 1872 MT, 4107 WTh
 Gaspar, Rudolf – 1963 MT
 Gaston, Tyler – 3110 WTh
 Gatenby, Chris – 1607 MT, 3005 WTh
 Gates, Kathleen – 1180 MT
 Gau, Susan – 1184 MT, 1198 MT, 3336 WTh, 4236 WTh
 Gaudreau, Helene – 1714 MT
 Gaurav, Rahul – 3175 WTh
 Gauvreau, Samantha – 3573 WTh
 GAVARET, Martine – 1635 MT, 1762 MT
 Gavin, Brighid – 3506 WTh
 Gavito, Jose – 1307 MT
 Gawron, Natalia – 1442 MT
 Gawryluk, Jodie – 3011 WTh, 3012 WTh, 3023 WTh, 3198 WTh

Gaxiola-Valdez, Ismael – 3103 WTh, 3119 WTh
 Gazes, Yunglin – 3785 WTh, 3793 WTh
 Gazzaley, Adam – 2085 MT
 Ge, Jianqiao – 3631 WTh
 Ge, Jingjie – 3181 WTh, 3182 WTh
 Ge, Mingmei – 2099 MT
 Ge, Ruiyang – 1230 MT, 1876 MT
 Ge, Tian – 3309 WTh
 Geeraert, Bryce – 2057 MT
 Geerligs, Linda – 1237 MT, 3956 WTh
 Geerligs, Linda – 3987 WTh
 Geha, Paul – 2142 MT
 Gehricke, Jean – 1152 MT
 Gehrman, Philip – 1121 MT
 Geissberger, Nicole – **1058 MT**, 1063 MT, 1242 MT, 1413 MT, 1414 MT, 4152 WTh
 Gelardi, Kristina – 3881 WTh
 Geminiani, Giuliano – 3076 WTh
 Genc, Sila – 3850 WTh
 Geng, Xiujuan – 1245 MT, 1988 MT
 Gennatas, Efsthathios – 3153 WTh
 Genon, Sarah – 2000 MT, **3915 WTh**
 Genova, Helen – 1384 MT
 Genzel, Lisa – 1926 MT
 George, Nathalie – 1972 MT
 Georgiades, Matthew – 3165 WTh, 3209 WTh
 Georgiou-Karistianis, Nellie – 3213 WTh
 Geranmayeh, Fatemeh – 3699 WTh
 Gerchen, Martin Fungisai – 1084 MT, 1883 MT, 4245 WTh
 Gerlach, Alexander – 1125 MT
 Gerlicher, Anna – 1135 MT, 1409 MT
 Germanaud, David – 3867 WTh, 3869 WTh
 Germann, Jurgen – 2058 MT
 Gerstenbrand, Franz – 1484 MT
 Geschwind, Daniel – 3018 WTh
 Getman, Andrey – 1275 MT, 1277 MT
 Geugies, Hanneke – 1237 MT
 Geurts, Jeroen – 1913 MT, 2019 MT, 3057 WTh, 3061 WTh, 3074 WTh
 Geurts, Pierre – 3894 WTh
 Gevorkyan, Anait – 1275 MT, 1277 MT
 Ghadery, Christine – 3197 WTh
 Ghahremani, Ayda – 3372 WTh
 Ghahremani, Dara – 1424 MT
 Ghane, Merage – 2110 MT
 Ghaseminejad, Farhad – 3580 WTh
 Ghazaleh, Naghmeh – 1835 MT
 Gheiratmand, Mina – 3939 WTh
 Gheysen, Freja – 3749 WTh
 Ghosh, Arna – 1801 MT
 Ghosh, Debashis – 3903 WTh, 3907 WTh

Ghosh, Joydeep – 1802 MT
 Ghosh, Satrajit – 1368 MT, **1672 MT**, 1675 MT, 1681 MT, 1686 MT, 1695 MT, 1696 MT, 1704 MT, 1706 MT, 1712 MT, 1833 MT, 3686 WTh
 Ghosh Hajra, Sujoy – 3040 WTh, 3084 WTh, 3281 WTh, 3387 WTh, 3388 WTh
 Ghukasyan, Vladimir – 3546 WTh
 Ghumare, Eshwar – 2080 MT
 Ghumare, Eshwar Gorakhnath – 1764 MT
 Ghumman, Sukhmanjit – 3532 WTh, 3961 WTh
 Giachetti, Isabella – 2177 MT
 Giacino, Joseph – 1742 MT
 Giacobbe, Peter – 1065 MT, 1243 MT
 Giallard, William – 3105 WTh
 Giampiccolo, Davide – **1039 MT**
 Giampietro, Vincent – 1147 MT
 Giannoni, Alberto – 1778 MT
 Giaschi, Deborah – 3651 WTh
 Gibson, Erin – 1789 MT
 Gibson, Jude – 1306 MT, 3438 WTh
 Giedd, Jay – 2001 MT
 Giertuga, Katarzyna – 3493 WTh
 Gießing, Carsten – 4021 WTh
 Gietl, Anton – 3029 WTh
 Giezendanner, Stephanie – 1343 MT
 Gilam, Gadi – 1381 MT, 4214 WTh
 Gilat, Moran – 3165 WTh
 Gilat, Moran – 3209 WTh
 Gilbert, Guillaume – 1626 MT, 1770 MT
 Gilchrist, Iain – 3756 WTh
 Gili, Tommaso – 2075 MT
 Gillebert, Céline – 3419 WTh
 Gillebert, Céline – 3539 WTh
 Gillebert*, Céline – 3231 WTh
 Gillich, Imke – 2073 MT, 2215 MT
 Gillingham, Nicolas – 3064 WTh
 Gilman, Jodi – 1117 MT
 Gilmore, Adrian – 3728 WTh
 Gilmore, John – 2008 MT, 3861 WTh, 3979 WTh
 Gilron, Roe – 4184 WTh
 Gilson, Matthiew – 3977 WTh
 GINSBURGER, Kevin – 1734 MT
 Giordano, Magda – 3643 WTh
 GIOVANNELLA, Martina – 2159 MT
 Girard, Nadine – 3858 WTh
 Giraud, Anne-Lise – 4025 WTh, 4161 WTh
 Girgis, Ragy – 2217 MT
 Giroud, Christian – 1081 MT
 Gisbert Muñoz, Maria Sandra – 1349 MT
 Giuliani, Fabrizio – 1606 MT
 Giuliano, Alessia – 1176 MT, 1878 MT
 Gizewski, Elke – 2035 MT

Gkogkidis, Alexis – 1014 MT
 Glahn, David – 1241 MT, 1324 MT, 1463 MT, 2009 MT, 3308 WTh, 3313 WTh, **4226 WTh**
 Glaser, Martin – 1003 MT
 Glass, John – 3910 WTh
 Glasser, Matthew – 1864 MT, 1998 MT, 2021 MT
 Glatard, Tristan – 1679 MT, 1706 MT, 1713 MT
 Glen, Daniel – 1588 MT
 Glenn, G. – 1099 MT
 Glennon, Jeffrey – 3586 WTh
 Glenthøj, Birte – 1429 MT
 Glerean, Enrico – 4241 WTh
 Glover, Gary – 1851 MT, 2145 MT
 Gobbin, M. Ida – 2082 MT
 Goebel, Rainer – 1393 MT, 1460 MT, 1530 MT, 1536 MT, 1661 MT, 1956 MT, 2183 MT, 2192 MT, 3384 WTh, 3466 WTh, 3735 WTh
 Goer, Franziska – 1436 MT
 Gogberashvili, Tinatin – 1275 MT, 1277 MT
 Gogtay, Nitin – 2001 MT
 Goh, Joshua – 3336 WTh, 3784 WTh, 3813 WTh
 Goh, Sheng-Yang – 3288 WTh
 Gohel, Suril – 1442 MT
 Goikolea, José – 3899 WTh
 Gökçay, Didem – 3589 WTh
 Golan, Tal – 2163 MT, 3924 WTh
 Golaszewski, Stefan – 1484 MT
 Golby, Alexandra – 1922 MT
 Golby, Alexandra – 1518 MT
 Golchert, Johannes – 3400 WTh
 Gold, James – **4000 WTh**
 Goldbrunner, Roland – 1061 MT
 Golden, Kimberly – 2036 MT
 Goldfinger, Matthew – 2163 MT
 Goldin, Philippe – 2143 MT, 2145 MT
 Goldman, Barbara – 3979 WTh
 Goldman, Robin – 1418 MT
 Goldschmidt, Anja – 3634 WTh
 Goldstein, Laura – 3241 WTh
 Golestani, Narly – 3443 WTh, 3644 WTh, 3674 WTh
 Gollapudy, Suneeta – 2100 MT, 2104 MT
 Gollo, Leonardo L. – 1772 MT, 4066 WTh
 Gollub, Randy – 1501 MT, 1662 MT
 Golosky, Mitchell – 3092 WTh
 Gomes, Ana – 1748 MT, 3868 WTh
 Gomes, Lavier – 3948 WTh
 gomez, Daniel – **1551 MT**
 Gómez, Francisco – 4024 WTh, 4176 WTh
 Gomez, Jesse – 2164 MT
 Gomez Ramirez, Jaime – 1535 MT
 Gomez-Verdejo, Vanessa – 3893 WTh
 Goncalves, Mathias – 3686 WTh

Gong, Diankun – 3352 WTh
 Gong, Gaolang – 1587 MT, 3206 WTh, 3304 WTh, 3652 WTh, 3837 WTh
 Gong, Jie – 3065 WTh
 Gong, Jinnan – 1316 MT, 3107 WTh
 Gong, Qiyong – 1206 MT, 1224 MT, 1282 MT, 1322 MT, 3161 WTh
 Gong, Weikang – 3991 WTh, 4131 WTh
 Gong, Yujing – 3007 WTh
 Gong, Zhuqing – 1579 MT
 Góngora, Daylín – 1589 MT, 1612 MT, 3091 WTh
 Goni, Joaquin – 4063 WTh, 4173 WTh
 Gonul, Ali Saffet – 1324 MT
 Gonzalez, Guadalupe – 4213 WTh
 Gonzalez-Castillo, Javier – 1054 MT
 Gonzalez-Escamilla, Gabriel – 1038 MT
 González-García, Carlos – 2162 MT
 Gonzalez-Garcia, Nadia – 3873 WTh
 Gonzalez-Martinez, Jorge – 1650 MT
 Gonzalez-Olvera, Jorge – 1089 MT, 1105 MT, 1111 MT
 Gonzalez-Zacarias, Clio – 3307 WTh
 GonzalezCastillo, Javier – 2110 MT, 3540 WTh, 3605 WTh, 3947 WTh, 3954 WTh, 4029 WTh
 Goo, Elizabeth – 1189 MT
 Good, Cameron – 2113 MT
 Goodman, Morgan – 1353 MT
 Goodman, Robert – 3151 WTh, 3469 WTh
 Goodrich-Hunsaker, Naomi J. – 3318 WTh, **3320 WTh**
 Goodyear, Brad – 1628 MT, 4076 WTh
 Goodyer, Ian – 4243 WTh
 gooijsers, jolien – 1566 MT
 Gopinath, Kaundinya – 1949 MT, 3069 WTh
 Gordon, Evan – 3728 WTh, 4080 WTh
 Gore, John – **1481 MT**, 3663 WTh
 Görgen, Kai – 3920 WTh
 Gorgolewski, Krzysztof – 1485 MT, **1677 MT**, 1680 MT, 1695 MT, 1704 MT, 1706 MT, 1717 MT, 1820 MT, 3375 WTh
 Gorgoraptis, Nikos – 3277 WTh
 Goring, Harold – 3313 WTh
 Gorno-Tempini, Maria Luisa – **3050 WTh**
 Goschke, Thomas – 3097 WTh
 Gosseries, Olivia – 2095 MT, 2196 MT
 Gotlib, Ian – 1227 MT, 1241 MT, 3839 WTh
 Gotman, Jean – 1467 MT, 1625 MT, 3118 WTh
 Götting, Florian – 1041 MT
 Gotts, Stephen – 3954 WTh
 Gotts, Stephen – 3260 WTh
 Goucha, Tomás – 3737 WTh
 Goudriaan, Anna – 3451 WTh

Gould, Layla – 3654 WTh
 Gould, Layla – 1503 MT
 Gould, Sharon – 3108 WTh
 Gounot, Daniel – 1346 MT
 Govindan, Rathinaswamy – 3509 WTh
 Gowland, Penny – 3151 WTh, 3469 WTh
 Goya-Maldonado, Roberto – **1504 MT**, 1926 MT, 3082 WTh, 3743 WTh
 Goyal, Aman – 3069 WTh
 Goyard, David – 1664 MT
 GOZDAS, Elveda – 3998 WTh
 Grab, Kayla – 3255 WTh
 Grabowska, Anna – 3365 WTh, 3709 WTh
 Grabowski, Thomas – 1707 MT, 1738 MT, 3005 WTh, 4162 WTh
 Gracco, Vincent – 3551 WTh
 Gracia, Zeus – 2103 MT
 Grady, Cheryl – 1234 MT, 3362 WTh, 3781 WTh
 Graedel, Nadine – **1546 MT**
 Graf, Heiko – 1933 MT, 4234 WTh
 Grafton, Scott – 1750 MT, 1788 MT, 3745 WTh
 Graham, Alice – 1196 MT
 Graham, George – 3859 WTh
 Graham, Simon – 1818 MT, 3664 WTh
 Gralla, Jan – 3606 WTh
 Gramfort, Alexandre – 1759 MT, 1760 MT, 1829 MT
 Grant, Igor – 1261 MT
 Grant, P. Ellen – 1662 MT, **1703 MT**, 1711 MT, 1920 MT, 3265 WTh, 3471 WTh, 3859 WTh
 Gras, Liz – 3318 WTh
 Gräßel, David – 4106 WTh
 Gratton, Caterina – 3728 WTh
 Grau, Sergi – 3424 WTh, 3662 WTh, 3706 WTh
 Gravel, Nicolas – 1318 MT, 1526 MT, 3977 WTh
 Gray, Calum – 4148 WTh
 Gray, Heidi – 3760 WTh
 Gray, Heidi – 3766 WTh
 Gray, Jodie – 1211 MT
 Gray, Kevin – 1099 MT
 Gray, Whitney – 2072 MT
 Grayson, David – 1179 MT, 3951 WTh
 Greco, Gabriella – 1186 MT
 Greeff, Marlie – 2003 MT
 Green, Gary – 1846 MT
 Greenberg, Benjamin – 3348 WTh
 Greene, Deanna – 3728 WTh
 Greenlee, Mark – 1591 MT
 Greenshaw, Andrew – 3939 WTh
 Greental, Ayam – 4214 WTh
 Greenwood, Celia – 3309 WTh
 Greenwood, Celia – 1714 MT, 3310 WTh
 Greer, David – 1742 MT

Greer, Jasmine – 3663 WTh
 Greffier, Joel – 1268 MT
 Grefkes, Christian – 1061 MT, 3247 WTh, 3253 WTh
 Gregoraci, Fabio – 3103 WTh
 Gregory, Michael – 1326 MT
 Gregory, Michael – **3862 WTh**
 Greicius, Michael – 3010 WTh, 3296 WTh
 Greiner, Russell – 3939 WTh
 Grenier, Yves – 1759 MT
 Grethe, Jeffrey – 1696 MT
 Greuel, Andrea – 3205 WTh
 Greve, Douglas – 3441 WTh, 4100 WTh, 4118 WTh
 Grevent, David – 1560 MT, 3607 WTh
 Grevet, Eugenio – 3139 WTh
 Gribble, Paul – 1967 MT
 Grieder, Matthias – 1048 MT, 4011 WTh
 Grieve, Stuart – 3948 WTh
 Griffa, Alessandra – 1081 MT, 3498 WTh, 4075 WTh
 Griffanti, Ludovica – 1666 MT, 3191 WTh, 3460 WTh, 3884 WTh
 Griffanti, Ludovica – 1870 MT, 3819 WTh, 3868 WTh
 Griffin, Jordan – 2148 MT
 Griffiths, John – 1831 MT
 Griffiths, John – 1786 MT
 Grigis, Antoine – 1664 MT, 3485 WTh
 Grigorenko, Elena – 3587 WTh
 Grill-Spector, Kalanit – 1661 MT, 2164 MT, **2187 MT**
 Grillon, Christian – 1139 MT
 Grimault, Stephan – 1785 MT
 Grimmer, Yvonne – 3151 WTh, 3469 WTh
 Gris, Jean-Christophe – 1268 MT
 Grisel, Olivier – 4153 WTh
 Grodd, Wolfgang – 1987 MT, 4149 WTh
 Groen, Georg – 1933 MT
 Groen, Iris – 1062 MT
 Groen, Wouter – 1167 MT
 Groenendaal, Floris – 3867 WTh
 Groenewold, Nynke – 1235 MT, 1241 MT, 4157 WTh
 Grohs, Melody – 1968 MT
 Grootswagers, Tijn – 3548 WTh
 Groppe, Sergiu – 1002 MT, 1003 MT, 1038 MT
 Groppe, David – 2163 MT
 Grosbras, Marie-Helene – 3858 WTh
 Gross, Donald – 3477 WTh
 Gross, James – 2143 MT, 2145 MT
 Gross, Joachim – 1765 MT
 Gross, Robert – 1006 MT
 Gross, William – 2100 MT, 2104 MT, 3645 WTh
 Grotegerd, Dominik – 1227 MT, 1233 MT, 1241 MT, 1463 MT, 4157 WTh
 Grova, Christophe – 1785 MT, 2196 MT
 Gruber, Oliver – 1324 MT, 1425 MT, **1504 MT**

Grueschow, Marcus – 3342 WTh
 Grueschow, Marcus – 1133 MT
 Grunau, Ruth – 1213 MT
 Grunau, Ruth – 1736 MT
 Grunau, Ruth – 4189 WTh
 Gruner, Patricia – 1291 MT, 1292 MT, 1297 MT
 Grunstein, Ronald – 3053 WTh
 Grunwald, Thomas – 1126 MT, 1419 MT
 Grupe, Daniel – 1418 MT
 Grützmann, Rosa – 1298 MT, 1299 MT
 Gschwind, Markus – 3724 WTh
 Gu, Feng – 1086 MT
 Gu, Hong – 1097 MT, 1510 MT
 Gu, Jian – 1450 MT, 4151 WTh
 Gu, Shi – **1302 MT**
 Gu, Shi – 1303 MT, 3123 WTh
 Gu, Xiaosi – 3349 WTh
 Gu, Yian – 3793 WTh
 Guadagni, Veronica – 2199 MT
 Guan, Lili – 4197 WTh
 Guan, Min – 1373 MT, 1376 MT, 1439 MT, 1440 MT
 Guan, Pujun – 1322 MT
 Gubanich, Paul – 1578 MT
 Gudbrandsen, Maria – 3474 WTh
 Gueorguieva, Ralitza – 1357 MT
 Guerrero-Pedraza, Amalia – 3899 WTh
 Guerriero, Réjean – 3265 WTh
 Guevara, Miguel – 1867 MT
 Guevara, Pamela – 1867 MT, 3533 WTh
 Guger, Christoph – 1961 MT
 Gugler, Manfred – 3614 WTh
 Guidi, Maria – 3605 WTh
 Guillaume, Bryan – 3309 WTh
 GUILLOIS, Bernard – 2159 MT
 Guitart-Masip, Marc – 3697 WTh, 3779 WTh
 Gul, Asiya – 3775 WTh
 Gulban, Omer Faruk – 1596 MT, 2121 MT, 3467 WTh
 Guldenmund, Pieter – 3167 WTh
 Gullapalli, Rao – 3280 WTh
 Gullett, Joseph – 1594 MT
 Gulliford, Desiree – 1544 MT
 Gundbrandsen, Maria – 3318 WTh
 Gundobina, Olga – 1275 MT, 1277 MT
 Gunn, Roger – 3276 WTh
 Gunny, Roxana – 3104 WTh
 Gunter, Jeffrey – 3908 WTh
 Guntupalli, J. – 1704 MT, 3928 WTh
 Guo, Christine – 1420 MT
 Guo, Hua – 1361 MT, 1362 MT, 3295 WTh
 Guo, Hui – 3040 WTh, 3084 WTh
 Guo, Lei – 3054 WTh

Guo, Peifang – 3006 WTh, 3535 WTh
 Guo, Qihao – 3625 WTh
 Guo, Shen – 1798 MT
 Guo, Wenbin – 1241 MT
 Guo, Xiuyan – 4254 WTh
 Guo, Xiuyan – 3300 WTh
 Guo, Yequn – 1487 MT
 Guo, Ying – 3909 WTh, 3971 WTh, 4046 WTh, 4060 WTh
 GUO, Yong-Xin – 1489 MT
 Guo, Yuhao – 3559 WTh
 Guo, Yuhua – 3377 WTh
 Guo, Zhiqiang – 3680 WTh
 Gupta, Arpana – 1278 MT, 2144 MT, 3141 WTh
 Gupta, Bhanu – 1300 MT
 Gupta, Vikash – 1261 MT
 Gupta, Vikash – 1603 MT, 2020 MT
 Gur, Raquel – **1302 MT**, 1821 MT, 1823 MT
 Gur, Raquel – 1577 MT, 2031 MT, 3153 WTh, 3318 WTh, **3320 WTh**, 4179 WTh
 Gur, Ruben – **1302 MT**, 1577 MT, 1821 MT, 1823 MT, 2031 MT, 3153 WTh, 4179 WTh
 Gurevitch, Guy – 1381 MT
 Gurholt, Tiril – 1339 MT
 Gurses, Candan – 3126 WTh
 Guruprasad, Puneeth – 3254 WTh
 Gurvit, Hakan – 3080 WTh, 3187 WTh, 3200 WTh, 3584 WTh, 3585 WTh, 4039 WTh
 Guterstam, Arvid – 2133 MT
 Gutierrez, Benjamin – 1054 MT, 2110 MT
 Gutman, Boris – 3055 WTh
 Gutman, Boris A. – 1205 MT, 1275 MT, 1277 MT, 1731 MT, 3282 WTh, 3318 WTh, 3321 WTh, 3937 WTh
 Guye, Maxime – 1637 MT
 Guyer, Amanda – 2061 MT, 3881 WTh
 Gvozdanovic, Geraldine – 1929 MT

H

H Y Tse, Desmond – **1567 MT**
 Ha, Seunggyun – 2126 MT
 Haacke, Mark – 3280 WTh
 Haak, Koen – 1167 MT, 1190 MT, 1912 MT, 4034 WTh, 4082 WTh
 Haas, Shalaila – 1305 MT
 Haast, Roy – 1640 MT
 Habas, Christophe – 2168 MT, 3476 WTh
 HABECK, Christian – 3785 WTh, 3793 WTh, 3831 WTh
 Habel, Ute – 1434 MT, 4199 WTh, 4253 WTh
 Habib, Michel – 3653 WTh
 Hachisuka, Keisuke – 1411 MT, 3898 WTh

Hadida, Jonathan – 1758 MT, 4123 WTh
 Hafkemeijer, Anne – 3015 WTh
 Haghighatkah, Hamid Reza – 3581 WTh
 Hagiwara, Rina – 3763 WTh
 Hagler, Donald – 3314 WTh
 Hagmann, Patric – 1081 MT, 3498 WTh, 4075 WTh
 Hagoort, Peter – 1552 MT
 Hahm, Jarang – 3416 WTh, 3417 WTh
 Hahn, Andreas – 3454 WTh
 Hahn, Cecil – 3127 WTh
 Hahn, Tim – 1227 MT, 4157 WTh
 Haider, Lamia – 3793 WTh
 Haigh, Zula – 3251 WTh
 Haist, Frank – 3381 WTh
 Hajek, Tomas – 1324 MT
 Hajnal, Joseph – 1153 MT, 1748 MT, 3868 WTh, 3884 WTh
 Haker, Helene – **3501 WTh**
 Halai, Ajay – 2049 MT
 Halbertsma, Hinke – 1526 MT, 4082 WTh
 Halchenko, Yaroslav – 1670 MT, 1696 MT, 1706 MT
 Haldar, Justin – 1747 MT
 Hale, Kayleigh – 3105 WTh
 Haley, Andreana – 3822 WTh, 3825 WTh
 Haley, Robert – 3069 WTh
 Halgren, Eric – **3379 WTh**
 Hall, Andrew – 3540 WTh
 Hall, Anrew – 3605 WTh
 Hall, Julie – 3165 WTh, 3209 WTh
 Hall, Nathan – 4055 WTh
 Haller, Simone – 4135 WTh
 Hallett, Mark – 3911 WTh
 Halli, Patrick – 1084 MT
 Hallmayer, Joachim – 3839 WTh
 Hallquist, Michael – 3340 WTh, 3346 WTh, 4055 WTh
 Ham, Sungwon – 3246 WTh, 3681 WTh
 HAMA, Tomoko – 3002 WTh
 Hamada, Masashi – 1618 MT
 Hämäläinen, Jarmo – 3671 WTh
 Hamamci, Andac – 2024 MT
 Hamamci, Andaç – 1548 MT, 3149 WTh
 Hamann, Stephan – 4076 WTh
 Hametner, Simon – 3542 WTh
 Hamilton, Antonia – 3598 WTh, 3874 WTh
 Hammes, Jochen – 3008 WTh
 Hammill, Christopher – 1195 MT, 1716 MT
 Hammond, David – 1648 MT
 Hampshire, Adam – **3359 WTh**, 3699 WTh, 3933 WTh, 4079 WTh
 Hampshire, Adam – 3932 WTh
 Hampson, Michelle – 1297 MT

Hampton, Jacqueline – 3728 WTh
 Han, Bingqian – 3764 WTh
 Han, Bong Soo – 1374 MT, 1375 MT
 Han, Doug Hyun – 1096 MT
 Han, Kai – 1461 MT
 Han, Kihwan – **3262 WTh**
 Han, Kuan – 2169 MT, **2172 MT**, 2173 MT
 Han, Laura – 1254 MT
 Han, Long – 1086 MT, **1092 MT**
 Han, Pengfei – 1219 MT
 Han, Shihui – 3967 WTh, 4216 WTh, 4217 WTh, 4242 WTh, 4256 WTh, 4259 WTh
 Han, Summer – 3010 WTh
 Han, Xiaochun – 3967 WTh
 Han, Xiaochun – 4242 WTh, 4256 WTh
 Han, Xun – 1090 MT
 Han, Ying – 1903 MT, 3027 WTh
 Hanagasi, Hasmet – 3187 WTh, 3200 WTh, 3584 WTh, 3585 WTh, 4039 WTh
 Handjaras, Giacomo – 2075 MT, 2182 MT, **3635 WTh**
 Handwerker, Daniel – 1054 MT, 2110 MT, 3540 WTh, 3605 WTh, 3947 WTh, 4029 WTh
 Handy, Todd – 2111 MT, 3497 WTh
 Hanford, Lindsay – 4049 WTh
 Hänggi, Jürgen – 1072 MT
 Hanke, Michael – 1670 MT, 1694 MT
 Hankins, Jane – 1269 MT
 Hanna, Gregory – 1283 MT, 1285 MT
 Hans-Jörg, Wittsack – 1273 MT, 3538 WTh
 Hansen, Alex – 2204 MT
 Hansen, Barbara – 3110 WTh
 Hansen, Brian – 1089 MT
 Hansen, Morten – 2135 MT
 Hansen, Naja – 3818 WTh
 Hao, Xuejun – 3462 WTh
 Hao, Yongfu – 3118 WTh
 Harasym, Diana – 3563 WTh, 3573 WTh
 Harbord, Ruth – 4033 WTh
 Hardikar, Samyogita – 2089 MT
 Hardiman, Orla – 3506 WTh
 Harding, Ian – 3213 WTh
 Harding, Robert – 3274 WTh
 Hardstone, Richard – 2162 MT
 Harel, Michal – 2163 MT
 Harel, Noam – 3218 WTh
 Harensk, Carla – 1935 MT
 Harenski, Carla – 1119 MT
 Harenski, Keith – 1935 MT
 Harezlak, Jaroslaw – 1261 MT, 4063 WTh, 4173 WTh
 Hariri, Ahmad – 1248 MT

Harmony, Thalia – **3840 WTh**
 Harms, Madeline – 1432 MT
 Harms, Robbert – 1740 MT
 Harness, Jane – 1285 MT
 Harpaz-Rotem, Ilan – 1138 MT
 Harper, Zachary – 1792 MT
 Harrewijn, Anita – 1134 MT
 Harrington, Deborah – 1024 MT
 Harris, Ashley – 1050 MT, 3582 WTh
 Harris, Lara – 3380 WTh
 Harris, Richard – 2150 MT, 4077 WTh
 Harrison, Austin – 2191 MT
 Harrison, Ben – 1227 MT, 4157 WTh
 Harrison, Laura – 1189 MT
 Harrison, Marc – 4157 WTh
 Harrison, Samuel – 1859 MT, 1890 MT, 1911 MT, 3868 WTh, 3884 WTh, 4020 WTh, 4036 WTh
 Hart, Chelsie – 2199 MT
 Hart, Tessa – 1557 MT
 Harte, Steven – 2150 MT, 4077 WTh
 Hartmann, Christian – 3179 WTh, 3185 WTh, 3744 WTh
 Hartmut, Mohlberg – 1999 MT, 4104 WTh
 Harty, Siobhan – 3234 WTh
 Hasan, Alkomiet – **1049 MT**
 Hasan, Khader – 3841 WTh
 Hase, Sumitaka – 3322 WTh
 Hasegawa, Sayaka – 1325 MT
 Haselgrove, Christian – 1665 MT, 1696 MT, 1712 MT
 Hashemi, Mahur – 3994 WTh
 Hashimoto, Ryu-ichiro – 1151 MT, 1325 MT
 Hashimoto, Teruo – 1993 MT, 3670 WTh
 Hashmi, Javeria – 1465 MT
 Hassall, Cameron – 3328 WTh, 3512 WTh
 Hassan, Ayman – 3248 WTh
 Hassanpour, Katayun – 1142 MT
 Hassel, Stefanie – 1971 MT
 Haswell, Courtney – 1132 MT, 3482 WTh
 Haszto, Connor – 3588 WTh
 Hattingh, Coenraad J. – 1130 MT
 Hatton, Sean – 3830 WTh, 4157 WTh
 Hatton, Sean – 1241 MT, 3314 WTh
 Hau, Janice – 1194 MT
 Haueis, Philipp – 2025 MT
 Haueisen, Jens – 3382 WTh
 Haugg, Amelie – 1493 MT
 Hauk, Olaf – 1769 MT, **1790 MT**, 3638 WTh
 Hausfeld, Lars – 3384 WTh
 Häussinger, Dieter – 1273 MT, 3538 WTh
 Haut, Kristen – 4219 WTh
 Havlicek, Martin – 2206 MT
 Havsteen, Inger – 2135 MT

Haxby, James – 3928 WTh
 Hayar, Abdallah – 2036 MT
 Hayashi, Kobayashi – 1385 MT
 Hayashi, Takuya – 2021 MT, 2216 MT, **3186 WTh**
 Haynes, John-Dylan – 1709 MT, 1728 MT, 1828 MT, 3692 WTh, 3920 WTh
 Hayward, Kathryn – 1057 MT, 3224 WTh, 3229 WTh, 3267 WTh
 Hazell, Philip – 3850 WTh
 He, Bin – 1879 MT
 He, Biyu – 2162 MT
 He, George – 1357 MT
 He, Hao – 1688 MT
 He, Hui – 3401 WTh
 He, Hui – 1317 MT
 He, Huiguang – 1396 MT, 1576 MT, 1622 MT, **1723 MT**
 He, Jianghong – 2099 MT
 He, Lili – 3995 WTh, 3998 WTh
 He, Naying – 3214 WTh, 3475 WTh
 He, Xiaofu – 1251 MT, 2066 MT
 He, Xiaosong – 1642 MT, 3120 WTh
 He, Ye – 4075 WTh
 He, Yifei – 3988 WTh
 He, Yini – 3905 WTh, 4261 WTh
 He, Yong – 1183 MT, 1206 MT, 1337 MT, 1495 MT, 1510 MT, 1705 MT, 4007 WTh, 4009 WTh, 4026 WTh
 He, Yuan – 1218 MT, 1461 MT, 3078 WTh
 He, Yuan – 1568 MT, 3170 WTh
 He, Zhen – 3751 WTh
 Heaps, Jodi – 1261 MT
 Hebart, Martin – 3920 WTh
 Hebart, Martin – 1842 MT
 Hect, Jasmine – 3887 WTh, 3891 WTh
 Hedden, Trey – 3003 WTh
 Hedrich, Tanguy – 1785 MT
 Heekeren, Hauke – 3327 WTh
 Heflin, Brynna – 1163 MT
 Hegarty, Catherine – 1326 MT, 3704 WTh
 Heib, Dominik – 3718 WTh
 Heidemann, Robin – 1555 MT
 Heilinger, Alexander – 1961 MT
 Hein, Grit – 4247 WTh
 Heine, Lizette – 2094 MT, 4024 WTh, 4176 WTh
 Heinig, Monika – 3468 WTh, 3996 WTh
 Heinilä, Erkka – 3562 WTh
 Heinrichs-Graham, Elizabeth – 1027 MT, 2155 MT, 3564 WTh, 3885 WTh
 Heinrichs-Graham, Elizabeth – 3553 WTh, 3561 WTh, 3568 WTh, 3770 WTh

Heinz, Andreas – 1088 MT, 1095 MT, 3151 WTh, 3469 WTh, 4163 WTh
 Heinze, Hans-Jochen – 3385 WTh, 3918 WTh
 Heinzl, Stephan – 1298 MT, 1299 MT
 Heinzle, Jakob – 1521 MT, 1982 MT, 3759 WTh
 Heise, Kirstin-Friederike – 1020 MT, **1026 MT**, 3525 WTh
 Heise, Verena – 3461 WTh
 Helakari, Heta – 1809 MT, 3124 WTh
 Helbich, Konstantin – **1049 MT**
 Hellemann, Gerhard – 1031 MT, 3321 WTh
 Heller, Abi – 4227 WTh
 Hellrung, Lydia – 1041 MT
 Hellyer, Peter – 1328 MT, 3970 WTh, 4016 WTh
 Helmer, Catherine – 1498 MT
 Helmer, Karl – 1686 MT, 1695 MT, 3403 WTh
 Helmer, Markus – 1928 MT
 Helms, Gunther – 3580 WTh
 Helpert, Joseph – 1099 MT
 Helton, Kathleen – 1269 MT
 Helzer, Alison – 4211 WTh
 Hemington, Kasey – 2138 MT
 Hendler, Talma – 1381 MT, 3411 WTh
 Hendler, Talma – 4214 WTh
 Hennig, Jürgen – 2043 MT, 3119 WTh, **3243 WTh**, 4154 WTh
 Henning, Anke – 3578 WTh
 Henry, Roland – 1689 MT, 1710 MT
 Hensel, Lukas – 3247 WTh
 Henselman, Gregory – 4174 WTh
 Henson, Richard – 1458 MT, 1790 MT, 1831 MT, 3956 WTh, 3987 WTh
 Henson, Richard – 3638 WTh
 Heo, DaWoon – 1115 MT, 1116 MT
 Herdener, Marcus – 1072 MT, 1493 MT
 Herding, Jan – 3347 WTh
 Herdman, Anthony – 1755 MT
 Herholz, Peer – 3455 WTh
 Hermann, Bruce – 2006 MT, 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh
 Hermann, Derik – 1102 MT
 Hermans, Lize – 3807 WTh
 Hermens, Daniel – 3830 WTh
 Hernandez, Leanna – 1182 MT, 1423 MT
 Hernandez-Castillo, Carlos – 3193 WTh
 Hernández-Gutiérrez, David – 3507 WTh, 3623 WTh, 3626 WTh, 3633 WTh, 4252 WTh, 4260 WTh
 Hernández-Torres, Enedino – 1601 MT, **3541 WTh**
 Hernandez-Torres, Enedino – 3542 WTh
 Herrler, Andreas – **1567 MT**
 Herrmann, Christoph – 4021 WTh

Herrojo Ruiz, Maria del Carmen – 1974 MT
 Herron, Timothy – 1652 MT
 Hershey, Linda – 3037 WTh
 Hertz-Pannier, Lucie – 3485 WTh, 3867 WTh, 3869 WTh, 4104 WTh
 Hervais-Adelman, Alexis – 3644 WTh
 Herwig, Uwe – 1397 MT, 4202 WTh
 Herzog, Michael H. – 1321 MT, 3492 WTh, 3527 WTh
 Hess, Martin – 3297 WTh
 Hester, Rob – 1073 MT
 Hetrick, William – 1114 MT
 Heuer, Katja – **1672 MT**, 1675 MT, 1681 MT, 3481 WTh
 Heugel, Nicholas – 1644 MT
 Heumüller, Severin – 1524 MT
 Heusser, Karsten – 2137 MT
 Heverin, Mark – 3506 WTh
 Heydari, Panthea – 3232 WTh
 Heyne, Roy – 3879 WTh
 Hibar, Derrek – 1205 MT, 1227 MT, 1254 MT, 1356 MT, 3089 WTh, 3309 WTh
 Hieber, Maren – **3243 WTh**
 Higgins, Ixavier – 4046 WTh
 Higgins, Stephen – 3317 WTh
 Hilbert, Sven – 1250 MT
 Hilbig, Susan – 2191 MT, 3772 WTh, 3773 WTh
 Hild, Allison – 1542 MT
 Hilfiker, Peter – 1419 MT
 Hilgetag, Claus – 4021 WTh
 Hill, Christopher – 3342 WTh
 Hill, Lauren – 1098 MT, **1428 MT**
 Hillegers, Manon – 1324 MT, 1340 MT
 Hillis, Argye – 1050 MT
 Himmer, Lea – 3718 WTh
 Hinault, Thomas – 1625 MT
 Hinkin, Charles – 1261 MT, 1594 MT
 Hinkley, Leighton – 1197 MT
 Hinojosa Rodriguez, Manuel – **3840 WTh**
 Hinrichs, Hermann – 3385 WTh, 3918 WTh
 Hinson, Emily – 1029 MT, **2223 MT**
 Hinton, Kendra – 3199 WTh, 3326 WTh
 Hipp, Joerg – 1156 MT
 Hipwell, Alison – 2061 MT, 3881 WTh, 4049 WTh
 Hirabayashi, Kathryn – 1185 MT, 1193 MT, 3526 WTh
 Hiroe, Nobuo – 1773 MT
 Hiroyasu, Tomoyuki – 1411 MT, 1658 MT, 1953 MT, 2092 MT, 2096 MT, 2097 MT, 2098 MT, 2101 MT, 3503 WTh, 3595 WTh, 3600 WTh, 3603 WTh, 3763 WTh, 3898 WTh
 Hirsch, Lawrence – 3105 WTh

Hirschmann, Christina – 3715 WTh
 Hirsiger, Sarah – 1072 MT
 Hiwa, Satoru – 1411 MT, 1658 MT, 1953 MT, 2092 MT, 2096 MT, 2097 MT, 2098 MT, 2101 MT, 3503 WTh, 3595 WTh, 3600 WTh, 3603 WTh, 3763 WTh, 3898 WTh
 Hızlı Sayar, Gökben – 3080 WTh
 Hjelm, Devon – 1553 MT, 4191 WTh
 Hlinka, Jaroslav – 1943 MT
 Hlušík, Petr – 3192 WTh
 Ho, Cyrus – 1300 MT
 Ho, Roger – 1300 MT
 Ho, Tiffany – 1227 MT, 1241 MT
 Hoagey, David – 3787 WTh
 Hoagey, David – 3827 WTh
 Hoare, Jacqueline – 1261 MT, 1271 MT
 Hock, Christoph – 3029 WTh
 Hocke, Lia – 1043 MT, 2207 MT, 3593 WTh, 3599 WTh
 Hodge, Jacquie – 3228 WTh
 Hoeft, Fumiko – 3587 WTh
 Hoehn, David – 1254 MT
 Hoeksma, Marco – 1447 MT
 Hoekstra, Pieter – 1290 MT, 1562 MT
 Hoexter, Marcelo – 1291 MT, 1292 MT
 Hoffman, William – 1074 MT, 1077 MT, 1508 MT, 1901 MT
 Hoffmann, André – 1063 MT, 1242 MT, 1413 MT, 1810 MT, 4152 WTh
 Hoffmann, Sabine – 1084 MT
 Hoffstaedter, Felix – 1434 MT, 3179 WTh, 3185 WTh, **3355 WTh**, 3790 WTh, 3815 WTh, 3820 WTh, **3915 WTh**
 Höfle, Oliver – 1563 MT
 HOFMANIS, Janis – 1012 MT
 Hofstetter, Shir – 2168 MT
 Hoge, Rick – 1673 MT
 Hoge, W Scott – 1279 MT
 hojjati, seyed hani – 3017 WTh
 Hok, Pavel – 3192 WTh
 Holahan, John – 3663 WTh
 Holland, Scott – 1638 MT, 2062 MT, 3393 WTh, 3998 WTh
 Holler, Ariane – 2158 MT
 Holmes, Avram – 1806 MT
 Holmes, Martha – 1590 MT, 3456 WTh, 4108 WTh
 Holmgren, Jostein – 1619 MT
 Holroyd, Clay – 3339 WTh
 Holt, Daphne – 1311 MT
 Holtze, Susanne – 2154 MT
 Holyoak, Keith – 3414 WTh
 Holzer, Peter – 1443 MT

Honer, William – 1876 MT
 Hong, Jinwoo – 1861 MT
 Hong, Keum-Shik – 3591 WTh, 3594 WTh, 3597 WTh
 Hong, L. Elliot – 1323 MT, 1336 MT, 1463 MT, 3780 WTh
 Hong, Seok-Jun – **1172 MT**
 Hong, Seok-Jun – 3123 WTh
 Hong, Sung Kwang – 3530 WTh
 Hong, Yeon-Ju – 1333 MT, 3330 WTh, 4198 WTh
 Hong, Young – 3048 WTh
 hongtao, ruan – 1585 MT
 Honig, Jesse – 3787 WTh
 Hönig, Merle – 3008 WTh
 Honnorat, Nicolas – 1823 MT, 1827 MT, 3960 WTh, 4145 WTh
 Hoogendoorn, Corné – 4148 WTh
 Hoogman, Martine – 3144 WTh
 Hooker, Christine – 4219 WTh
 Hoopes, Andrew – 3473 WTh
 Hope, Thomas – 3251 WTh, 3804 WTh
 Hopf, Jens-Max – 3918 WTh
 Hoptman, Matthew – 1018 MT, 4143 WTh
 Hoque, Maruf – 3081 WTh
 Horáček, Jiří – 1943 MT
 Horban, Andrzej – 1442 MT
 Horga, Guillermo – 2217 MT
 Horn, Andreas – **1000 MT**, 1907 MT, 3083 WTh
 Horn, Ulrike – 1979 MT
 Horne, Merle – 3672 WTh
 Hornung, Jonas – 1402 MT
 Horovitz, Silvina – 3911 WTh
 Horovitz, Silvina – 1007 MT
 Horowitz-Kraus, Tzipi – 3393 WTh, 3848 WTh
 HOSODA, CHIHIRO – 1618 MT, 3738 WTh
 Hossein-Zadeh, Gholam-Ali – 3685 WTh
 Hossein-Zadeh, Gholam-Ali – 3687 WTh, 4059 WTh
 Hosseini, Hadi – 1908 MT
 Hotchi, Shota – 1993 MT
 Hou, Bob – 1620 MT, 3964 WTh
 Hou, Changyue – 3401 WTh, 3803 WTh
 Hou, Jidong – 1783 MT
 Hou, Xiao-Hui – 1232 MT
 Houck, Jon – 1016 MT
 Houde, Jean-Christophe – 1582 MT
 Houde, John – 1197 MT, 3689 WTh
 Houdé, Olivier – 2001 MT
 Hoven, Christina – 1251 MT
 Howard, Michael – 3726 WTh
 Howells, Henrietta – 2054 MT, 2068 MT, 3241 WTh
 Howes, Oliver – 3970 WTh
 Howse, Harvey – 3497 WTh, 3515 WTh

Hoxha, Armand – 1976 MT
 Hoxhaj, Eliza – 3143 WTh
 Hoyng, Lieke – 3061 WTh
 Hoyos Idrobo, Andrés – 3904 WTh
 Hrybouski, Stanislaw – 3723 WTh, 3802 WTh
 Hsieh, Chang-Wei – 2212 MT
 Hsieh, Chao-Hsien – 2212 MT
 Hsieh, Jih-Fu – 2220 MT
 Hsieh, Ming H. – 1069 MT
 Hsieh, Wen-Chi – 4005 WTh
 Hsin, Yue-Loong – 3134 WTh
 Hsu, Ai-Ling – 1492 MT
 Hsu, Wei-Ting – 4040 WTh
 Hsu, Yung-Chin – 1198 MT, 1571 MT
 Hu, Chaur-Jong – 3227 WTh
 Hu, Dewen – 1609 MT, 2200 MT, 3116 WTh, 3420 WTh
 Hu, Huiqing – 1218 MT, 1223 MT, 1586 MT, 3170 WTh
 Hu, Jiali – 3659 WTh
 Hu, Jianbo – 1222 MT
 Hu, Jin – 3275 WTh
 Hu, Michele – 3191 WTh
 Hu, Shaohua – 1222 MT
 Hu, Shiang – 1774 MT
 Hu, Sophie – 3272 WTh
 Hu, Xiaoping – 3203 WTh, 3214 WTh, 3475 WTh
 Hu, Xiaoxiao – 1282 MT
 Hu, Xinyu – 1282 MT, 3150 WTh
 Hu, Yang – 4229 WTh
 Hu, Yi – **3705 WTh**
 Hu, Yuzheng – 1510 MT, 2209 MT, 3739 WTh, 4120 WTh
 Hua, Bo – 4002 WTh
 Hua, Yunqing – 3459 WTh
 Huang, Biao – 3170 WTh
 Huang, Bingsheng – 3479 WTh
 Huang, Bosco – 1486 MT
 Huang, Chao – 1594 MT
 Huang, Chao – 3046 WTh, 3306 WTh
 Huang, Charles – 1024 MT, 3283 WTh
 Huang, Dengfeng – **3243 WTh**
 Huang, Gan – 4116 WTh
 Huang, Hao – 3013 WTh
 Huang, Hao – 1183 MT, 1495 MT, 3879 WTh
 Huang, Huifang – 3929 WTh
 Huang, Huiyuan – 1568 MT, 3078 WTh
 Huang, Jeffrey – 1024 MT, 3283 WTh
 Huang, Jing Ying – 1310 MT
 Huang, Lejian – 1799 MT
 Huang, Li – 1218 MT, 1223 MT, 1586 MT
 Huang, Li-Yu – 3364 WTh, 3514 WTh, 3517 WTh

Huang, Lijie – 3302 WTh
 Huang, Manli – 1222 MT
 Huang, Mingxiong – 1024 MT, 3283 WTh
 Huang, Norden – 4192 WTh
 Huang, Ruiwang – 1218 MT, 1223 MT, 1461 MT, 1487 MT, 1586 MT, 3170 WTh
 Huang, Ruiwang – 1568 MT, 3078 WTh
 Huang, Shu-Yu – 4235 WTh
 Huang, Taicheng – 1651 MT
 Huang, Xiaoqi – 1224 MT, 1282 MT, 3150 WTh
 Huang, Yu – 1019 MT
 Huang, Yung-Cheng – 3201 WTh
 Huang, Yushan – 3723 WTh
 Hübener, Ina – 2178 MT
 Huber, Elizabeth – 3656 WTh
 Huber, Eveline – 3578 WTh
 Huber, Eveline – 3075 WTh
 Huber, Laurentius – 3540 WTh, 3605 WTh
 Huber, Reto – 3729 WTh
 Huber, Stefan – 3418 WTh, 3429 WTh
 Huckans, Marilyn – 1508 MT
 Huddleston, Daniel – 3203 WTh, 3214 WTh, 3475 WTh
 Hudetz, Anthony – 2100 MT, 2104 MT
 Hudson, Kelsey – 1136 MT, 3146 WTh, 3151 WTh, 3317 WTh, 3360 WTh, 3871 WTh
 Huemer, Julia – 1036 MT
 Huemer, Sabine – 1152 MT
 Huerta, Gabriel – 3974 WTh
 Hughes, Emer – 1148 MT, 1153 MT, 1748 MT, 3846 WTh, 3868 WTh
 Hughes, Emer – 3884 WTh
 Hughes, Jeremy – 3037 WTh
 Huh, Youngmin – 3361 WTh, 3367 WTh
 Huis, Elisabeth – 3091 WTh
 Huizinga, Mariette – 1383 MT
 Hukin, Juliette – 1276 MT
 Hula, Andreas – 3140 WTh
 Hull, Jocelyn – 2016 MT
 Hulshoff Pol, Hilleke – 1324 MT, 1340 MT, 3853 WTh, 4121 WTh
 Hulst, Hanneke – 3061 WTh
 Hummel, Friedhelm C. – 1605 MT
 Hummel, Nadine – 2141 MT
 Hummer, Allan – 1063 MT, 2184 MT
 Humphreys, Glyn – 3234 WTh, 3380 WTh
 Humphreys, Kim – 3077 WTh
 Humphries, Colin – 3128 WTh, 3130 WTh, 3645 WTh
 Hung, Jin-Jie – 1685 MT
 Hunt, Benjamin – 1763 MT, 1892 MT
 Hunt, Benjamin – 3842 WTh

Hunt, Ruskin – 1104 MT
 Huntenburg, Julia – 3400 WTh
 Huo, Yanling – 2033 MT
 Huotari, Niko – 1809 MT, 3124 WTh, 4010 WTh
 Huppi, Petra – 3857 WTh, 4104 WTh, 4161 WTh
 Hurdal, Monica – 2013 MT
 Hurria, Arti – 1267 MT
 Hutcheson, Nathan – 3096 WTh
 Hutchinson, Elizabeth – 1598 MT
 Hutchison, Kent – 1110 MT
 Hutchison, Michael – 3291 WTh
 Hutchison, R. Matthew – 1984 MT
 Huth, Alexander – **1838 MT**, 1850 MT
 Hutter, Jana – 1153 MT, 1748 MT, 3868 WTh, 3884 WTh
 Hutton, John – 3393 WTh, 3848 WTh
 Huynh, Vincent – 2068 MT
 Huys, Quentin – 1095 MT
 Huysegoms, Marcel – 4106 WTh
 Huyser, Chaim – 1292 MT
 Huyser, Chaim – 1291 MT
 Hwang, Gyujoon – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh
 Hwang, Kai – 2034 MT, 3346 WTh
 Hwang, Taehyun – **3453 WTh**
 Hwang, Tzung-Jeng – 1310 MT
 Hwang, Yoon Ho – 1374 MT, 1375 MT
 Hwu, Hai-Gwo – 1310 MT
 Hyde, Damon – 1791 MT
 Hyder, Fahmeed – 2222 MT
 Hymers, Mark – 1846 MT, 2116 MT
 Hyvärinen, Aapo – 3562 WTh

I
 Iacoboni, Marco – 1068 MT
 Iacono, William – 1104 MT
 Ianni, Angela – 1326 MT, 3704 WTh
 Ianni, Geena – 1054 MT
 Iaria, Giuseppe – 2199 MT, 3423 WTh
 Ibitoye, Temitope – 3733 WTh
 Icenhour, Adriane – 1260 MT, 1456 MT
 Ichesco, Eric – 2150 MT, 4077 WTh
 Ichihara, Junji – 2216 MT
 Ichikawa, Naho – 1036 MT
 Ichinose, Megan – 3326 WTh
 Iglesias, Jaime – 2170 MT
 Iglesias, Juan – 1703 MT
 Iglesias, Juan Eugenio – 1655 MT
 Iglesias, Sandra – 1482 MT, 1509 MT, 3501 WTh
 Ihn, Yon Kwon – 3030 WTh
 Iidaka, Tetsuya – 1143 MT
 Iijima, Kentaro – 1994 MT

Iizuka, Mari – 2096 MT
 IJsselstijn, Hanneke – 1575 MT
 Ikari, Keisuke – 1287 MT
 Ikeda, Saki – 3595 WTh
 Ikeda, Shigeyuki – 1897 MT
 Ikeda, Yumiko – 1525 MT
 Ikram, Arfan – 1844 MT
 Ikuta, Toshikazu – 3033 WTh
 Ilmoniemi, Risto – 4101 WTh
 Im, Kiho – 3265 WTh, 3471 WTh, 3859 WTh
 Imamizu, Hiroshi – 1964 MT
 In, Myung-Ho – 1041 MT
 In, Myung-Ho – 1008 MT
 Indefrey, Peter – 3634 WTh
 Ing, Alex – 3759 WTh
 Inglese, Matilde – 1353 MT, 1877 MT, 3468 WTh, 3996 WTh
 Ingram, Tony – 3748 WTh
 Inman, Robert – 2138 MT
 Inoue, Takashi – 3322 WTh
 Inoue, Yusuke – 2076 MT, 3524 WTh
 Insausti, Ricardo – 1655 MT
 Insel, Catherine – 1383 MT
 Invernizzi, Azzurra – 1454 MT, 1526 MT
 Investigators, ONDRI – 3248 WTh
 Iordan, Alexandru – 3816 WTh
 Ip, Isaac – 1852 MT
 Ipser, Jonathan – 1132 MT, 1138 MT, 1295 MT, 1463 MT
 Iraj, Armin – 3280 WTh, 4059 WTh
 Irani, Sarosh – 3062 WTh
 Irfanoglu, M. – 1588 MT, 1598 MT
 Irimia, Andrei – 1165 MT, 1698 MT, 2016 MT, 2063 MT, 3274 WTh, 3288 WTh, 3452 WTh, **3840 WTh**, 3930 WTh, 3931 WTh
 Ironside, Manon – 1253 MT
 Isabella, Silvia – 1777 MT
 Isaev, Dmitry – 1132 MT, 3055 WTh, 3282 WTh, 3318 WTh
 Ishaque, Abdullah – 3088 WTh
 Ishida, Syoya – 1411 MT
 Ishihara, Tomonori – 1953 MT
 Ishii, Hiromi – 3322 WTh
 Ishii, Shin – 3914 WTh
 Ishikawa, Kenta – 4204 WTh
 Isnard, Jean – 2088 MT
 Isoda, Haruo – 1952 MT
 Itahashi, Takashi – 1151 MT, 1325 MT
 Ito, Kaori – 3232 WTh
 Itoi, Chihiro – 1151 MT
 Itshayek, Eyal – 2151 MT

Iturria-Medina, Yasser – 1845 MT, 1847 MT, 3049 WTh
 Ivanov, Dimo – 2206 MT, 3466 WTh, 3605 WTh
 Ivleva, Elena – 3953 WTh
 Ivry, Richard – **1654 MT**, 1657 MT
 Iwaki, Sunao – 2175 MT
 Iwata, Saeko – 3719 WTh
 Iyer, Parameswaran – 3506 WTh
 Iyer, Swathi – 3629 WTh
 Iyer, Vidya – 3859 WTh
 Izzi-Engbeaya, Chioma – 1438 MT

J
 Jääskeläinen, Iiro – 4241 WTh
 Jabs, Ethylin – 1598 MT
 Jack, Clifford – 3908 WTh
 Jackson, Graeme – 3984 WTh
 Jackson, Lisa – 1155 MT, 1164 MT
 Jacob, Heike – 1404 MT, 2123 MT
 Jacobs, Heidi I.L. – 1372 MT
 Jacobsen, Leslie – 3587 WTh
 Jacobson, Joseph – 2003 MT, 3068 WTh
 Jacobson, Sandra – 2003 MT, 3068 WTh
 Jacoby, Nori – 3411 WTh
 Jacokes, Zach – 3452 WTh
 Jacokes, Zachary – 1165 MT, 2016 MT, 3274 WTh
 Jacokes, Zachary – 1698 MT
 Jacola, Lisa – 3910 WTh
 Jacquemont, Sébastien – 3315 WTh, 3316 WTh
 Jaeggi, Susanne – 3816 WTh
 Jaén, Joanna – 2170 MT, 3091 WTh
 Jahanian, Hesam – 4141 WTh
 Jahanshad, Neda – 1100 MT, 1132 MT, 1138 MT, 1227 MT, 1254 MT, 1261 MT, 1356 MT, 1463 MT, 1594 MT, 1600 MT, 1731 MT, 2020 MT, 3051 WTh, 3089 WTh, 3305 WTh, 3308 WTh, **3320 WTh**, 3937 WTh, 4157 WTh
 Jahanshad, Neda – 1241 MT, 1291 MT
 Jahedi, Afroz – 1150 MT
 Jaillard, Assia – 1142 MT
 Jaimes, Camilo – 1662 MT
 Jajcay, Nikola – 1943 MT
 Jakobsen, Estrid – **2022 MT**
 Jalbrzikowski, Maria – **3320 WTh**, 3321 WTh
 Jamal, Nasheed – 1930 MT
 Jamalabadi, Hamidreza – 1840 MT, **3762 WTh**
 James, Andrew – 1040 MT, 1083 MT, 1918 MT, 2036 MT
 James, Anthony – 1292 MT
 Jan, Tz-Yun – 3072 WTh
 Jäncke, Lutz – 3392 WTh

Jang, Changwon – 4056 WTh, 4088 WTh, 4089 WTh
 Jang, Ikbeom – 1580 MT, 3263 WTh, 3270 WTh, 4087 WTh
 Jang, Sung Ho – 1569 MT, 1570 MT, 1572 MT, 1573 MT, 1574 MT, 3264 WTh
 Jang, Yujin – 1115 MT
 Jangraw, David – 2110 MT, 2191 MT, 3605 WTh, 4029 WTh
 Jáni, Martin – 4224 WTh
 Janini, Daniel – 3666 WTh
 Jankiewicz, Marcin – 1590 MT
 Jann, Kay – 1047 MT, 4011 WTh
 Jann, Kay – 4003 WTh
 Jannati, Ali – 1907 MT
 Janouschek, Hildegard – 1669 MT
 Janowsky, Aaron – 1077 MT
 Jansen, Andreas – 1233 MT, 1412 MT, 2161 MT, 2178 MT, 3455 WTh
 Jansen, Philip – 3870 WTh
 Jansma, Johan – 1547 MT
 Jansma, Martijn – 3386 WTh
 Januzzi, James – 1742 MT
 Janzen, Gabriele – 3712 WTh
 Jaquet, Pierre – 3485 WTh
 Jarecka, Dorota – 1696 MT, 1706 MT
 Jarrett, Michael – 1601 MT, 3269 WTh, 3271 WTh, **3537 WTh**
 Jarrold, Christopher – 3756 WTh
 Jasinska, Kaja – 3592 WTh
 Jauregi, Ainara – 1971 MT
 Javed, Ayesha – 1148 MT
 Javed, Ehtasham – 4132 WTh
 Javitt, Daniel – 1018 MT, 4220 WTh
 Jbabdi, Saad – 1735 MT, 1748 MT, 1749 MT, 1758 MT, **1889 MT**, **2042 MT**, 3884 WTh, 4019 WTh, 4078 WTh, 4123 WTh
 Jech, Robert – 3166 WTh, 3171 WTh
 Jednoróg, Katarzyna – 1422 MT, 2127 MT, 3365 WTh, 3579 WTh, 3616 WTh, 3617 WTh, 3658 WTh, 3667 WTh, 3698 WTh, 3709 WTh
 Jee, Sungju – 1033 MT, 3220 WTh
 Jefferies, Elizabeth – 1833 MT, 2091 MT, 3400 WTh, **4203 WTh**
 Jeffery, Gerardo – 1307 MT
 Jeganathan, Jayson – 1200 MT
 Jegou, Aude – 2196 MT
 Jenkins, Lianne – 4130 WTh
 Jenkins, Peter – 3279 WTh

Jenkinson, Mark – 1666 MT, 1704 MT, 1824 MT, 1870 MT, 3451 WTh, 3460 WTh, 3461 WTh, 3819 WTh, 3828 WTh, 3868 WTh, 3884 WTh, 4190 WTh
 Jensen, Alexandria – 3903 WTh
 Jensen, Jens – 1099 MT
 Jensen, Karin – 1501 MT
 Jensen, Ole – 2083 MT
 Jeon, Han Jae – 3530 WTh
 Jeon, Hyeon-Ae – 3354 WTh
 Jeon, Seun – 3432 WTh, 3440 WTh, 3852 WTh, 4159 WTh, 4166 WTh, 4168 WTh
 Jeon, Tina – 1495 MT, 3879 WTh
 Jeong, bumseok – 1403 MT
 Jeong, Bumseok – 1096 MT, 3555 WTh
 Jeong, Bumseok – 3039 WTh
 Jeong, Gwang-Woo – 1137 MT
 Jeong, Hyeonjeong – 1897 MT
 Jeong, Hyun-Ghang – 3039 WTh
 Jeong, Seok-Oh – 4094 WTh
 Jeong, Seongah – 4013 WTh
 Jeong, Shin Young – 3014 WTh, 3041 WTh
 Jeong, Woorim – 3106 WTh
 Jerbi, Karim – 1181 MT, 1972 MT, 2088 MT
 Jerbi, Karim – 1314 MT, 2102 MT, 3767 WTh, 3771 WTh
 Jeska, Brianna – 2164 MT, **2187 MT**
 Jespersen, Sune – 1089 MT
 Jett, Marti – 3145 WTh
 Jetzschmann, Paul – 1088 MT
 Ji, Erni – 1204 MT
 Ji, Jie Lisa – 1309 MT, 1431 MT
 Ji, Lisa – 1928 MT, 3324 WTh
 Jia, Xiuqin – 3196 WTh
 Jia, Yanbin – 1218 MT, 1223 MT, 1586 MT
 Jiang, Chengfeng – 3181 WTh, 3182 WTh
 Jiang, Chunxiang – 2197 MT, 3026 WTh, 3249 WTh, 3912 WTh
 Jiang, Hangyi – 2203 MT
 Jiang, Jiefeng – 3993 WTh
 Jiang, Jing – 4248 WTh
 Jiang, Jiyang – 2037 MT
 Jiang, Lili – 1903 MT
 Jiang, Rongtao – 1217 MT, 3905 WTh
 Jiang, Sisi – 3107 WTh
 Jiang, Tianzi – **1215 MT**, 1217 MT, 1362 MT
 Jiang, Tianzi – 1361 MT, 1476 MT, 1488 MT, **1660 MT**, 1879 MT, 2014 MT, 3295 WTh, 3757 WTh, 3905 WTh, 4261 WTh
 Jiang, Wenhao – 1356 MT, 3144 WTh
 Jiang, Xiaowei – 1357 MT
 Jiang, Yali – 3479 WTh

Jiang, Yang – 2084 MT, 3814 WTh
 Jiang, Yuchao – 1316 MT
 Jiang, Zhigou – 3399 WTh
 JIAO, QING – 1489 MT
 Jiao, Yuqin – 3736 WTh
 Jicha, Gregory – 3814 WTh
 Jie, Jie Lisa – 1335 MT
 Jimenez-Ortega, Laura – 3507 WTh, 3623 WTh, 3626 WTh, 4252 WTh, 4260 WTh
 Jimura, Koji – 3322 WTh, 4004 WTh
 Jin, Chenwang – 3751 WTh
 Jin, Dan – 1488 MT
 Jin, Seung-Hyun – 3409 WTh, 3513 WTh
 Jin, Taihao – 1267 MT
 Jin, Yan – 1556 MT, 1594 MT, 1600 MT
 Jin, Yan – 1354 MT, 3054 WTh, 3895 WTh
 Jin, Zhengyu – 3206 WTh
 JIN AN, WU – 1550 MT
 Jing, Rixing – 1359 MT, 1369 MT
 Jinguji, Thomas – 3286 WTh
 Jiskoot, Lize – 1595 MT
 Jo, Hang Joon – 1008 MT
 Jo, Sungman – 1116 MT
 Jo, Youngheun – 2065 MT
 Jobard, Gael – 1646 MT
 Jobst, Cecilia – 1767 MT
 Jochaut, Delphine – 4025 WTh, 4161 WTh
 Jockwitz, Christiane – 3790 WTh, 3796 WTh, 3815 WTh, **3915 WTh**
 Joel, Suresh – 1910 MT, 4008 WTh, 4012 WTh, 4014 WTh
 Joelson, Sarah – 3847 WTh
 Jog, Mayank S. – 1047 MT
 Johansen-Berg, Heidi – 1052 MT
 John, Majnu – 3033 WTh
 Johnson, Blake – 3628 WTh
 Johnson, Curtis – 2030 MT
 Johnson, Errin – 1735 MT
 Johnson, Hans – 1932 MT, 2064 MT, 3168 WTh, 3301 WTh
 Johnson, Jeremy – 1866 MT
 Johnson, Kara – 1001 MT
 Johnson, Mark – 3598 WTh
 Johnson, Micah – 3787 WTh
 Johnson, Sam – 1846 MT
 Johnson, Timothy – 1720 MT, 1849 MT
 Johnston, Kevin – 3222 WTh
 Johnstone, Ainslie – 1052 MT
 Johnstone, Tom – 1632 MT
 Jokeit, Hennric – 1419 MT
 Jolicoeur, Pierre – 1407 MT, 3767 WTh
 Joliot, Marc – 1646 MT, 3639 WTh

Jollans, Lee – 1136 MT
 Jollant, Fabrice – 3299 WTh
 Jolly, Amy – 3258 WTh, 3276 WTh, 3277 WTh
 Jonas, Jacques – 1013 MT, 1762 MT
 Jonas, Rachel K. – 3318 WTh, 3321 WTh
 Jones, Aaron – 3726 WTh
 Jones, Derek – 1746 MT, 3060 WTh, 3554 WTh
 Jones, Derek – 1902 MT
 Jones, Jacob – 1594 MT
 Jones, Jeffery – 3680 WTh
 Jones, Jeffery – 3775 WTh
 Jones, Peter – 3048 WTh
 Jones, Scott – 1103 MT
 Jones, Stephen – 1873 MT
 Jones, Tamekia – 3750 WTh
 Jones, Thomas – 1217 MT
 Jones, Tristan – 2191 MT
 Jonides, John – 3816 WTh
 Joo, Yohan – 1360 MT
 Joobar, Ridha – 1341 MT
 Jor'dan, Azizah – 3826 WTh
 Joraschky, Peter – 3435 WTh
 Jordan, Kerry – 4200 WTh, 4225 WTh, 4250 WTh
 Jordan, Kesshi – 1689 MT
 Jordan, Kesshi – 1710 MT
 Jorde, Anne – 4163 WTh
 Jörgens, Daniel – 2059 MT
 Jorgensen, Janelle – 3281 WTh
 Jorgensen, Matthew – 4106 WTh
 Josephs, Oliver – 3733 WTh
 Joshi, Anand – 1272 MT, 1650 MT, **3966 WTh**, 4102 WTh
 Joshi, Gagan – 1192 MT
 Joshi, Nikita – 1192 MT
 Joshi, Shantanu – 1031 MT, 1240 MT, 1255 MT, 3839 WTh, 4102 WTh
 Joska, John – 1261 MT
 Jouvent, Eric – 3485 WTh
 Jovicich, Jorge – 1985 MT, 2047 MT, 2131 MT, 2177 MT
 Ju, Tiffany – 3141 WTh
 Juan, Juan – 3839 WTh
 Jun, Min-Young – 3113 WTh
 Jun, Sung Chan – 1051 MT, 1406 MT
 Jung, JeYoung – 3622 WTh
 Jung, Ji-Jung – 1264 MT
 Jung, Kwang-Ik – 1034 MT
 Jung, Kyesam – 3681 WTh, 4056 WTh
 Jung, Sonja – 4253 WTh
 Jung, Tzyy-Ping – 3364 WTh
 Jung, Won Sang – 3030 WTh
 Jung, Young Hoon – 1475 MT, 1722 MT

Jung, Young-Chul – 1071 MT, 3094 WTh
 Jung, Young-Hoon – 1333 MT
 Jungehülsing, Jan – 3250 WTh
 Junger, Jessica – 4199 WTh
 Jürgen, Kratzsch – 3783 WTh
 Just, Marcel – 3619 WTh
 Jørgensen, Kjetil – 1339 MT, 2002 MT

K

K. Loderhose, Tim – 1567 MT
 Kaas, Amanda – 1393 MT, 1460 MT, 1956 MT, 3735 WTh
 Kabdebon, Claire – 4104 WTh
 Kaczurkin, Antonia – 3153 WTh
 Kadis, Darren – 1638 MT, 2062 MT, 3565 WTh
 Kadota, Hiroshi – 1964 MT
 Kaelen, Mendel – 3413 WTh
 Kageyama, Tetsuya – 3329 WTh
 Kahana, Michael – 1642 MT
 Kahane, Philippe – 2112 MT
 Kähler, Claas – 4157 WTh
 Kähler, Claas Kähler – 1227 MT
 Kahn, Rene – 1615 MT, 4121 WTh
 Kahn, René – 1324 MT, 1340 MT
 Kaiser, Marcus – 1914 MT, 3195 WTh
 Kaiserová, Michaela – 3192 WTh
 Kaldewaij, Reinoud – 3994 WTh
 Kale, Emre – 3427 WTh
 Kaleem, Muhammad – 1898 MT, 1939 MT, 4160 WTh, 4165 WTh
 Kalisch, Raffael – 1135 MT, 1409 MT, 1499 MT
 Kaller, Christoph – **1000 MT**, 2043 MT
 Kaller, Christoph – **3243 WTh**
 Kallianpur, Kalpana – 1261 MT
 Kalra, Sanjay – 3088 WTh
 Kambeitz, Joseph – 1319 MT
 Kambeitz-Illankovic, Lana – 1305 MT, 1319 MT
 Kames, Christian – 3269 WTh, **3541 WTh**
 Kamp, Tabea – 3384 WTh
 Kanaan, Ahmad Seif – 1296 MT
 Kanai, Chieko – 1151 MT
 Kananen, Janne – 1809 MT, 3045 WTh, 3124 WTh, 4010 WTh
 Kanat, Manuela – 3143 WTh
 Kanba, Shigenobu – 1287 MT
 Kandala, Sridhar – 3371 WTh
 Kandel, Sonia – 3653 WTh
 Kane, Fergus – 1324 MT
 Kaneshiro, Blair – 3511 WTh
 Kang, Daehun – 3487 WTh
 Kang, Dong-Wha – 3246 WTh
 Kang, Eun Kyoung – 3221 WTh

Kang, Eunjoo – 2126 MT, 3673 WTh
 Kang, Hyejin – 1855 MT, 2120 MT, 2126 MT, 3136 WTh, 3361 WTh, 3367 WTh, 3673 WTh
 Kang, Jian – 1720 MT
 Kang, Jiyoung – 4017 WTh
 Kang, Kyunghun – 3014 WTh, 3041 WTh
 Kang, Pyungwon – 4247 WTh
 Kang, Seung Wan – 3513 WTh
 Kang, Un – 2217 MT
 Kang, Victor – 3102 WTh
 Kang, Yeon-koo – 3136 WTh
 Kangas, Johanna – 1153 MT, 3846 WTh
 Kaňovský, Petr – 3192 WTh
 Kantarovitch, Karin – 3823 WTh
 Kantola, Jussi – 4010 WTh
 Kao, Zih-Kai – 4005 WTh
 Kapilushniy, Dmitry – 1275 MT, 1277 MT
 Kappel, Viola – 3151 WTh, 3469 WTh
 Kaptchuk, Ted – 1501 MT
 Kara, Murat – 3589 WTh
 Karaaslan, Zerrin – 3126 WTh, 4039 WTh
 Karahan, Esin – 1766 MT, 1774 MT
 Karahanoglu, F. Isik – 1169 MT, 1502 MT, 3690 WTh, 4062 WTh
 Karali, Temmuz – 1032 MT, 1256 MT, 1367 MT, 1718 MT, 3580 WTh
 Karalunas, Sarah – 3978 WTh
 Karam, Rafael – 3139 WTh
 Karamchandani, Jason – 1673 MT
 Karapanagiotidis, Theodoros – 2091 MT
 Karas, Marta – 4173 WTh
 Karch, Susanne – 1032 MT, 1256 MT
 Karchmacharya, Sarina – 1344 MT
 Kareken, David – 4063 WTh, 4173 WTh
 Karibe, Hiroyuki – 1525 MT
 Karimpoor, Mahta – 1818 MT, 3664 WTh
 Karjalainen, Louise – 3095 WTh
 Karkashadze, George – 1275 MT, 1277 MT
 Karkashadze, Magda – 1275 MT, 1277 MT
 Karl, Damian – 1102 MT
 Karle, Kathrin – 2123 MT
 Karmonik, Christof – 3408 WTh
 Karni, Avi – 3746 WTh
 Karolis, Vyacheslav – 1623 MT
 Karolis, Vyacheslav – 3804 WTh
 Karunakaran, Keerthana – 1442 MT
 Karydas, Anna – 3018 WTh
 Kasagi, Masato – 3552 WTh
 Kashyap, Amrit – 1945 MT
 Kashyap, Amrit – 4027 WTh
 Kashyap, Pratik – 3263 WTh
 Kašpárek, Tomáš – 1531 MT, 4224 WTh

Kasper, Lars – 1482 MT, 1521 MT
 Kasper, Siegfried – 3454 WTh
 Kasprian, Gregor – 3630 WTh, 3855 WTh
 Kass, Robert – 4180 WTh
 Kassinosopoulos, Michalis – 1801 MT, 1826 MT, 3798 WTh
 Katagiri, Naoyuki – 1334 MT
 Katayama, Nariko – 1441 MT
 Katayama, Tomoka – 2092 MT
 Kates, Wendy R. – 1611 MT, 3318 WTh, **3320 WTh**
 Kathmann, Norbert – 1298 MT, 1299 MT
 Kato, Nobumasa – 1151 MT, 1325 MT
 Kato, Shohei – 1952 MT
 Kato, Yataka – 3552 WTh
 Kato, Yutaka – 1405 MT
 Katz, Benjamin – 3816 WTh
 Katz, Daniel – 3326 WTh
 Katz, Jeffrey – **1389 MT**
 Kaufmann, Christian – 1298 MT, 1299 MT
 Kaufmann, Joern – 1555 MT
 Kauppi, Jukka-Pekka – 1691 MT
 Kaur, Sonya – 3822 WTh
 Kavounoudias, Anne – 1496 MT
 Kawabata Duncan, Keith – 3650 WTh
 Kawachi, Yousuke – 3487 WTh
 Kawadler, Jamie – 4138 WTh
 KAWAGUCHI, ATSUSHI – 3981 WTh
 KAWARA, Tokuhiko – 3002 WTh
 Kawasaki, Masahiro – 1965 MT
 Kawashima, Ryuta – 1897 MT, 1993 MT, 3329 WTh, 3670 WTh
 Kawashima, Ryuta – 3293 WTh, 3457 WTh
 Kawata, Kelssy H. dos S. – 3329 WTh
 Kawata, Natasha – 3670 WTh
 Kawato, Mitsuo – 2093 MT
 Kawsar, Ferdaus – 3128 WTh, 3130 WTh, 3645 WTh
 Kay, Kendrick – 2182 MT
 Kayser, Christoph – 3494 WTh, 3495 WTh, 3801 WTh
 Kayser, Stephanie – 3494 WTh, 3801 WTh
 Kazan, Samira – 3972 WTh
 Kazemi, Kamran – 1875 MT
 Keator, David – 1686 MT, 1695 MT, 1696 MT, 1706 MT, 1712 MT, 3035 WTh
 Kecklund, Göran – 1909 MT
 Keenan, Kate – 2061 MT, 3881 WTh
 Keerativittayayut, Ruedeerat – 3714 WTh, 4004 WTh
 Keereman, Vincent – 3114 WTh
 Keeser, Daniel – 1032 MT, **1049 MT**, 1250 MT, 1256 MT, 1367 MT, 1718 MT, 2011 MT, 3580 WTh

Kehagia, Angie – 4016 WTh
 Keilholz, Shella – 1923 MT, 1931 MT, 1945 MT, 1989 MT, 2208 MT, 4027 WTh, 4175 WTh
 Keinänen, Tuija – 1809 MT, 4010 WTh
 Keita, Åsa – 1260 MT
 Keller, Corey – 1036 MT, 1059 MT, 1784 MT
 Keller, Simon – 1608 MT, 3108 WTh, 3121 WTh, 3122 WTh
 Keller-Varady, Katriona – 1367 MT, 3580 WTh
 Kelley, Austin – 1707 MT
 Kelley, Mireille – 1902 MT
 Kellmeyer, Philipp – 1539 MT
 Kellner, Elias – 1811 MT
 Kelly, Claire – 3829 WTh
 Kelly, Claire – 3833 WTh
 Kelly, Clare – 1433 MT, 3345 WTh
 Kelly, Michael – 1503 MT
 Kelly, Robert – 4143 WTh
 Kelly, Ryan – 1329 MT
 Kelly, Simon – 3345 WTh
 Kelly, Sinead – 1132 MT, 1241 MT
 Kennedy, David – 1665 MT, 1696 MT
 Kennedy, David – 1695 MT, 1712 MT
 Kennedy, Kristen – 3827 WTh
 Kennedy, Sidney – 1065 MT
 Kensinger, Elizabeth – 4113 WTh
 Kent, Jack – 3313 WTh
 Kenworthy, Lauren – 1199 MT
 Kerwin, Lewis – 1036 MT
 Kerwin, Lewis – 1784 MT
 Keser, Zafer – 3841 WTh
 Keshavan, Anisha – 1689 MT, 1704 MT, 1710 MT
 Keshavan, Matcheri – 3953 WTh, 4219 WTh
 Kesler, Shelli – 3004 WTh
 Kesselman, Carl – 3307 WTh
 Kessler, Klaus – 1971 MT
 Kettner, Norman – 1528 MT, 1592 MT
 Ketz, Nicholas – 1800 MT, 3726 WTh
 Khalili-Mahani, Najmeh – 3432 WTh, 3440 WTh, 4159 WTh, 4166 WTh
 Khalsa, Sahib – 3096 WTh
 Khambhati, Ankit – 4092 WTh
 Khan, Ali – 2012 MT, 4103 WTh
 Khan, Raiyan – 3010 WTh, 3296 WTh
 Khanna, Rajiv – 1802 MT
 Kharabian Masouleh, Shahrzad – 3783 WTh, 3812 WTh
 Kharabian Masouleh, Shahrzad – 3800 WTh
 Khatibi, Ali – 1455 MT
 Khazaee, Ali – 3017 WTh
 Kheir, Amin – 1433 MT

Khemka, Saurabh – 1126 MT
 Khetani, Aneesh – 3272 WTh
 Khoo, Hui Ming – 1467 MT, 3118 WTh
 Khrameeva, Ekaterina – 1275 MT, 1277 MT
 Khrapichev, Alexandr – **2042 MT**
 Khundrakpam, Budhachandra – 3852 WTh, 3892 WTh
 Kiar, Gregory – 1704 MT
 Kicik, Ani – 3187 WTh, 3584 WTh, 3585 WTh
 Kıcı, Ani – 3200 WTh
 Kida, Ikuhiro – 2087 MT
 Kido, Mikio – 1334 MT
 Kiefer, Claus – 3606 WTh
 Kiefer, Falk – 1084 MT, 1102 MT, 4163 WTh
 Kiehl, Kent – 1119 MT, 1519 MT, 1935 MT
 Kiel, Susan – 3108 WTh
 Kieseler, Marie-Luise – **1838 MT**
 Kievit, Rogier – 1831 MT
 kikinis, zora – 1611 MT, **3320 WTh**
 Kikuchi, Toshiaki – 1441 MT, 3722 WTh
 Kikuchi, Yoshie – 3293 WTh
 Kilborn, Tracy – 1599 MT
 Kılıç, Emine – 3149 WTh
 Kiljan, Svenja – 2019 MT
 Killgore, William – 1378 MT
 Killgore, William – 1379 MT
 Kilpatrick, Lisa – 2149 MT, 3141 WTh
 Kilroy, Emily – 1189 MT
 Kilts, Clint – 1040 MT, 1083 MT, 1918 MT, 3921 WTh
 Kilts, Jason – 3482 WTh
 Kim, Annika – 3101 WTh
 Kim, Bo-Hyun – 3463 WTh, 4158 WTh
 Kim, Bo-Ram – 3235 WTh
 Kim, Chan Hee – 3409 WTh
 Kim, Dae-Shik – 3238 WTh, 3239 WTh
 Kim, Dai Jin – 1078 MT
 Kim, Daniel – 1736 MT
 Kim, Danny – 1737 MT
 kim, dohyun – 1096 MT
 Kim, Dohyun – 3039 WTh
 Kim, Dong Youn – 1374 MT, 1375 MT
 Kim, Dong-Youl – 4057 WTh
 Kim, Eun-Young – 3319 WTh
 Kim, Eunjoo – 1475 MT, 1722 MT
 Kim, Eunkyung – 2120 MT, 3673 WTh
 Kim, Han Jun – 1034 MT
 Kim, Hang-Keun – 1360 MT, 3610 WTh
 Kim, Hee Goo – 3252 WTh
 Kim, Hesun Erin – 3330 WTh
 Kim, Heung Dong – 3111 WTh
 Kim, Hong Cheol – 3651 WTh
 Kim, Hosung – 1370 MT

Kim, Hosung – 3843 WTh
 Kim, Hyeon Jin – 3113 WTh, 3319 WTh
 Kim, Hyoun Soo – 3233 WTh
 Kim, Hyun-Chul – 1115 MT, 1116 MT, **3936 WTh**
 Kim, Hyung Jong – 3530 WTh
 Kim, Hyung-Sik – 2157 MT
 Kim, Hyungjun – 1592 MT
 Kim, Jae-Jin – 1333 MT, 1475 MT, 1722 MT, 3330 WTh, 4198 WTh
 Kim, Jaehee – 3982 WTh
 Kim, Jaejoong – 1403 MT
 Kim, Jahee – 2120 MT
 Kim, Jeehyun – 3180 WTh
 Kim, Jeong Hwa – 1329 MT
 Kim, Jeong-Hee – 1360 MT
 Kim, Jeong-Hee – 3610 WTh
 Kim, Jihyun – 2153 MT
 Kim, Jinhee – 3197 WTh
 Kim, Jong-Hoon – 1360 MT
 Kim, Jong-Min – 3610 WTh
 Kim, Jongwan – 3636 WTh
 Kim, Joo-won – 1857 MT, 1877 MT
 Kim, Ju Sang – 1464 MT, 1569 MT, 1572 MT, 3264 WTh
 Kim, June Sic – 1969 MT, 3106 WTh
 Kim, Junghoon – 1617 MT
 Kim, Junghoon – 1557 MT, 1751 MT
 Kim, Junghoon – 3273 WTh
 Kim, Junseok – 2138 MT
 Kim, Junsuk – 2153 MT
 Kim, Kwang Ki – 3416 WTh, 3417 WTh
 Kim, KyungJun – 3816 WTh
 Kim, Laehyun – 3221 WTh
 Kim, Min-Kyeong – 1475 MT, 1722 MT
 Kim, Min-Woo – 1333 MT
 Kim, Minah – 1085 MT
 Kim, Na Young – 1642 MT, 3120 WTh
 Kim, Nam-Young – 3111 WTh
 Kim, Namkug – 3246 WTh, 3681 WTh
 Kim, Nayoung – 3233 WTh
 Kim, Sam Soo – 1025 MT
 Kim, Sang Beom – 3257 WTh
 Kim, Sang Joon – 3681 WTh
 Kim, Sanghoon – 4139 WTh
 Kim, Seung-Goo – 3405 WTh
 Kim, So-Yeon – 1141 MT
 Kim, Soo-Jeong – 1333 MT
 Kim, Sun Mi – 1096 MT
 Kim, Sung Nyun – 1085 MT
 Kim, Sung-Phil – 2153 MT
 Kim, Sungheon – 4111 WTh
 Kim, SungYup – 1570 MT, 1573 MT, 1574 MT

Kim, Woo-Ram – 2157 MT
 Kim, Yeon Jin – 1078 MT, 1080 MT, 1085 MT
 Kim, Yeun – 1068 MT, 1594 MT, 4102 WTh
 Kim, Yong Wook – 3233 WTh
 Kim, Young-Bo – 3610 WTh
 Kim, Yu Kyeong – 1264 MT, 1855 MT, 3361 WTh, 3673 WTh
 Kim, Yun-Hee – 1605 MT, 3238 WTh, 3239 WTh, 3252 WTh
 Kim-Spoon, Jungmeen – 3341 WTh
 Kimberly, William – 1742 MT
 Kimmich, Sara – 3954 WTh
 Kind, Peter – 3174 WTh
 Kindt, Merel – 3700 WTh
 King, Bradley – 3746 WTh
 King, Erin – 3081 WTh
 King, Jace – 3962 WTh
 King, John – 3261 WTh
 King, Joseph – 3097 WTh
 King, Kevin – 4162 WTh
 King, Kevin S. – 4128 WTh
 King, Maedbh – 1657 MT
 King, Maedbh – **1654 MT**
 King, Tricia – 1266 MT, 1270 MT
 King-Casas, Brooks – 1244 MT, 1249 MT, 3333 WTh, 3341 WTh, 3349 WTh
 Kingsley, Peter – 1700 MT
 Kini, Lohith – 3125 WTh
 Kinkingnéhun, Serge – 2038 MT
 Kippenhan, J. Shane – **3862 WTh**
 Kirby, John – 1480 MT
 Kircanski, Katharina – 4135 WTh
 Kircheis, Gerald – 1273 MT, 3538 WTh
 Kircher, Tilo – 1125 MT, 1131 MT, 1233 MT, 3988 WTh
 Kirilina, Evgeniya – 1604 MT
 Kirlic, Namik – 1559 MT
 Kirsch, Irving – 1501 MT
 Kirsch, Martina – 1084 MT
 Kirsch, Peter – 1084 MT, 1883 MT, **4239 WTh**, 4245 WTh
 kirsch, valerie – 1256 MT, 1718 MT, 2011 MT
 Kirschner, Matthias – 1072 MT, 1493 MT
 Kirton, Adam – 1053 MT, 3228 WTh, 3255 WTh
 Kiryu, Shigeru – 2076 MT, 3524 WTh
 Kiss, Zelma – 1001 MT
 Kitajo, Keiichi – 1795 MT, 2174 MT
 Kitano, Rie – 3859 WTh
 Kitchen, Katie – 1578 MT
 Kivimäki, Mika – 1870 MT, 3828 WTh, 3975 WTh
 Kiviniemi, Vesa – 1320 MT, 1809 MT, 2044 MT, 3045 WTh, 3124 WTh, 4010 WTh

Klaasen, Nicky – 1308 MT
 Klasnja, Anja – 3836 WTh
 Klawohn, Julia – 1298 MT, 1299 MT
 Kleim, Birgit – 1133 MT
 Klein, Denise – 1500 MT
 Klein, Elise – 3418 WTh, 3429 WTh
 Klein, Johannes – 3191 WTh
 Klein Oros, Kathleen – 1714 MT
 Kleinhans, Natalia – 1186 MT
 Kleinman, Claudia – 3310 WTh
 Kleinnijenhuis, Michiel – 1699 MT, 1735 MT, 4019 WTh
 Klepp, Anne – 3634 WTh
 Klim, Casimir – 4220 WTh
 Klimova, Jana – 3838 WTh
 Kling, Mitchel – 1121 MT
 Klingberg, Torkel – 3758 WTh
 Klooster, Debby – 1042 MT, 1064 MT
 Kloosterman, Niels – 2176 MT
 Klumpers, Floris – 3994 WTh
 Klumpp, Heide – 1130 MT, 1584 MT
 Klyuzhin, Ivan – 3183 WTh
 Klyuzhin, Ivan – 1853 MT
 Knebel, Jean-Francois – 3498 WTh
 Knight, Lindsay – 1399 MT, 1415 MT, 1416 MT
 Knight, Robert – 3385 WTh
 Knight-Scott, Jack – 2032 MT
 Knopman, David – 3908 WTh
 Knösche, Thomas – 3382 WTh, 3556 WTh
 Knotts, JD – 2093 MT
 Knudsen, Gitte – 1234 MT
 Knutson, Kristine – 3260 WTh
 Ko, Andrew – 1936 MT
 Ko, Yoshiaki – **3379 WTh**
 Koban, Leonie – 4257 WTh
 Kobayashi, Akihiro – 4204 WTh
 Kober, Silvia – 3809 WTh
 Koch, Katharina – 1239 MT
 Koch, Kathrin – 1291 MT, 1292 MT
 Koch, Lena – **1049 MT**
 Koch, Saskia – 1132 MT
 Kochalka, John – **3678 WTh**, 4037 WTh
 Kochan, Nicole – 3047 WTh
 Kochunov, Peter – 1113 MT, 1132 MT, 1463 MT, 1700 MT, 1811 MT, 2020 MT, 3305 WTh, 3308 WTh, 3312 WTh, 3780 WTh
 Kodosky, Paula – 3261 WTh
 Koeda, Michihiko – 1525 MT, 3002 WTh
 Koen, Nastassja – 1235 MT
 Koenig, Katherine – 1807 MT, 1873 MT, 3043 WTh, 3162 WTh, 3583 WTh
 Koenigs, Michael – 1935 MT

Koenis, Marinka – 3853 WTh
 Koessler, Laurent – 1012 MT, 1013 MT, 1022 MT, 1762 MT
 Koevoets, Godefridus – 1615 MT
 Koffarnus, Mikhail – 1082 MT
 Kogata, Tomohiro – 1143 MT
 Kogler, Lydia – 1402 MT
 Koh, Natalie – 1707 MT, 3005 WTh, 4162 WTh
 Kohanpour, Mohsen – 1541 MT
 Kohlberg, Jessica – 1397 MT
 Köhler, Stefan – 2012 MT
 Köhler, Stefanie – 1517 MT, 1796 MT
 Kohn, Nils – 1390 MT, 3712 WTh
 Kohn, Philip – 1326 MT, 3704 WTh, **3862 WTh**
 Kohno, Milky – 1074 MT, 1077 MT, 1508 MT, 1901 MT
 Koirala, Gyan Raj – 3111 WTh
 Koirala, Nabin – 1002 MT, 1003 MT
 Kok, Jelmer – 2053 MT
 Kolarova, Monika – 1963 MT
 Kolasinski, James – **2223 MT**
 Kolind, Shannon – 3056 WTh
 Kollias, Spyros – 3029 WTh, 3578 WTh
 Kollmann, Bianca – 1202 MT
 Kolozsvári, Orsolya – 3671 WTh
 Komaki, Yuji – 3322 WTh
 Komarova, Olga – 1275 MT, 1277 MT
 Komiya, Asuka – **1386 MT**
 Kondo, Natsumi – 3721 WTh
 Kong, Danyang – 1380 MT
 Kong, Jian – 1501 MT
 Kong, Ru – 1806 MT, 3969 WTh
 Kong, Xiangzhen – 3472 WTh
 Konstantinidi, Tatiana – 1275 MT, 1277 MT
 Koo, Daniel – 1930 MT
 Koole, Michel – 1839 MT, 1854 MT
 Koopmann, Anne – 1102 MT
 Koopmans, Peter – 1561 MT
 Koopowitz, Sheri – 1138 MT
 Kopala-Sibley, Daniel – 3098 WTh
 Kopp, Ute – 3063 WTh
 Koppelmans, Vincent – 3392 WTh
 Kopstick, Ryan – 4232 WTh
 Koravand, Amineh – 1959 MT
 Kordjazi, Neda – 1959 MT
 Korgaonkar, Mayuresh – 3948 WTh
 Korhonen, Vesa – 1809 MT, 3045 WTh, 3124 WTh, 4010 WTh
 Koriath, Carolin – 2122 MT
 Kornak, John – **3050 WTh**
 Kornelsen, Jennifer – 1643 MT
 Kos, Claire – 1318 MT

Koschutnig, Karl – 1443 MT, 3811 WTh
 Köse, Hasan – **3613 WTh**
 Kosik, Eena – 3018 WTh
 Kosson, David – 1935 MT
 Kossowski, Bartosz – 3458 WTh, 3579 WTh, 3616 WTh, 3617 WTh, 3658 WTh
 Kossut, Małgorzata – 3458 WTh, 3493 WTh
 Kostoglou, Kyriaki – 1826 MT
 Kostopoulos, Penelope – 1684 MT, 3852 WTh
 Kostovic, Ivica – **2056 MT**
 Kosuda, Ayaka – 3552 WTh
 Kota, Srinivas – 3509 WTh
 Kotani, Yasunori – 2076 MT, 3524 WTh
 Kothapalli, Deydeep – **3320 WTh**
 Kothare, Hardik – 1197 MT
 Kotkowski, Eithan – 3976 WTh
 Kotrotsou, Aikaterini – 3534 WTh
 Kou, Zhifeng – 3280 WTh, 4059 WTh
 Koul, Atesh – 4233 WTh
 Koush, Yury – 1493 MT, 1514 MT, 1690 MT, 2222 MT, 3223 WTh
 Koutsouleris, Nikolaos – 1305 MT, 1319 MT
 Kovač, Lea – 2184 MT
 Kowalczyk, Natalia – 3458 WTh
 Koyejo, Oluwasanmi – 1802 MT
 Koyejo, Sanmi – 1829 MT
 Kozak, Rouba – 3317 WTh
 Kozhemiako, Nataliia – 1162 MT
 Kozhevnikova, Olga – 1275 MT, 1277 MT
 Kozłowski, Lauren – 3120 WTh
 Kraaijeveld, Bram – **1567 MT**
 Krabak, Brian – 3286 WTh
 Krabbendam, Lydia – 1383 MT
 Kraegel, Peter – 3645 WTh
 Kraeutner, Sarah – 3396 WTh, 3741 WTh
 Kragel, James – 1642 MT
 Krajinovic, Maja – 3767 WTh
 Kral, Tammi – 1401 MT, 1418 MT, 2202 MT
 Kramer, Arthur – 3736 WTh
 Krämer, Bernd – 1425 MT
 Kranz, Georg – **1058 MT**, 1242 MT, 4152 WTh
 Krauel, Kerstin – 3152 WTh, 3697 WTh
 Kraus, Christoph – **1058 MT**, 1242 MT, 4152 WTh
 Krause, Anna Linda – 3990 WTh
 Krause, Florian – 1530 MT, 1954 MT
 Krause, Thomas – 3250 WTh
 Krause, Vanessa – 3558 WTh, 3744 WTh
 Krawczyk, Daniel – **3262 WTh**
 Krayenbühl, Niklaus – 1126 MT, 1419 MT
 Kregel, Jeroen – 3447 WTh
 Kreifelts, Benjamin – 1404 MT, 2123 MT, 4210 WTh

Kreilkamp, Barbara – 3108 WTh, 3121 WTh, 3122 WTh
 Kreither, Johanna – 1018 MT
 Kremen, William – 3314 WTh
 Kremin, William – 1241 MT
 Kremneva, Elena – 1934 MT
 KRIEG, Julien – 1013 MT
 Krigolson, Olave – 3328 WTh, 3497 WTh, 3502 WTh, 3512 WTh, 3515 WTh, 3615 WTh, 3693 WTh
 Krigolson, Olave – 3520 WTh
 Krikorian, Emma – 3321 WTh
 Krinsky, Hannah – 1353 MT, 1857 MT, 2119 MT
 Krishnamurthy, Ashok – 3546 WTh
 Krishnamurthy, Lisa – 3069 WTh
 Krishnamurthy, Venkatagiri – 1949 MT, 3069 WTh
 Krishnan, Anjali – 1519 MT, 4257 WTh
 Krishnan, Balu – 2210 MT
 Krishnan, Michelle – 3298 WTh
 Kroemer, Nils – 3877 WTh, **4032 WTh**
 Kröger, Anne – 1173 MT
 Kroll, Jasmin – 1623 MT
 Kronbichler, Martin – 4215 WTh
 Kropf, Pascal – 1830 MT
 Kroth, Julia – 1003 MT
 Krueger, Britta – 3395 WTh
 Krueger, Frank – 1128 MT, 3138 WTh
 Krug, Axel – 1233 MT, 1463 MT
 Krug, Kristine – 2068 MT
 Kruggel, Frithjof – 1152 MT
 Kruschwitz, Johann – 2053 MT
 Kryoneriti, Evangelia – 4041 WTh
 Kryscio, Richard – 3814 WTh
 Krystal, John – 1357 MT, 1431 MT, 2218 MT
 Ku, Hsiao-Lun – 1315 MT, 3227 WTh
 Ku, Yixuan – **3705 WTh**
 Kubicki, Marek – 1344 MT, 1611 MT
 Kuceyeski, Amy – 1907 MT
 Kucyi, Aaron – 1937 MT
 Kuczynski, Andrea – 3228 WTh
 Kudela, Maria – 4063 WTh
 Kuebel, Stefanie – 3184 WTh
 Kuehn, Esther – **2022 MT**
 Kuennecke, Basil – 2214 MT
 Kugel, Harald – 1241 MT
 Kuh, Diana – 3838 WTh
 Kuhl, Patricia – 3677 WTh
 Kuhl, Ulrike – 3354 WTh
 Kuhn, Matyáš – 1531 MT
 Kuhn, Taylor – 1261 MT, 1594 MT
 Kuja-Halkola, Ralf – 1168 MT, 1170 MT, 1174 MT
 Kulason, Sue – 1334 MT

Kulkarni, Arman – 3799 WTh
 Kullmann, Stephanie – 3337 WTh
 Kumar, Poornima – 1436 MT
 Kumar, Vinod – 1987 MT, 4149 WTh
 Kümmerer, Dorothee – **3243 WTh**
 Kumpf, Ulrike – 1250 MT, 1367 MT
 Kumral, Deniz – 3812 WTh
 Kunas, Stefanie – 1125 MT
 Kundu, Prantik – 3999 WTh
 Kung, Chun-Chia – 1471 MT, 4244 WTh
 Kung, Yi-Chia – 1649 MT
 Kunugi, Hiroshi – 1241 MT
 Kunze, Tim – 3382 WTh
 Kuo, Chao-Hung – 3521 WTh, 3863 WTh
 Kuo, Li-Wei – 1410 MT, 1692 MT
 Kuo, Michael – 3707 WTh
 Kuo, Po-Chih – 2125 MT
 Kuo, Wen-Jui – 4235 WTh
 Kuplicki, Rayus – 1226 MT, 1813 MT, 1815 MT
 Kurban, Denizhan – 1960 MT
 Kurniawan, Nyoman – 4194 WTh
 Kurt, Elif – 3080 WTh, 3126 WTh
 Kurth, Florian – 4107 WTh
 Kurz, Max – 2155 MT
 Kushan, Leila – 1335 MT, 3318 WTh, **3320 WTh**, 3474 WTh
 Kushan-Wells, Leila – 3321 WTh
 Kustubayeva, Almira – 1220 MT
 Kuzmanovic, Bojana – 1387 MT, 1509 MT
 Kuzniecky, Ruben – **3379 WTh**, 3919 WTh
 Kwakkel, Gert – 3226 WTh
 Kwan, Donna – 3248 WTh
 Kwan, Kathy – 3651 WTh
 Kwok, Fu Yu – 3952 WTh
 Kwok, Sze Chai – **3705 WTh**
 Kwon, Dongjin – 1995 MT
 Kwon, Eun Jin – 3113 WTh
 Kwon, Hunki – 4158 WTh
 Kwon, Hyeok Gyu – 3264 WTh
 Kwon, Jun Soo – 1085 MT, 1291 MT
 Kwon, Jun Soo – 1292 MT
 Kwon, Miseon – 3681 WTh
 Kwon, Moonyoung – 1406 MT
 Kydd, Rob – 1331 MT
 Kyeong, Sunghyon – 1475 MT, 1722 MT, 3330 WTh, 4198 WTh

L

L. Harms, Robbert – **1567 MT**
 La, Christian – 3180 WTh
 Labit, Mickael – 4104 WTh
 Labra, Nicole – 3533 WTh

Labus, Jen – 2144 MT, 3141 WTh
 Labus, Jennifer – 1278 MT, 2149 MT
 Labus, Jennifer – 3935 WTh
 Lacey, Simon – 1949 MT
 Lachapelle, Francis – 1370 MT
 Lachaux, Jean-Philippe – 2112 MT, 3531 WTh
 LaConte, Stephen – 1082 MT, 1249 MT
 LaConte, Stephen – 3943 WTh
 Ladron de Guevara Cervantes, Diego – 1101 MT
 Lafon, Belen – 1019 MT
 Lagae, Lieven – 3112 WTh
 Lage-Castellanos, Agustín – 2170 MT
 Lagopoulos, Jim – 3830 WTh, 4157 WTh
 Lagopoulos, Jim – 1241 MT
 Lahnakoski, Juha – 3140 WTh, 4233 WTh, 4241 WTh, 4246 WTh
 Lai, Meng-Chuan – 1195 MT, 3439 WTh, 4236 WTh
 Lai, Yongxiu – 1317 MT
 Lail, Moh – 3477 WTh
 Laird, Angela – **3355 WTh**
 Laird, Angie – 1098 MT, **1428 MT**, **1674 MT**, 1849 MT, 1942 MT, 2000 MT, 3415 WTh, **4203 WTh**, **4226 WTh**, 4251 WTh
 Laird, Robert – 3415 WTh
 Lajnef, Tarek – 1314 MT, 2102 MT
 Lakhani, Bimal – 1627 MT, 3742 WTh
 Lally, Niall – 1221 MT
 Lally, Peter – 3279 WTh
 Lalor, Edmund – 3506 WTh
 Lam, Alexandra – 3143 WTh
 Lam, Alexandra – 3366 WTh
 Lam, Hei – 1261 MT
 Lam, Hei Yeung – 1545 MT
 Lam, Jaeger – 3823 WTh
 Lam, Linda C. W. – 3020 WTh
 Lam, Raymond – 1037 MT, 1065 MT, 1230 MT
 Lam, Sandi – 3100 WTh
 Lamar, Melissa – 3054 WTh
 Lamberts, Robert – 1599 MT
 Lambon Ralph, Matthew – 2049 MT, 3622 WTh
 Lamke, Jan-Peter – 2053 MT
 Lamm, Claus – **1058 MT**, 1242 MT, 4152 WTh, 4215 WTh, 4216 WTh
 Lammers, Florian – 3805 WTh
 Lampe, Leonie – 3800 WTh
 Lamphere, Melanie – 3726 WTh
 Lamy, Julien – 1346 MT
 Lancaster, Jack – 1663 MT
 Lancaster, Thomas – 1209 MT
 Landi, Nicole – 3587 WTh, 3592 WTh
 Landini, Luigi – 1778 MT
 Landman, Bennett – 3199 WTh

- Lane, Chris – 3838 WTh
 Lane, Laura – 2030 MT
 Lane, Stephanie – 1180 MT
 Lane, Timothy Joseph – 1315 MT
 Lang, Donna – 1876 MT
 Langbehn, Douglas – 3733 WTh
 Langenecker, Scott – 1584 MT
 Langer, Nicolas – 3754 WTh, 3789 WTh
 Langerak, Nelleke – 1599 MT
 Langguth, Berthold – 1250 MT, 4251 WTh
 Langhorst, Beth – 1196 MT
 Langley, Jason – 3203 WTh, 3214 WTh, 3475 WTh
 Langner, Inga – 2136 MT
 Langner, Robert – 2000 MT, 3820 WTh, **4258 WTh**
 Langner, Robert – 3821 WTh
 Langs, Georg – 1825 MT, 1833 MT, 3630 WTh, 3855 WTh
 Lanzenberger, Rupert – **1058 MT**, 1242 MT, 3454 WTh, 4152 WTh
 Lao, Cuijin – 4105 WTh
 Larabi, Daouia – 1338 MT
 Larbi, Ahmed – 1268 MT
 Larcher, Kevin – 1896 MT
 Larcher, Kevin – 1625 MT, 1863 MT, 3202 WTh, 3612 WTh
 Larios, Cintya – 3157 WTh
 Larivière, Sara – 1826 MT, 3798 WTh
 Larkin, Tony – 2150 MT
 Larsen, Bart – 3875 WTh, 3880 WTh
 Larson, Eric – 1779 MT
 Larson, Eric – 3571 WTh
 Larson-Prior, Linda – 1783 MT, 2036 MT
 Larsson, Maria – 3398 WTh
 Lataster, Arno – **1567 MT**
 Latini, Francesco – 3927 WTh
 Lau, Airey – 3592 WTh
 Lau, Hakwan – 2093 MT, **3379 WTh**
 Lau, Hakwan – 1140 MT
 Lau, Joanne – 3843 WTh
 Lau, Johnny King – **1386 MT**, 3380 WTh
 Lau, Jonathan – 2012 MT, 4103 WTh
 Lauckner, Mark – 3400 WTh
 Laue, Cameron – 1638 MT, 2062 MT
 Lauer, Kathryn – 2100 MT, 2104 MT
 Laughlin, Suzanne – 1276 MT, 1417 MT, 3449 WTh
 Laughlin, Suzanne – 3890 WTh
 Laughton, Barbara – 1590 MT, 1900 MT, 3456 WTh, 4108 WTh
 Lauharatanahirun, Nina – 3341 WTh
 Laumann, Timothy – 3728 WTh, 3958 WTh
 Laureys, Steven – 1631 MT, 2094 MT, 2095 MT, 4024 WTh, 4176 WTh
 Laurienti, Paul – 1108 MT
 Lauritzen, Martin – 3818 WTh
 Laverdiere, Caroline – 3767 WTh
 Lavigne, Katie – **1355 MT**
 Law, Christine – 2143 MT, 2145 MT
 Lawrence, Katherine – 1182 MT, 3096 WTh
 Lawrie, Stephen – 1306 MT, 3438 WTh
 Lazaro, Luisa – 1292 MT
 Lazaro, Luisa – 1291 MT
 Lazovski, Nikola – 1667 MT
 Le, Clarence – 3935 WTh
 Le, Trang – 1228 MT
 Le Bihan, Denis – 2048 MT
 Leach, James – 1578 MT
 Leahy, Richard – 1650 MT, **3966 WTh**, 4102 WTh
 Leahy, Richard – 1272 MT, 1868 MT
 Leal, Alberto – 3983 WTh
 Leaver, Amber – 1031 MT, 1240 MT, 1255 MT
 LEBARGY, Sylvain – 2159 MT
 Lebedev, Alexander – 2152 MT
 Lebel, Catherine – 1468 MT, 1968 MT, 2057 MT, 3059 WTh, 3228 WTh
 Lebel, Marc – 2057 MT
 Leberberg, Jessica – 3533 WTh, 4104 WTh
 Lebrun-Frenay, Christine – 1261 MT
 Lecours Boucher, Xavier – 1682 MT, 1714 MT
 Ledolter, Anna – 2184 MT
 LeDoux, Mark – 3750 WTh
 Lee, Ahee – 1605 MT, 3238 WTh, 3239 WTh, 3252 WTh
 Lee, Brian – 1185 MT
 Lee, Chan-Young – 3113 WTh
 Lee, Chi-Chun – 1410 MT
 Lee, Chia-Wei – 1492 MT
 Lee, Chia-Ying – 3657 WTh
 Lee, Chulhyun – 3610 WTh
 Lee, Chun-Yi – 3336 WTh
 Lee, David – 1255 MT
 Lee, Deokjong – 1071 MT
 Lee, Dong Soo – 1855 MT, 3361 WTh, 3367 WTh, 3673 WTh
 Lee, Dong Soo – 2126 MT, 3136 WTh
 Lee, Dongpyo – 3111 WTh
 Lee, Eun-Jae – 3246 WTh
 Lee, Ho Young – 1034 MT
 Lee, Hsin-Chien – 1315 MT
 Lee, Hsin-Ju – 4235 WTh
 Lee, Hwee Ling – 3713 WTh
 Lee, Hyang Woon – 3113 WTh, 3319 WTh
 Lee, Hyekyoung – 1855 MT, 3136 WTh
 Lee, Hyeongrae – 3106 WTh
 Lee, Hyo Jeong – 3530 WTh
 Lee, Hyo-Jeong – 2120 MT, 2126 MT
 Lee, Hyunna – 3246 WTh, 3681 WTh
 Lee, Inseon – 1915 MT
 Lee, Jae-Hong – 3681 WTh
 Lee, Jaetae – 3041 WTh
 Lee, Ji Yoon – 1078 MT
 Lee, Ji-Eun – 3113 WTh
 Lee, Jingu – **3453 WTh**
 Lee, Jong-Hwan – 1115 MT, 1116 MT, **3936 WTh**, 4057 WTh, 4155 WTh
 Lee, Jong-Min – 1861 MT, 1880 MT, 3463 WTh, 4068 WTh, 4158 WTh
 Lee, Jongho – 3273 WTh, **3453 WTh**
 Lee, Jongmin – 3235 WTh
 Lee, Juin-Der – 2220 MT
 Lee, Jun-Young – 1264 MT
 Lee, Jungsoo – 1605 MT, 3238 WTh, 3239 WTh
 Lee, JungWoo – 3396 WTh
 Lee, Kendall – 1008 MT
 Lee, Kyu-ho – 1033 MT, 3220 WTh
 Lee, Mi Young – 1464 MT, 1569 MT, 1572 MT, 3264 WTh
 Lee, Min-Hee – 1374 MT, 1375 MT
 Lee, Mina – 3319 WTh
 Lee, Nikki – 1383 MT
 Lee, Pei-Hong – 3376 WTh
 Lee, Richard – 3101 WTh
 Lee, Roland – 1024 MT, 3283 WTh
 Lee, Sang Won – 3555 WTh
 Lee, Sang-Woo – 3014 WTh, 3041 WTh
 Lee, Seon Woo – 3530 WTh
 Lee, Seonjoo – 3098 WTh
 Lee, Seung Ku – 1374 MT
 Lee, Seunghwan – 3235 WTh
 Lee, Shu-Hui – 4236 WTh
 Lee, Shu-Hui – 1382 MT
 Lee, Si-Chen – 3378 WTh, 3383 WTh
 Lee, Sook Joung – 3257 WTh
 Lee, Suji – 3039 WTh
 Lee, Sung-Mu – 1550 MT, 3691 WTh
 Lee, Suzee – 3018 WTh, **3050 WTh**
 Lee, Szu-Hui – 1214 MT, 1216 MT
 Lee, Tatia – 1988 MT, 3810 WTh
 Lee, Tatia – 1245 MT
 Lee, Vincent – 4049 WTh
 Lee, Wang-Tso – 3072 WTh
 Lee, Won Hee – 1350 MT, 1353 MT, 1857 MT
 Lee, Xuan Kai – 2194 MT
 Lee, Yao-Tung – 1315 MT
 Lee, Ying – **4032 WTh**
 Lee, Yoojin – 1604 MT, 3448 WTh
 Lee, Yoon Ji – 1141 MT
 Lee, Youngjo – 3361 WTh, 3367 WTh, 3673 WTh
 Leech, Robert – 1017 MT, 2106 MT, **3359 WTh**, 3413 WTh, 3699 WTh, 3933 WTh, 4016 WTh
 Leemans, Alexander – 1566 MT, 1602 MT, 1604 MT, 3829 WTh
 Lefèvre, Julien – 3867 WTh
 Leff, Alex – 3251 WTh
 Lefranc, Sandrine – 2048 MT
 Legarreta, Margaret – 3067 WTh
 Legget, Kristina – 1542 MT
 Legon, Wynn – 1046 MT
 Legostaeva, Liudmila – 1934 MT
 Lehericy, Stephane – 3175 WTh, 3215 WTh
 Lehmann, Briec – 3956 WTh
 Lei, Du – 3161 WTh
 Lei, Hao – 1090 MT, 1091 MT
 Lei, Xiaoxia – 1490 MT, 3147 WTh
 Lei, Xiaoyu – 1698 MT, **3840 WTh**
 Lei, Xiaoyu – 3930 WTh, 3931 WTh
 Lei, Xu – 1371 MT
 Leibenluft, Ellen – 3153 WTh, 4135 WTh
 Leibnitz, Kenji – 2087 MT
 Leinders, Sacha – 3544 WTh
 Leite, Marco – 3496 WTh
 Lekander, Mats – 1909 MT
 Lemaître, Hervé – 1560 MT, 3607 WTh
 Lemiere, Jurgen – 1263 MT
 Lemieux, Louis – 3496 WTh
 Lemire-Rodger, Sabrina – 3823 WTh
 Lemke, Clark – 1052 MT
 Lenci, Alessandro – **3635 WTh**
 Leng, Haxia – 1357 MT
 Lenglet, Christophe – 1596 MT, 2121 MT, 3218 WTh
 Lennartz, Carolin – 4154 WTh
 Lennertz, Leonard – 1298 MT, 1299 MT
 Lenz, Gregor – 3884 WTh
 Leo, Andrea – 2075 MT, 2182 MT, **3635 WTh**
 Leonardi, Matilde – 3079 WTh
 Leoni, Renata – 3022 WTh
 Leoni, Renata – 4030 WTh
 Leopold, David – 4038 WTh, 4220 WTh
 Leow, Alex – 1584 MT, 3054 WTh, 4130 WTh
 Lepage, Claude – 1341 MT, 1862 MT, 1886 MT, 3432 WTh, 3440 WTh, 4159 WTh, 4166 WTh, 4168 WTh
 Lepage, Martin – 1341 MT
 Lepore, Natasha – 4050 WTh
 Leprince, Yann – 4106 WTh
 Lepsien, Jöran – 3405 WTh, 4112 WTh
 Lerch, Jason – 1158 MT, 3489 WTh
 Lerch, Jason – 1195 MT, 1248 MT, 1716 MT, 3449 WTh

Leritz, Elizabeth – 1280 MT
 Lerma-Usabiaga, Garikoitz – 1655 MT, 3665 WTh
 Lerman-Sinkoff, Dov – 3371 WTh
 Leroy, Francois – 4104 WTh
 Leroy, François – 3867 WTh
 Leshin, Joseph – 1139 MT
 Leslie, Emily – 3407 WTh
 Leslie, Sara – 1246 MT
 Lesnick, Michael – 4174 WTh
 Lett, Tristram – 1241 MT, 4163 WTh
 Leuchs, Laura – 1394 MT
 Leung, Ada – 3769 WTh
 Leung, Hang Kin – 3522 WTh
 Leunissen, Inge – **1026 MT**
 Leunissen, Inge – 1020 MT, 3807 WTh
 Leurgans, Sue – 3534 WTh, 3792 WTh
 Leurquin-Sterk, Gil – 1106 MT, 1839 MT
 Leuze, Christoph W.U. – 1732 MT, 2018 MT
 LeVan, Pierre – 3119 WTh, **3243 WTh**, 4154 WTh
 Levar, Nina – 1117 MT
 Levenstein, Jacob – 3231 WTh, 3234 WTh
 Levenstein, Jacob – 3539 WTh
 Leverenz, Larry – 1580 MT
 Levesque, Victoria – 3056 WTh
 Levin, Netta – 1887 MT
 Levine, Andrew – 1261 MT
 Levine, Brian – 3248 WTh
 Levinson, Lisa – 1144 MT
 Levis, Bianca – 1073 MT
 Levman, Jacob – 1154 MT, 3442 WTh
 Levy, Ifat – 1138 MT
 Levy, Richard – 2038 MT
 Lewis, Daniel – 3980 WTh
 Lewis, Jeffrey – 3260 WTh, 3282 WTh
 Lewis, John – 1177 MT, 1341 MT, 3313 WTh,
 3315 WTh, 3316 WTh, 3852 WTh, 3892 WTh
 Lewis, Laura – 1641 MT, 2211 MT
 Lewis, Lindsay – 1886 MT, 3432 WTh, 3440 WTh,
 3483 WTh, 4159 WTh, 4166 WTh, 4168 WTh
 Lewis, Noah – 3926 WTh
 Lewis, Simon – 3165 WTh, 3209 WTh
 Lewis, Simon – 3053 WTh
 Lewis-de los Angeles, Christine Paula – 2033 MT
 Lewis-Peacock, Jarrod – 1513 MT
 Leyton, Marco – 1896 MT
 Li, Ang – 1476 MT
 Li, Ang – 3325 WTh
 Li, Cheng-Ta – 1214 MT, 1216 MT
 Li, Chia-Wei – 2212 MT
 Li, Chun-Bo – 1342 MT
 Li, David – 1601 MT, 3056 WTh, 3269 WTh,
 3271 WTh

Li, David – 3542 WTh
 Li, Gang – 2008 MT, **3872 WTh**, 3882 WTh,
 4105 WTh
 Li, Hai – **1660 MT**, 2014 MT
 Li, Hailong – 3150 WTh
 Li, Hechun – 3803 WTh
 Li, Huan – 1091 MT
 Li, Huanjie – 3942 WTh
 Li, Hui – 1124 MT
 Li, Jamie – 1398 MT
 Li, Jamie – 3375 WTh
 Li, Jian – 1868 MT
 Li, Jiao – 3985 WTh
 Li, Jiewei – 3523 WTh
 Li, Jin – 1476 MT, 3295 WTh, 4261 WTh
 Li, Jingwei – 1806 MT
 Li, Jingyuan – 3007 WTh
 Li, Jinpeng – 1396 MT
 Li, Juan – 1066 MT, 3806 WTh, 3814 WTh,
 3968 WTh
 Li, Jun – 3761 WTh, 3764 WTh
 Li, Kai – 1783 MT
 Li, Kaiming – 1322 MT
 Li, Kaiyun – 1400 MT
 Li, Kang – 4067 WTh
 Li, Kuncheng – 4009 WTh
 Li, Liang – 3911 WTh
 Li, Lin – 4254 WTh
 Li, Lingjiang – 1127 MT
 Li, Linling – 1204 MT
 Li, Lucia – 1023 MT
 Li, Lucia – 3277 WTh
 Li, Meng – 1241 MT, 3990 WTh
 Li, mingli – 1238 MT
 Li, Mingyi – 1873 MT
 Li, Nannan – 3161 WTh
 Li, Peipei – 3785 WTh
 Li, Peng – 1359 MT, 1361 MT, 1362 MT, 3295 WTh
 Li, Qi – 3369 WTh, 4230 WTh, 4231 WTh
 Li, Qingyang – 1227 MT
 Li, Quanzheng – 4013 WTh
 Li, Ru – 1472 MT
 Li, Rui – 3437 WTh
 Li, Rui – 1066 MT, 3806 WTh, 3968 WTh
 Li, Shau-Hsuan – 3201 WTh
 Li, Shi-Jiang – 2099 MT, 2100 MT, 2104 MT
 Li, Shijia – 3300 WTh
 Li, tao – 1238 MT
 Li, Tengfei – 1556 MT, 3046 WTh
 Li, Wan – 3557 WTh
 Li, Wan – 4115 WTh
 Li, Wenbin – 1322 MT, 1738 MT

Li, Wenfeng – 1576 MT
 Li, Wenxin – 4217 WTh, 4259 WTh
 Li, Wenxin – 4256 WTh
 Li, Wu – 2185 MT
 Li, Xia – 3266 WTh
 Li, Xiang – 4013 WTh
 Li, Xiaobo – 3137 WTh
 Li, Xiaoli – 1004 MT
 Li, Xiaoming – 1086 MT
 Li, Xiaoxi – 3701 WTh
 Li, Yang – 2203 MT
 Li, Yansong – 1358 MT
 li, yao – 1288 MT
 Li, Yongli – 1373 MT, 1376 MT
 Li, Yongmei – 1225 MT
 Li, Yue – 2203 MT
 Li, Zhenghan – 1938 MT, 1946 MT
 Li, Zhihao – 4238 WTh
 Li, Zhonglin – 1373 MT, 1376 MT
 Liang, Jimin – 1439 MT
 Liang, Peipeng – 3196 WTh
 Liang, Wei-Kuang – 4192 WTh
 Liang, Xia – 3044 WTh
 Liang, Xinyu – 3206 WTh
 Liang, Yan – 3150 WTh
 Liang, Yuanyuan – 1113 MT
 Liao, Haiyan – 1289 MT, 1294 MT
 Liao, Ling-Ling – 1410 MT
 Liao, Mei – 1127 MT
 Liao, Wei – 3985 WTh
 Liao, Xuhong – 1495 MT, 1705 MT, 4007 WTh,
 4009 WTh, 4026 WTh
 Lidov, Hart – **2056 MT**
 Liebenthal, Einat – 1644 MT, 3629 WTh
 Liebeskind, David – 3897 WTh
 Liegeois, Raphael – 3958 WTh, 3969 WTh
 Liem, Franziskus – 3392 WTh
 Liemburg, Edith – 1308 MT
 Liew, Sook-Lei – 3232 WTh
 Lifshitz, Michael – 1891 MT
 Ligidorf, Armin – 2198 MT
 Ligeza, Tomasz – 1408 MT
 Liguori, Agnese – 3194 WTh
 Liloia, Donato – 3445 WTh
 Lim, Ahnate – 1486 MT
 Lim, Ashley Ruyan – 1154 MT, 3442 WTh
 Lim, Hyun Kook – 3030 WTh
 Lim, Jae-A – 1080 MT
 Lim, Joseph Kai Wei – 1904 MT
 Lim, Julian – 2081 MT
 Lim, Kelvin – 3965 WTh
 Lim, Kelvin – 1345 MT, 1610 MT

Lim, Sung-Joo – **2074 MT**
 Lim, Wesley – 3773 WTh
 Limal, Severin – 1017 MT
 Limanowski, Jakub – 1981 MT
 Limbrick-Oldfield, Eve – 1107 MT, 1109 MT
 Lin, Amy – 1335 MT, 3318 WTh, 3321 WTh
 Lin, Chia-Pei – 1315 MT
 Lin, Ching-Po – 1649 MT, 3625 WTh
 Lin, Chongde – 3422 WTh
 Lin, CHUN-YU – 1550 MT, 3691 WTh
 Lin, Dongdong – 1217 MT, **1330 MT**, 1351 MT,
 3905 WTh, 3953 WTh
 Lin, Fa-Hsuan – 1069 MT, 3032 WTh, 4235 WTh
 Lin, Fuchun – 1090 MT, 1091 MT, 3066 WTh
 Lin, Haixi – 3150 WTh
 Lin, Hsiang-Yuan – 1184 MT, 1198 MT, 4236 WTh
 Lin, I-Cheng – 1315 MT
 Lin, Jack – 2006 MT
 Lin, Jian – 1873 MT, 2046 MT, 3162 WTh
 Lin, Jo-Fu – 3402 WTh, 4235 WTh
 Lin, Qixiang – 4009 WTh
 Lin, Shih-Yen – 1410 MT
 Lin, Shih-Yen – 1410 MT
 Lin, Shih-Yen – 1794 MT
 Lin, Sue-Jin – 4001 WTh
 Lin, Sue-Jin – 3207 WTh
 Lin, Tian – 1544 MT
 Lin, Wei-Che – 3159 WTh, 3201 WTh
 Lin, Weili – 1583 MT, 2008 MT, 3866 WTh,
3872 WTh, 3876 WTh, 3882 WTh, 3902 WTh,
 3979 WTh, 4053 WTh, 4105 WTh
 Lin, Yi-Ru – 1966 MT
 Lin, Yi-Ting – 1069 MT
 Lin, Ying – 1127 MT, 1477 MT
 Lin, Ying-Chia – **1741 MT**
 Lin, Ying-Chia – 2060 MT
 Lincoln, Sarah Hope – 4219 WTh
 Lind, Monika – 4211 WTh
 Linden, David – 1209 MT
 Linden, David – 1954 MT
 Lindenbach, Talise – 3615 WTh
 Lindenberger, Ulman – 4064 WTh
 Lindh, Daniel – 2186 MT
 Lindinger, Nadine – 3068 WTh
 Lindner, Michael – 4177 WTh
 Lindquist, Martin – 1727 MT, 4164 WTh
 Lindsey (dec.), Kimberley – 2207 MT
 Lindström, Björn – 4247 WTh
 Ling, Huawei – 3475 WTh
 Lingford-Hughes, Anne – 1107 MT, 1109 MT
 Linhartová, Pavla – 1531 MT
 Linke, Annika – 1150 MT

Linke, Julia – 1202 MT, 1392 MT
 Linn, Gary – **1882 MT**
 Liou, Michelle – 2125 MT, 2220 MT
 Lipp, Ilona – 3060 WTh
 Lippé, Sarah – 3767 WTh, 3771 WTh
 Lipsitz, Lewis – 3826 WTh
 Lirng, Jiing-Feng – 4005 WTh
 Lisanby, Sarah – 2191 MT, 3772 WTh, 3773 WTh
 Lisanik, Martin – 3737 WTh
 Lisanti, Lucy – 3121 WTh
 Lisinski, Jonathan – 1082 MT, 1249 MT, 3943 WTh
 Litinas, Krisanne – 3943 WTh
 Litt, Brian – 3125 WTh
 Litt, Robin – 3648 WTh
 Little, Francesca – 1590 MT, 1900 MT, 3456 WTh, 4108 WTh
 Little, Graham – 3059 WTh, 3925 WTh
 Lituchy, Michael – 1431 MT
 Liu, Anli – 1019 MT
 Liu, Bing – 1361 MT, 1476 MT, 1488 MT, 3295 WTh, 3325 WTh
 Liu, Bing – 1362 MT
 Liu, Careesa – 3040 WTh, 3281 WTh, 3387 WTh, 3388 WTh, 3563 WTh
 Liu, Careesa – 3084 WTh
 Liu, Cathy – 3935 WTh
 Liu, Chenghua – 4067 WTh
 Liu, Chia-Yih – 2156 MT
 Liu, Chia-Ying – 1598 MT
 Liu, Chih-Min – 1310 MT
 Liu, Chunhong – 1212 MT
 Liu, Chunlei – 3475 WTh
 Liu, Chunzhi – 1212 MT
 Liu, Dongqiang – 1893 MT
 Liu, Gang – 1477 MT
 Liu, Hanjun – 3680 WTh
 LIU, Hengshuang – 3621 WTh
 Liu, Huan – 1225 MT
 Liu, I-Chao – 1315 MT
 Liu, Janelle – 1155 MT, 1164 MT
 Liu, Jeffrey – 1139 MT
 Liu, Jia – 1651 MT, 2166 MT, 3302 WTh
 Liu, Jiaen – 3604 WTh
 Liu, Jiangang – 2193 MT
 Liu, Jiao – 3810 WTh
 Liu, Jin – 4026 WTh
 Liu, Jingyu – **1330 MT**, 1932 MT, 3144 WTh, 3295 WTh, 3301 WTh
 Liu, Jingyu – 1345 MT, 1351 MT, 2064 MT
 Liu, Ke-yu – 1210 MT
 Liu, Kuo – 1471 MT
 Liu, Li – 3659 WTh, 3660 WTh

Liu, Lin – 3058 WTh, 3065 WTh
 Liu, Lin-Cho – 1966 MT
 Liu, Min – 3123 WTh
 Liu, Peiyang – 2203 MT
 Liu, Peng – 1472 MT, 2140 MT, 3065 WTh
 Liu, Quanyang – 3500 WTh, 3519 WTh
 Liu, Rongjie – 3046 WTh
 Liu, Shengfeng – **1215 MT**, 3295 WTh
 Liu, Shu – 1476 MT
 Liu, Shuying – 1853 MT
 Liu, Siwei – 1904 MT
 Liu, Siyuan – 1313 MT
 Liu, Suyan – 2100 MT, 2104 MT
 Liu, Tao – 2037 MT
 Liu, Thomas – 1888 MT, 1919 MT
 Liu, Tiaotiao – 3504 WTh
 Liu, Tongran – 3437 WTh
 Liu, wangting – 1294 MT
 Liu, Wanting – 1289 MT
 Liu, Wei – 3261 WTh, 3287 WTh
 Liu, Weiguo – 1549 MT
 Liu, Weixiang – 3479 WTh
 Liu, Wenda – 3590 WTh, 4237 WTh
 Liu, Xiao – 4038 WTh
 Liu, Xiaolin – 2100 MT, 2104 MT
 Liu, Xiaolin – 2099 MT
 Liu, Xiaolong – 3591 WTh
 Liu, Xin – 3659 WTh
 Liu, Xingdan – 3929 WTh
 LIU, Xueru – 3504 WTh
 Liu, Xun – 1938 MT, 1946 MT, 3369 WTh, 4228 WTh, 4230 WTh, 4231 WTh
 Liu, ye – 1238 MT
 Liu, Yong – 3013 WTh
 Liu, Yong – 1362 MT, 1488 MT, 3295 WTh
 Liu, Yuchen – 3065 WTh
 Liu, Yue – 1576 MT, 1622 MT
 Liu, Yuqiu – 3528 WTh
 Liu, Zhangdaihong – 4150 WTh
 Liu, Zhi – 1251 MT
 Liu, Zhiyuan – 4254 WTh
 Liu, Zhongming – 1617 MT, 2169 MT, **2172 MT**, 2173 MT, 3397 WTh
 Liuzzi, Antonietta Gabriella – 3627 WTh
 Livy, Daniel – 3477 WTh
 Llera, Alberto – 3439 WTh
 Llera, Alberto – 1843 MT
 Lo, Chun-Yi – 1649 MT
 Lo, June Chi Yan – **3778 WTh**
 Lobaugh, Nancy – 3543 WTh
 Lochner, Christine – 1130 MT
 Loeb, Frances – 1313 MT

Loeffler, Markus – 3783 WTh, 3800 WTh
 Loftis, Jenifer – 1508 MT
 Logan, John – **2223 MT**
 Logan, Kelsey – 1578 MT
 Logue, Mark – 1132 MT
 Loh, Wai Yen – 3829 WTh, 3833 WTh
 Lohmann, Gabriele – 4112 WTh, 4149 WTh
 Lohrenz, Terry – 3140 WTh
 Loiotile, Rita – 3731 WTh, 3732 WTh
 Lojek, Emilia – 1442 MT
 Loke, Yng Miin – 1904 MT
 Lomakina, Ekaterina – 3989 WTh
 Lombardo, Michael – 3439 WTh
 London, Edythe – 1100 MT, 1424 MT
 Long, Chris – 1535 MT
 Long, Hongyu – 3116 WTh
 Long, Jeffrey – 1932 MT, 2064 MT, 3168 WTh, 3301 WTh
 Long, Lili – 3116 WTh
 Long, Shi Yun – 1300 MT
 Long, Xiangyu – **2022 MT**
 Long, Xiangyu – 1468 MT, 3059 WTh
 Long, Xiaojing – 2197 MT, 3026 WTh, 3249 WTh, 3912 WTh
 long, yuhang – 3590 WTh
 Long, Yuhang – 4237 WTh
 Long, Zhiying – 4018 WTh
 Longcamp, Marieke – 3653 WTh
 Longwell, Parker – 1059 MT
 Lonning, Vera – 1348 MT, 2002 MT
 Loo, Beatrice Rui Yi – 1904 MT
 Lopez, Juan Pablo – 3299 WTh
 Lopez, Katherine – 1247 MT
 Lopez, Oscar – 4195 WTh
 López, Ramón – 3009 WTh
 López Sanz, David – 3009 WTh
 Lopez-Calderon, Javier – 4220 WTh
 Lopez-Guerrero, Nelsiyamid – 3643 WTh
 López-Sala, Anna – 3424 WTh, 3662 WTh, 3706 WTh
 Lopez-Sola, Marina – 2148 MT, 4257 WTh
 Lord, Grace – 3770 WTh
 Lorenz, Romy – 1017 MT, **3359 WTh**, 3413 WTh
 Lorenzetti, Valentina – 1079 MT, 3451 WTh
 Lorenzi, Marco – **3294 WTh**
 Lorio, Sara – 4138 WTh
 Lösche, Patrick – 3820 WTh
 Lott, Ira – 3035 WTh
 Lotufo, Roberto – 3073 WTh
 Lotze, Martin – 1979 MT, 2136 MT
 Louw, Anton – 1064 MT
 Louwen, Suzanne – 3870 WTh

Lovallo, William – 1113 MT
 Lowe, Mark – 1807 MT, 1873 MT, 2046 MT, 3043 WTh, 3162 WTh, 3583 WTh
 Lowe, Mark – 1478 MT, 2210 MT, 4139 WTh
 Lowe, Matthew – 2179 MT
 Lu, Bin – 4091 WTh
 Lu, Cheng-Hsien – 3159 WTh, 3201 WTh
 Lu, Chunming – 3590 WTh, 4237 WTh
 Lu, Da-Li – 1489 MT
 Lu, Donghuan – 3036 WTh
 Lu, Guang-Ming – 1489 MT
 Lu, Hanna – 3020 WTh
 Lu, Hanzhang – 2203 MT
 Lu, Hongbing – 3911 WTh
 Lu, Hongjing – 3414 WTh
 Lu, Jacky Tai-Yu – 4235 WTh
 Lu, Jing – 3401 WTh
 Lu, Junfeng – 3625 WTh
 Lu, Kun-Han – 2173 MT, 3397 WTh
 Lu, Lin – 3295 WTh
 Lu, Lin – 1359 MT
 Lu, Lin – 1361 MT, 1362 MT
 Lu, Lu – 1282 MT
 Lu, Lu – 3275 WTh
 Lu, Lu – 3150 WTh
 Lu, Qing – 3550 WTh
 Lu, Shaojia – 1222 MT
 Lu, Zhong-Lin – 1540 MT
 Luber, Bruce – 2191 MT, 3772 WTh, 3773 WTh
 Lublin, Fred – 1877 MT, 3468 WTh, 3996 WTh
 Luby, Joan – 1247 MT
 Lucas, Carlos – 3424 WTh
 Lüchinger, Roger – 3029 WTh
 Luchtmann, Michael – 1555 MT
 Luck, Tobias – 3800 WTh
 Luckhardt, Christina – 1173 MT
 Luders, Eileen – 4107 WTh
 Ludersdorfer, Philipp – 3251 WTh, 3650 WTh
 Ludlum, Ruth – 1199 MT
 Ludwig, H – 1032 MT
 Ludwig, Simon – 3347 WTh
 Luehr, Stephen – 3693 WTh
 Lueken, Ulrike – 1125 MT, 1131 MT
 Luetje, Megan – 1917 MT
 Luetzkendorf, Ralf – 1555 MT
 Luft, Andreas – 1482 MT
 Luh, Wen-Ming – 4035 WTh
 Luhrs, Michael – 1530 MT, 1954 MT
 Lui, Yvonne – 3064 WTh
 Luigjes, Judy – 1293 MT
 Luijten, Maartje – 1100 MT
 Luk, Jessica – 1364 MT

Lukavský, Jiří – 1943 MT
 Lukemire, Joshua – 4060 WTh
 Luna, Beatriz – 3346 WTh, 3765 WTh, 3875 WTh, 3880 WTh
 Lundengård, Karin – 1533 MT
 Lungu, Codrin – 1007 MT
 Lungu, Ovidiu – 1947 MT
 Luo, Cheng – 1316 MT, 1317 MT, 3107 WTh, 3803 WTh
 Luo, Na – 3295 WTh
 Luo, Qingfei – 1459 MT, 1462 MT, 1614 MT
 Luo, Xi – 1980 MT
 Luo, Yuejia – 4238 WTh
 Luque Laguna, Pedro – 1858 MT, **2050 MT**, 2167 MT
 Lurie, Dan – 1683 MT
 Lurie, Jonathan – 3483 WTh
 Lutkenhoff, Evan – 3268 WTh, 3289 WTh
 Lutti, Antoine – 4138 WTh
 Lutz, Antoine – 2202 MT
 Lutz, Jacqueline – 4202 WTh
 Luu, Phan – 1771 MT, 1781 MT, 1783 MT
 Lv, Luxian – 1361 MT, 1362 MT, 3295 WTh
 Lv, Wanwan – 1086 MT
 Lv, Yating – 3225 WTh
 Lv, Zhihong – 1487 MT
 Ly, Monica – 3154 WTh
 Ly, Monica – 1639 MT
 Lyday, Robert – 1108 MT
 Lynch, Charles – 1944 MT, 4080 WTh
 Lynch, Kirsten – 3889 WTh
 Lynch, Kirsten – 1743 MT
 Lynn, Vivian – 3021 WTh
 Lyons, Michael – 3314 WTh
 Lythgoe, David – 3582 WTh, 3586 WTh

M

M. Blumberger, Daniel – 1230 MT
 Ma, Da – 3036 WTh
 Ma, Feilong – 3928 WTh
 Ma, Jennifer – 3240 WTh
 Ma, Junji – 1477 MT
 Ma, Ru – 1075 MT, 1086 MT
 Ma, Samantha – 3897 WTh
 Ma, Suk Ling – 3020 WTh
 Ma, Xiaohong – **1215 MT**, 1238 MT
 Ma, Xiaojuan – 1238 MT
 Ma, Yilong – 3176 WTh, 3177 WTh, 3181 WTh, 3182 WTh
 Ma, Yina – **4201 WTh**
 Ma, Zongming – **1302 MT**

Mabbott, Donald – 1276 MT, 1417 MT, 3093 WTh, 3449 WTh, 3573 WTh
 Mabbott, Donald – 3890 WTh
 Mac Master, Frank – 1241 MT
 Mac-Auliffe, Diego – 2112 MT
Macciardi, Fabio – 1330 MT
 MacDonald, Patrick – 1154 MT, 3442 WTh
 MacDonald III, Angus – **4000 WTh**
 MacDougall, Keith – 4103 WTh
 MacFarlane, David – 1682 MT, 1684 MT, 1714 MT
 MacGillivray, Melanie – 3723 WTh
 MacGillivray, Tom – 4148 WTh
 Machado, Ana Carolina – 3851 WTh
 Machan, Lindsay – 3542 WTh
 Maciejewski, Dominique – 3341 WTh
 MacIntyre, Leigh – 1684 MT
 MacKay, Alex – 1527 MT, 1627 MT
 Mackay, Clare – 1870 MT, 3191 WTh, 3461 WTh, 3828 WTh, 3975 WTh
 Mackey, Eleanor – 3357 WTh
 Mackey, Scott – 1100 MT, 1136 MT, 3146 WTh, 3151 WTh, 3317 WTh, 3360 WTh, 3871 WTh
 Mackey, Sean – 1804 MT, 1895 MT, 2143 MT, 2145 MT
 Mackin, Scott – 3145 WTh
 Maclaren, Julian – **1581 MT**
 Maclaurin, James – 4119 WTh
 MacLeod, Rob – 1014 MT, 1791 MT
 MacMaster, Frank – 3272 WTh
 Macoir, Joël – 3620 WTh
 Macri, Francesco – 1268 MT
 Madan, Christopher – 1689 MT, 3723 WTh, 4113 WTh
 Madan, Neel – 3859 WTh
 Madden, David – 3787 WTh
 Madhavan, Radhika – 1910 MT, 4008 WTh, 4012 WTh, 4014 WTh
 Madhyastha, Tara – 1738 MT, 3005 WTh
 Madhyastha, Tara – 1707 MT, 4162 WTh
 Madjar, Cecile – 1684 MT
 Madsen, Sarah – 3096 WTh
 Maeda, Takaki – 3722 WTh
 Maeda, Yumi – 1592 MT
 Maeder, Philippe – 1081 MT
 Maes, Celine – 3807 WTh
 Maeshima, Hiroaki – 1618 MT
 Maess, Burkhard – 1776 MT
 Maestú, Fernando – 3009 WTh
 Maffei, Chiara – 2047 MT, 2131 MT, 2177 MT
 Mafoppa, Isabelle – 4106 WTh
 Maganti, Rama – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh

Magerkurth, Joerg – 3733 WTh
 Maguire, Albert – 1479 MT, 2028 MT
 Mah, Dennell – 3088 WTh
 Mahendran, Rathni – 1300 MT
 Mahle, William – 1266 MT
 Mahmood, Abda – 1870 MT, 3828 WTh, 3975 WTh
 Mahmoudian, Mani – 1479 MT, 2028 MT
 Mahrholz, Gaby – 4208 WTh
 Maia de Oliveira Wood, Guilherme – 3809 WTh, 3811 WTh
 Maidenbaum, Shachar – 3425 WTh
 Maike, Hege – 3337 WTh
 Maillard, Anne – 3315 WTh
 MAILLARD, Louis – 1012 MT, 1013 MT, 1762 MT
 Mainberger, Olivier – 1346 MT
 Maingault, Sophie – 2023 MT, 3433 WTh
 Mair, Grant – 1871 MT
 Mair, Ross – 3446 WTh
 Majeed, Waqas – 2208 MT
 Majeed, Waqas – 1931 MT
 Majerus, Steve – 2094 MT
 Mak, Elijah – 3048 WTh
 Makary, Meena – 1446 MT
 Makin, Tamar – 2004 MT, **2223 MT**, 4036 WTh
 Makowski, Carolina – 1341 MT
 Makris, Nikos – 1344 MT, 1611 MT
 Makropoulos, Antonios – 1748 MT, 3868 WTh, 3884 WTh
 Malach, Rafael – 2163 MT
 Malchow, Berend – 1367 MT, 3580 WTh
 Maldjian, Joseph – 1902 MT
 Malee, Katheen – 2033 MT
 Malejko, Kathrin – 4234 WTh
 Malhotra, Anil – 1700 MT
 Malik, Asad – 4177 WTh
 Malinovitch, Tamar – 3696 WTh
 Malla, Ashok – 1341 MT
 Mallas, Emma-Jane – 3277 WTh
 Malone, Ian – 3838 WTh
 Malone, Stephen – 1104 MT
 Maloney, Thomas – 3135 WTh
 Malony, Allen – 1771 MT
 Malpas, Charles – 1445 MT, 1948 MT, 3850 WTh
 Malykhin, Nikolai – 3477 WTh, 3723 WTh, 3802 WTh
 Manara, Renzo – 4109 WTh
 Mancini, Matteo – 3063 WTh
 Mandelkow, Hendrik – 1543 MT, **2201 MT**
 Mandl, Rene – 4121 WTh
 Mandzia, Jennifer – 3248 WTh
 Manera, Valeria – 4233 WTh
 Mang, Cameron – 1057 MT, 3224 WTh

Mangin, Jean-François – 1733 MT, 1734 MT, 1867 MT, 2004 MT, 2039 MT, 2048 MT, 3533 WTh, 3867 WTh, 3869 WTh, 4104 WTh
 Mangin, Jean-Francois – 2001 MT
 Manimaletu, Ria – 1448 MT
 Manini, Barbara – 3598 WTh
 Maniscalco, Brian – **3379 WTh**
 Manjaly, Zina-Mary – 1482 MT
 Mann, Caroline – 1166 MT, 3444 WTh
 Mann, Karl – 1102 MT
 Mann, Theresa – 1599 MT
 Mann, Virginia – 1152 MT
 Manners, Daniel – **2223 MT**
 Manning, Janessa – 3878 WTh, 3887 WTh, 3891 WTh
 Manning, Kathryn – 3278 WTh
 Mannix, Rebekah – 3265 WTh
 Manoach, Dara – 1169 MT, 1502 MT, 3690 WTh
 Manoli, Irini – 1598 MT
 Mansouri, Farrokh – 1065 MT
 Mansouri, Farrokh – 1021 MT
 Månsson, Kristoffer – 1130 MT
 Manthey, Antje – 2053 MT
 Mantini, Dante – 1020 MT, 1454 MT, 3419 WTh, 3500 WTh, 3525 WTh, 3782 WTh, 4134 WTh
 Mantini, Dante – 3231 WTh, 3519 WTh, 3539 WTh
 Manuello, Jordi – 1171 MT, 3076 WTh, 3445 WTh, 3450 WTh
 Mao, Ying – 3275 WTh, 3625 WTh
 Maquet, Pierre – 2196 MT
 Marchand-Pauvert, Veronique – 1947 MT
 Marchewka, Artur – 1422 MT, 2127 MT, 3365 WTh, 3368 WTh, 3458 WTh, 3616 WTh, 3617 WTh, 3658 WTh, 3667 WTh, 3698 WTh, 3709 WTh
 Marcjan, Karen – 3760 WTh
 Marcjan, Karen – 3766 WTh
 Marco, Elysa – 1197 MT
 Marcotte, Karine – 1582 MT
 Marcy, Anne – 1246 MT
 Mareckova, Klara – 3836 WTh
 Marek, Scott – 2061 MT, 3880 WTh
 Marek, Tadeusz – 1304 MT
 Marengo, Stefano – 1329 MT
 Margulies, Daniel – **1395 MT**, 1833 MT, 1991 MT, **2022 MT**, 3400 WTh
 Marie, Damien – 3443 WTh
 Marignier, Stéphanie – 1181 MT
 Marinazzo, Daniele – 1766 MT, 3682 WTh, 3959 WTh, 4015 WTh
 Marinelli, Luca – 3266 WTh
 Marinescu, Razvan – 3019 WTh
 Marino, Julie – 1228 MT

Marino, Marco – 3500 WTh
 Marins, Theo – 3245 WTh
 Maristany, Teresa – 3899 WTh
 Marjanovic, Goran – 4061 WTh
 Mark, Nadav – 3436 WTh
 Markello, Ross – 4035 WTh
 Marmar, Charles – 2060 MT, 3145 WTh
 Marotta, Giovanna – **3635 WTh**
 Marquand, Andre – 1912 MT, 3439 WTh
 Marquand, Andre – 4034 WTh
 Marquardt, Ingo – 2183 MT
 Marques, José – **1551 MT**
 Marques Dias, Diana – 4133 WTh
 Marrón, Elena – 1060 MT
 Mars, Rogier – **2042 MT**, 3730 WTh, **4203 WTh**, 4207 WTh
 Marsh, Faith – 2116 MT
 Marsh, Rachel – 2066 MT, 3098 WTh
 Marshall, Kathleen – 1479 MT
 Marshall, Narcis – 3891 WTh
 Marshall, Tom – 2083 MT
 Marshall-Gradisnik, Sonya – 3085 WTh
 Marsman, Jan-Bernard – 1237 MT, 1308 MT, 1318 MT
 Marson, Anthony – 1608 MT, 3108 WTh, 3121 WTh, 3122 WTh
 Mårtensson, Johan – 2135 MT, 3459 WTh
 Martial, Charlotte – 1631 MT, 2094 MT
 Martin, Alex – 3954 WTh
 Martin, Markus – **3243 WTh**
 Martin, Randi – 4070 WTh
 Martin, Steve – 3520 WTh
 Martin-Brevet, Sandra – 3315 WTh
 Martín-Loeches, Manuel – 3507 WTh, 3623 WTh, 3626 WTh, 3633 WTh, 4252 WTh, 4260 WTh
 Martin-Santos, Rocio – 3451 WTh
 Martinelli, Anne – 4210 WTh
 Martínez, Ana – 2103 MT
 Martinez, Antigona – 1018 MT, 4220 WTh
 Martínez, Darwin – 4024 WTh
 Martinez, David – **3262 WTh**
 Martinez, Pedro – **3862 WTh**
 Martínez Riaño, Darwin – 4176 WTh
 Martinez-Fernandez, Raul – **3188 WTh**
 Martini, Mia – 1365 MT
 Martini, Nicola – 2075 MT
 Martinot, Jean-Luc – 3151 WTh, 3469 WTh
 Martinot, Marie-Laure Paillère – 3151 WTh, 3469 WTh
 Martins, Bradford – 1083 MT, 1918 MT
 Martins, Mauricio – 1825 MT
 Martins, Mauricio – 1970 MT

Martone, Maryann – 1696 MT
 Marx, Christine – 3482 WTh
 Marxen, Michael – 1421 MT
 Marzetti, Laura – 1775 MT, 2083 MT, 4101 WTh
 Marzofka, Emily – 3054 WTh
 Mas Herrero, Ernest – 3410 WTh
 Mascheretti, Sara – 3661 WTh
 Masdeu, Joseph – 3266 WTh
 Mashour, George – 2102 MT, 4077 WTh
 Maslova, Olga – 1275 MT, 1277 MT
 Mason, Harry – 1507 MT
 Mason, Luke – 1156 MT
 Mason, Sarah – 3932 WTh
 Massar, Stijn – 2081 MT
 Massinimi, Marcello – 2095 MT
 Master, Sabah – 1767 MT
 Mastrandrea, Rossana – 2075 MT
 Mastrella, Giulia – 1407 MT
 Mataix-Cols, David – 1292 MT
 Mataix-Cols, David – 1291 MT
 Matallana, Diana – 1647 MT
 Mateos, Jose Maria – 1845 MT
 Mateu Estivill, Roger – 3424 WTh, 3662 WTh
 Mateu-Estivill, Roger – 3706 WTh
 Mathalon, Daniel – 1345 MT
 Mathalon, Daniel H. – **1330 MT**, 3757 WTh, 4076 WTh
 Mather, Karen – 3303 WTh
 Mathias, Charles – 1113 MT
 Mathias, Samuel – 2009 MT
 Mathis, Jed – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh
 Mathys, Christian – 3179 WTh, 3185 WTh, 3815 WTh
 Mathys, Christoph – 3344 WTh
 Matsudaira, Izumi – 3293 WTh
 Matsumoto, Kazunori – 1334 MT
 Matsuoka, Yuichiro – 2087 MT
 Matsuura, Masato – 1525 MT
 Matt, Eva – 2035 MT, 4023 WTh
 Mattar, Marcelo – 4092 WTh
 Mattay, Venkata – 3704 WTh
 Mattay, Venkata – 3311 WTh
 Mattes, Malcolm – 1620 MT
 Mattfeld, Aaron – 1192 MT
 Matthews, Fiona – 1726 MT
 Matthews, Lillian – 3829 WTh, 3833 WTh
 Matthews, Scott – 1024 MT
 Matthies, Swantje – 3143 WTh
 Mattioli Lewis, Tressa – 3286 WTh
 Mattioni, Stefania – 2177 MT
 Matuszewski, Jacek – 3616 WTh, 3617 WTh

Maullin-Sapey, Thomas – 1671 MT
 MAUMET, Camille – 1671 MT, 1686 MT, 1695 MT, 1706 MT, 1708 MT
 Maust, Erika – 3760 WTh
 Maust, Erika – 3766 WTh
 Mawla, Ishtiaq – 1528 MT
 Maximov, Ivan I. – 1372 MT
 Mayadali, Ümit – 3499 WTh
 Mayberg, Helen – 1006 MT, 1252 MT
 Mayer, Andrew – 1505 MT
 Mayer, Emeran – 1260 MT, 2144 MT, 3141 WTh
 Mayer, Emeran – 2149 MT, 3935 WTh
 Mayhew, Stephen – 1537 MT, 1624 MT, 1636 MT
 Mayhugh, Rhiannon – 1108 MT
 Mayo, Chantel – 3023 WTh, 3198 WTh
 Mazerolle, Erin – 3011 WTh, 3023 WTh
 Maziero, Danilo – 1805 MT, 1819 MT
 Mazoyer, Bernard – 1646 MT, 2023 MT, 3431 WTh, 3433 WTh, 3434 WTh, 3639 WTh
 Mazrooyisebdani, Mohsen – 3128 WTh, 3130 WTh
 Mazzola, Alessandro – 3139 WTh
 Mazzonetto, Ilaria – 3519 WTh
 Mazzucco, Sara – 3819 WTh
 Mc Mahon, Brenda – 1234 MT
 McAleer, Phil – 4208 WTh
 McAllister-Day, Trevor – 1707 MT
 McAlonan, Grainne – 1147 MT, 1148 MT, 1153 MT, 3846 WTh
 McAndrews, Mary Pat – 3129 WTh
 McAndrews, Mary Pat – 3092 WTh
 McAuley, Devin – 3090 WTh
 McAuley, Edward – 3736 WTh
 McAuliffe, Danielle – 3526 WTh
 McCabe, Connor – 4162 WTh
 McCabe, Kathryn L. – 3318 WTh, **3320 WTh**
 McCarthy, Paul – 4190 WTh
 McClain, Rand – 3274 WTh
 McClernon, Francis – 3923 WTh
 McCloskey, Mike – 1279 MT
 McConnell, Dina – 1276 MT
 McCormick, Ethan – 2030 MT
 McCoy, Dakarai – 3407 WTh
 McCready, Holly – 1074 MT, 1077 MT, 1508 MT, 1901 MT
 McCreary, Cheryl – 1628 MT, 3817 WTh
 McCulloch, Andrea – 3406 WTh, 3412 WTh
 McCurry, Katie – 1249 MT
 McDermott, Timothy – 1027 MT, 3553 WTh, 3564 WTh, 3568 WTh, 3570 WTh, 3770 WTh, 3885 WTh
 McDonald, Brenna – 4087 WTh
 McDonald, Gabriela – 1768 MT

McDonough, Ian – 1689 MT
 McDonough, Stefan – 3317 WTh
 McDowell, Amy – 1506 MT, 4138 WTh
 McEwen, Sarah – **1330 MT**, 3757 WTh, 4076 WTh
 McFadden, Alison – 3510 WTh
 McFarlane, Liam – 3423 WTh
 McGlade, Erin – 3067 WTh
 McGlashan, Thomas – 4076 WTh
 McGlinchey, Regina – 1280 MT
 McGonigle, John – 3802 WTh
 McGonigle, John – 1438 MT
 McGregor, Heather – 1967 MT
 McGruer, Fiona – 2107 MT
 McIlvain, Grace – 2030 MT
 McIntosh, Andrew – 1241 MT, 3438 WTh
 McIntosh, Anthony – 1175 MT, 1676 MT, 1786 MT, 3047 WTh, 3406 WTh, 3412 WTh, 3510 WTh
 McIntosh, Randy – 1789 MT
 McIntyre, Cameron – 1006 MT
 McKay, Cameron – 1768 MT, 1906 MT
 McKay, Nicole – 2051 MT
 McKenna, Peter – 3899 WTh
 McKenzie, Jess – 1853 MT, 3183 WTh
 McKeown, Martin – 1853 MT, 3207 WTh, 4001 WTh, 4143 WTh
 McKinney, Brett – 1228 MT, 1229 MT, 1301 MT
 McKinnon, Allison – 1249 MT
 McLaughlin, Katie – 1132 MT, 4162 WTh
 McLaughlin, Paula – 3248 WTh
 McLaughlin, Russell – 3506 WTh
 McLellan, Quinn – 1241 MT
 McLeod, Sarah – 3549 WTh
 McMahan, Agnes – 1715 MT
 McMahan, Katie – 1241 MT, 1600 MT, 1848 MT, 3089 WTh, 3163 WTh, 3164 WTh
 McMillan, Taylor – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh
 McNab, Jennifer A. – 1732 MT, 2018 MT
 McNabb, Carolyn – 1331 MT
 McNair, Steven – 3801 WTh
 McNamara, Quinten – 1694 MT
 McQuillen, Patrick – 3843 WTh
 McTeague, Lisa – 1036 MT
 Meaney, Michael – 1714 MT
 Medda, Alessio – 1945 MT
 Medina, Samuel – 1635 MT
 Medina, Yasser – 3852 WTh
 Medvedev, Andrei – 1768 MT, 1906 MT
 Meehan III., William – 3265 WTh
 Meeter, Lieke – 1595 MT
 Meeus, Mira – 3447 WTh
 Mégevand, Pierre – 2163 MT

Mehler, David – 1954 MT
 Mehren, Aylin – 3366 WTh
 Mehta, Ashesh – 1028 MT, 1036 MT, 2163 MT
 Meier, Felicitas – 1233 MT
 Meier, Michael – 3077 WTh
 Meijer, Kim – 1913 MT, 2019 MT, 3057 WTh, 3061 WTh, 3074 WTh
 Meinert, Susanne – 1241 MT
 Meintjes, Ernesta – 1590 MT, 1597 MT, 1599 MT, 1900 MT, 2003 MT, 3068 WTh, 3456 WTh, 4108 WTh
 Meiring, Wendy – 1750 MT
 Meisenzahl, Eva – 1305 MT, 1319 MT
 Meißner, Dominik – 1032 MT
 Meissner, Sarah – 3744 WTh
 Mejia, Amanda – 1727 MT
 Melie-García, Lester – 3430 WTh
 Mella, Nathalie – 3791 WTh
 Melle, Ingrid – 1339 MT
 Mellon, Synthia – 3145 WTh
 Melloni, Lucia – 2163 MT
 Melzer, Corina – 3297 WTh
 Memarian, Negar – 3053 WTh
 Menchon, Jose – 1291 MT, 1292 MT, 1295 MT
 Mencl, Einar – 3587 WTh
 Mendola, Janine – 2171 MT
 Mendoza, Haley – 3760 WTh
 Mendoza, Haley – 3766 WTh
 Meng, yajing – 1238 MT
 Meng, Yu – 3882 WTh
 Meng, Yu – 2008 MT, 3866 WTh, **3872 WTh**, 3902 WTh
 Mennes, Maarten – 1149 MT, 1190 MT, 1843 MT, 3865 WTh
 Menon, Ravi – 3278 WTh
 Menon, Vinod – 1729 MT, 3180 WTh, 3216 WTh, **3678 WTh**, 4037 WTh
 Mensch, Arthur – 4147 WTh
 Menzel, Miriam – **3613 WTh**
 Merchant, Junaid – 1199 MT
 Merhar, Stephanie – 1638 MT, 2062 MT
 Mérillat, Susan – 3392 WTh
 Meshulam, Meir – 2163 MT
 Meskaldji, Djalel-Eddine – 1169 MT, 3724 WTh, 3857 WTh, 4073 WTh, 4183 WTh
 Meskers, Carel – 3226 WTh
 Mesquita, Rickson – 3601 WTh, 3851 WTh
 Mesulam, Marsel – **3001 WTh**, **3632 WTh**
 Metcalfe, Arron – 3376 WTh
 Metoki, Athanasia – 3727 WTh
 Metzger, Coraline – 1933 MT
 Metzler-Baddeley, Claudia – 1746 MT

Meulders, Ann – 1393 MT
 Meunier, David – 2088 MT, 3771 WTh
 Meunier, Sabine – 3749 WTh
 Mevel, Katell – 1168 MT, 1170 MT, 1174 MT
 Meyer, Achim Pascal – 1728 MT
 Meyer, Benjamin – 1499 MT
 Meyer, Lars – 3624 WTh
 Meyer, Matthew – 1128 MT
 Meyer, Rafael – 3029 WTh
 Meyer-Gerspach, Anne – 1474 MT
 Meyer-Heim, Andreas – 3729 WTh
 Meyer-Lindenberg, Andreas – 1494 MT, 4163 WTh, **4239 WTh**
 Meyerand, Beth – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh, 4170 WTh
 Meyerhoff, Dieter – 1529 MT
 Meyers-Eaton, Jamie – 1265 MT
 Mezeivtch, Karleigh – 3311 WTh
 Mhyre, Jill – 2036 MT
 Miceli, Gabriele – 2131 MT
 Michael, Andrew – 3922 WTh, **4081 WTh**
 Michaels, Timothy – 1639 MT, 3154 WTh
 Michalak, Liza – 1235 MT
 Michałowski, Jarosław – 3368 WTh
 Michel, Christoph – 3498 WTh, 3505 WTh
 Michels, Lars – 3029 WTh
 Mick, Inge – 1107 MT, 1109 MT
 Mickey, Brian – 3292 WTh
 Mickleborough, Marla – 1503 MT, 3654 WTh
 Middell, Eike – **1000 MT**
 Miele, Andrea – 3847 WTh
 Mierzewski, Greg – 1770 MT
 Miettunen, Jouko – 1320 MT
 Migliaccio, Silvia – 1520 MT
 Mihaescu, Alexander – 3197 WTh
 Mihelj, Ernest – 1433 MT
 Mikhael, Shadia – 1871 MT, 4148 WTh
 Mikkelsen, Mark – 3577 WTh
 Mikko, Sams – 4241 WTh
 Mikl, Michal – 1531 MT
 Miklósi, Ádám – 1435 MT, 4249 WTh
 Mikulich-Gilbertson, Susan – 3907 WTh
 Milberg, William – 1280 MT
 Milham, Michael – 1028 MT, **1882 MT**, 3789 WTh, **3844 WTh**, 3950 WTh
 Miller, Bruce – 3018 WTh, **3050 WTh**
 Miller, Chantal – 3692 WTh
 Miller, Danielle – 1132 MT
 Miller, Karla – 1453 MT, 1507 MT, **1546 MT**, 1561 MT, 1619 MT, 1666 MT, 1735 MT, **2042 MT**, 3461 WTh, 4019 WTh
 Miller, Mark – 1132 MT

Miller, Michael – 2203 MT
 Miller, Robyn – 1345 MT, 1491 MT, 1932 MT, 1935 MT, 3965 WTh, 3974 WTh, 4083 WTh
 Miller, Steven – 1213 MT, 4189 WTh
 Miller, Steven – 1736 MT
 Mills, Brian – 3951 WTh, 3978 WTh
 Mills, Brittany – 1742 MT
 Mills, Kathryn – 3978 WTh, 4211 WTh
 Mills, Mackenzie – 1027 MT, 3568 WTh, 3570 WTh
 Milner, Brenda – 1500 MT
 Milosavljevic, Katarina – 3891 WTh
 Milot, Sylvain – 1673 MT
 Mimura, Masaru – 1325 MT, 1405 MT, 1441 MT
 Min, Areum – 1374 MT, 1375 MT
 Min, Hoon-Ki – 1008 MT
 Min, Young Kee – 3221 WTh
 Mincic, Adina – 1045 MT
 Mingoia, Gianluca – 4044 WTh
 Minuzzi, Luciano – 1203 MT
 Miotto, Diego – 2070 MT
 Mir-Moghtadaei, Arsalan – 1065 MT
 Mir-Moghtadaei, Kamran – 1065 MT
 Miranda, Debora – 3851 WTh
 Miranda, Débora – 3601 WTh
 Miranda-Dominguez, Oscar – 1196 MT
 Miró-Padilla, Anna – 1940 MT
 Mirzakhanian, Helene – 4076 WTh
 Misaki, Masaya – 1128 MT, 1228 MT, 1229 MT, 1301 MT, 1459 MT, **1613 MT**, 3138 WTh
 Mishra, Virendra – 2015 MT, 2069 MT, 2071 MT, 3038 WTh, 3169 WTh, 3178 WTh, 3208 WTh, 3210 WTh, 3211 WTh, 3478 WTh, 4054 WTh, 4142 WTh, 4144 WTh, 4160 WTh, 4165 WTh
 Misic, Bratislav – 1863 MT, 3202 WTh, 3204 WTh, 3373 WTh, 4075 WTh
 Misiura, Maria – 1932 MT, 3168 WTh
 Misquitta, Keith – 1248 MT
 Mitchell, Braxton – 3780 WTh
 Mitchell, Leander – 3163 WTh, 3164 WTh
 Mitchell, Philip – 1200 MT, 1201 MT, 1324 MT
 Mitchell, Tom – 1782 MT
 Mitra, Anish – 1634 MT, 3728 WTh
 Mitsis, Georgios – 1636 MT, 1801 MT, 1826 MT, 3798 WTh
 Miyoshi, Takuma – 2097 MT
 Mizuri, Danielle – 1197 MT
 Mizuno, Masafumi – 1334 MT
 Mizuno, Megumi – 3600 WTh
 Mizuno, Yoko – 2174 MT
 Moayed, Massieh – 3092 WTh
 Mobasser, Arian – 4211 WTh
 Mochalova, Elizaveta – 1934 MT

Mocking, Roel – 1237 MT
 Modenato, Claudia – 3315 WTh
 Moebius Collaborative Research Group, the – 1598 MT
 Moebus, Susanne – 3790 WTh, 3796 WTh, **3915 WTh**
 Moeller, Korbinian – 3418 WTh, 3429 WTh
 Moeller, Steen – 4193 WTh
 Moerkerke, Beatrijs – 1950 MT, 4187 WTh
 Moessnang, Carolin – 1494 MT
 Mohajer, Bahram – 3052 WTh, 3217 WTh
 Mohamed, Abdalla – 1446 MT
 Mohamed, Abdallah – 1556 MT
 Mohamed, Feroze – 1279 MT
 Mohamed, Meheissen – 1556 MT
 mohammadi, shilan – 2139 MT
 Mohammadi, Siawoosh – 3075 WTh
 Mohammadi-Nejad, Ali-Reza – 4059 WTh
 Mohan, Bhageshvar – 1443 MT
 Mohand-Saïd, Saddek – 2168 MT
 Mohanty, Deepankar – 3100 WTh
 Mohanty, Rosaleena – 3128 WTh, 4071 WTh
 Moharramipour, Ali – 3685 WTh, 3687 WTh
 Moher Alsady, Tawfik – 1925 MT
 Mohr, Kieran – 3506 WTh
 Mohr, Peter – 3327 WTh
 Moia, Stefano – 1171 MT
 Moisa, Marius – 3342 WTh
 Moiseev, Alex – 1755 MT, 1787 MT
 Mojzisek, Marek – 1963 MT
 Molfese, Peter – 3154 WTh, 3587 WTh
 Molfese, Peter – 1639 MT
 Molinaro, Nicola – 3572 WTh
 Moll, Jorge – 3245 WTh
 Möller, Christiane – 3015 WTh
 Möller, Hans-Jürgen – 1305 MT
 Möller, Harald – 1041 MT, 1257 MT, 1296 MT, 4112 WTh
 Mollink, Jeroen – 1735 MT
 Mollink, Jeroen – 4019 WTh
 Molteno, Christopher – 2003 MT, 3068 WTh
 Momenan, Reza – 1094 MT
 Momin, Arsh – 1070 MT
 Mondini, Sara – 1834 MT
 Mondloch, Catherine – 3381 WTh
 Mondot, Lydiane – 1261 MT
 Monge, Zachary – 3787 WTh
 Mongin, Marie – 3215 WTh
 Monsa, Rotem – 3148 WTh
 Monsch, Andreas – 3789 WTh
 Montag, Christian – 4253 WTh

Montague, P. Read – 3140 WTh
 Montana, Giovanni – 3298 WTh, **3359 WTh**
 Monté, Gemma – 3899 WTh
 Monteiro, Joao – 1822 MT, 1832 MT
 Montez, David – 3765 WTh
 Monti, Martin – 3268 WTh, 3289 WTh, 3414 WTh
 Monti, Ricardo – 1017 MT, **3359 WTh**
 Montillo, Albert – 1902 MT
 Monto, Simo – 2160 MT
 Montoya, Carlos – 1992 MT
 Montoya-Martinez, Jair – 1760 MT
 Montplaisir, Jacques – 1370 MT
 Moodie, Craig – 1820 MT
 Moodliar, Rddhi – 3766 WTh
 Moodliar, Rddhi – 3760 WTh
 Moody, Teena – 3096 WTh
 Moon, Chung-Man – 1137 MT
 Moon, Wonjin – 3235 WTh
 Moore, Tyler – **1302 MT**, 3153 WTh
 Moored, Kyle – 3816 WTh
 Moradi, Elaheh – 3892 WTh
 Morales, Angelica – 1100 MT, 1103 MT
 Moran, Rosalyn – 2095 MT
 Moravec, Leah – 1114 MT
 Morawetz, Carmen – 3327 WTh
 Moreau, Alison – 4108 WTh
 Moreau, Allison – 3456 WTh
 Moreau, Allison – 3473 WTh
 Moreau, Clara – 3316 WTh
 Moreau, Clara – 3315 WTh
 Moreau, David – 2051 MT, 4136 WTh
 MOREAU, Tristan – 1629 MT
 Morelli, Maria Sole – 1778 MT
 Moreno, Rodrigo – 2059 MT
 Moreno-Dominguez, David – 1667 MT, 1687 MT, 2027 MT
 Morey, Rajendra – 1132 MT, 1138 MT, 3482 WTh
 Morgado, Pedro – 1291 MT
 Morgan, Andrew – 2192 MT
 Morgenroth, Elenor – 2116 MT
 Mori, Susumu – 2203 MT
 Morillon, Benjamin – 3551 WTh
 Mormina, Enricomaria – 3468 WTh, 3996 WTh
 Moro, Noemí – 3899 WTh
 Morozova, Maria – 3811 WTh
 Morris, Alexandra – 1286 MT
 Morris, Alexandra – 1978 MT
 Morrison, India – 3363 WTh
 Morse, Joshua – 1845 MT
 Mortari, Filippo – 3884 WTh
 Mortensen, Erik – 3818 WTh
 Morton, J Bruce – 3980 WTh

Moscovitch, Morris – 3711 WTh
 Moseley, Michael – 4141 WTh
 Moser, Dominik – 3759 WTh
 Mostame, Parham – 3687 WTh
 Mostame, Parham – 3685 WTh
 Mostofsky, Stewart – 1159 MT, 1185 MT, 1187 MT, 1193 MT, 1519 MT, 1975 MT, 3156 WTh, 3526 WTh
 Mostowski, Piotr – 2127 MT
 Motomura, Kazuya – 1994 MT
 Motta, Raffaella – 2070 MT
 Moug, Susana – 1160 MT
 Mourao-Miranda, Janaina – 1822 MT, 1832 MT
 Mouthon, Anne-Laure – 3729 WTh
 Moutoussis, Michael – 1822 MT, 1832 MT
 Movahedian Attar, Fakhreh – 1602 MT, 1604 MT
 Movsisyan, Goar – 1275 MT, 1277 MT
 Mowafi, Hani – 2142 MT
 Moxon-Emre, Iska – 1417 MT
 Moyer, Daniel – 1731 MT
 Muckli, Lars – 2107 MT, 2180 MT, 2188 MT, 2189 MT, 2192 MT
 Mueggler, Thomas – 2214 MT
 Mueller, Bryon A. – 3757 WTh
 Mueller, Jerel – 1046 MT
 Mueller, Karsten – 1257 MT, 3034 WTh, 3166 WTh, 3171 WTh, 3405 WTh, 4112 WTh, 4149 WTh
 Mueller, Sarah – 1048 MT
 Mueller, Susanne – 3145 WTh
 Mueller-Pfeiffer, Christoph – 1142 MT
 Muetzel, Ryan – 1575 MT, 3870 WTh
 Muha, Emily – 3880 WTh
 Mühleisen, Thomas – 1669 MT, 3297 WTh
 Muhler, Nils – 3060 WTh
 Mukamel, Roy – 1977 MT, 4184 WTh
 Mukherjee, Pratik – 1197 MT, 3266 WTh, 3284 WTh
 Mulkey, Sarah – 3509 WTh
 Mullen, Tim – 1678 MT
 Muller, Angela Martina – 1213 MT, 3259 WTh
 Müller, Daniel – 3344 WTh
 Müller, Dirk – 1421 MT
 Müller, Nils – 3712 WTh
 Müller, Ralph-Axel – 1150 MT, 1194 MT
 Müller, Veronika – **3355 WTh**, **4258 WTh**
 Müller-Dahlhaus, Florian – 3253 WTh
 Müller-Myhsok, Bertram – 4074 WTh
 Müller-Vahl, Kirsten – 1296 MT
 Mullier, Emeline – 3498 WTh
 Mullinger, Karen – 1537 MT, 1624 MT, 1763 MT
 Mullins, Carola – 1307 MT
 Mumford, Jeanette – 1401 MT, 1418 MT
 Munck, Jan – 3226 WTh

Mundy, Lisa – 3849 WTh
 Mungas, Dan – 3024 WTh
 Munoz, Douglas – 1480 MT
 Muñoz-Muñoz, Francisco – 3507 WTh, 3623 WTh, 3626 WTh, 3633 WTh, 4252 WTh, 4260 WTh
 Munzert, Jörn – 3395 WTh
 Muratori, Filippo – 1176 MT, 1878 MT
 Muravchik, Carlos – 1771 MT, 1781 MT
 Murayama, Kou – **1386 MT**
 Murgasova, Maria – 1748 MT, 3884 WTh
 Murino, Vittorio – 3957 WTh, 4031 WTh
 Murphy, Clodagh – 1147 MT, 1166 MT, 3318 WTh, 3439 WTh, 3474 WTh
 Murphy, Declan – 1147 MT, 1148 MT, 1153 MT, 1166 MT, 1664 MT, 2054 MT, 2068 MT, 3318 WTh, 3439 WTh, 3444 WTh, 3474 WTh, 3642 WTh, 3846 WTh
 Murphy, Kathy – 3730 WTh
 Murphy, Kevin – 2204 MT, 3160 WTh
 Murphy, Shawn – 1662 MT
 Murray, Andrea – 3833 WTh
 Murray, Donna – 1529 MT
 Murray, Graham – 1320 MT
 Murray, John – 1309 MT, 1431 MT, 1928 MT, 3324 WTh
 Murray, Laura – 1436 MT
 Murray, Melissa – 3908 WTh
 Murray, Micah – 3498 WTh
 Murray, Robin – 1324 MT
 Murta, Teresa – 3496 WTh
 Murty, Vishnu – 3875 WTh
 Murugesan, Gowtham Krishnan – 1902 MT
 Musa, George – 1251 MT
 Musso, Cristina – **3243 WTh**
 Muta, Akitaka – 3738 WTh
 Muthuraman, Muthuraman – 1002 MT, 1003 MT, 1038 MT
 Muthurukumaraswamy, Suresh – 2106 MT
 Muzik, Otto – 2128 MT
 Mwangi, Benson – 3841 WTh, 4157 WTh
 Myer, Greg – 1578 MT
 Myers, Emily – 3679 WTh
 Myhre, Anne – 1348 MT
 Myllylä, Teemu – 1809 MT
 Mørch-Johnsen, Lynn – 2002 MT

N

Naaijen, Jilly – 1290 MT, 1562 MT, 3586 WTh
 Naaz, Farah – 1399 MT, 1415 MT, 1416 MT
 Nadler, Evan – 3357 WTh
 Naegeli, Christoph – 1142 MT
 Nagarajan, Srikantan – 1197 MT, 3689 WTh

Nagel, Bonnie – 1103 MT
 Nagy, Zoltan – 1604 MT, 3344 WTh
 Nagy, Zoltan – 3448 WTh
 Nahum, Mor – 4219 WTh
 Naidich, Thomas – 1857 MT
 Naik, Shruti – 3835 WTh
 Nair, Dileep – 1650 MT
 NAIR, VEENA – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh
 Naismith, Sharon – 3053 WTh
 Najafizadeh, Laleh – 4196 WTh
 Nakagawa, Atsuo – 1441 MT
 Nakahara, Kiyoshi – 3714 WTh, 4004 WTh
 Nakai, Toshiharu – 1952 MT, 3777 WTh, 3786 WTh, 3788 WTh, 4204 WTh
 Nakajima, Mizuki – 4240 WTh
 Nakamae, Takashi – 1291 MT, 1292 MT
 Nakamoto, Beau – 1261 MT
 Nakamura, Keisuke – 1658 MT
 Nakamura, Kunio – 1873 MT
 Nakamura, Mihoko – 1334 MT
 Nakamura, Motoaki – 1151 MT
 Nakao, Tomohiro – 1287 MT, 1291 MT, 1292 MT
 Nakazawa, Shunsuke – 2216 MT
 Nalci, Alican – 1888 MT, 1919 MT
 Naliboff, Bruce – 3141 WTh
 Naliboff, Bruce – 1278 MT
 Nam, Cho Rong – 1080 MT
 Nam, Eui-Cheol – 1025 MT
 Nam, Yoonho – **3453 WTh**
 Namazova-Baranova, Leyla – 1275 MT, 1277 MT
 Nan, Weizhi – 3369 WTh
 Nandy, Rajesh – 4142 WTh
 Nandy, Rajesh – 4188 WTh
 Nani, Andrea – 1171 MT, 3076 WTh, 3445 WTh, 3450 WTh
 Nanivadekar, Shruti – 1007 MT
 Nantes, Julia – 3062 WTh
 Napadow, Vitaly – 1528 MT, 1592 MT
 Napolioni, Valerio – 3010 WTh
 Narayan, Manjari – 1784 MT
 Narayana, Shalini – 3747 WTh, 3750 WTh
 Narayanaswamy, Shakunthala – 1438 MT
 Nariai, Tadashi – 3738 WTh
 Narr, Katherine – 1031 MT, 1217 MT, 1235 MT, 1240 MT, 1255 MT
 Narvacan, Karl – 3925 WTh
 Nasr, Shahin – 1311 MT
 Nasrallah, Ilya – 3125 WTh
 Nassehi, Farhad – 3427 WTh
 Nasserolelami, Bahman – 3506 WTh
 Nastase, Samuel – 1696 MT

Nathan, Dominic – 3261 WTh, 3287 WTh
 Nathan, Joshua – 1584 MT
 Natividad, María del Carmen – 3899 WTh
 Natsume, Atsushi – 1994 MT
 Natu, Vaidehi – 2164 MT
 Nauman, Eric – 1580 MT, 3270 WTh
 Nava, Simone – 3079 WTh
 Nava-Gomez, Laura – 1101 MT, 1112 MT
 Navarro de Lara, Lucia – 1063 MT
 Navejar, Natasha – 3324 WTh
 Navia, Bradford – 1261 MT
 Nawa, Norberto – 2087 MT
 Nayak, Amritha – 1588 MT, 1598 MT
 Nayak, Siddharth – 2220 MT
 Naylor, Jennifer – 3482 WTh
 Nazarian, Bruno – 1496 MT, 3653 WTh
 Nazeri, Arash – 4163 WTh
 Neale, Michael – 3314 WTh
 Near, Jamie – 1296 MT
 Neason, Mollie – 3122 WTh
 Nebe, Stephan – 1088 MT, 1095 MT, **4032 WTh**
 Nebel, Mary Beth – 1187 MT, 1519 MT, 1975 MT
 Nees, Frauke – 3151 WTh, 3469 WTh
 Neff, Dominik – 4234 WTh
 Negishi, Toru – 2216 MT
 Neilson, Emma – 3438 WTh
 Neilson, Nicole – 1853 MT, 3183 WTh
 Nelson, Erik – 1220 MT
 Nelson, Steven – 3728 WTh
 Nemoto, Kiyotaka – 1287 MT
 Nenadic, Igor – 1233 MT
 Nencka, Andrew – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh
 Nenert, Rodolphe – 3110 WTh
 Nerhus, Mari – 1339 MT
 Nerland, Stener – 1348 MT, 2002 MT
 Nesbitt, Alexander – 1438 MT
 Neseliler, Selin – 3350 WTh
 Nestor, Paul – 1368 MT
 Nestor, Vinas Guasch – 4065 WTh
 Neto, Pedro – 3006 WTh, 3941 WTh
 Nettekoven, Charlotte – 1061 MT
 Neudorf, Josh – 3654 WTh
 Neufeld, Janina – 1168 MT, 1170 MT, 1174 MT
 Neufeld, Nicholas – 3650 WTh
 Neugebauer, Julia – 1273 MT
 Neumann, Jane – 3034 WTh, 3173 WTh
 Neuschmelting, Volker – 1061 MT
 Neva, Jason – 1056 MT, 1057 MT, 3224 WTh, 3229 WTh
 Neville, David – **1515 MT**
 Nevrlý, Martin – 3192 WTh

Newbold, Dillan – 3728 WTh
 Newhouse, Paul – 3611 WTh
 Newman, Bradley – 1881 MT
 Newman, Sharlene – 1114 MT
 Neyedli, Heather – 1955 MT
 Neyens, Veerle – 2077 MT
 Neylan, Thomas – 3145 WTh
 Nezafati, Maysam – 2208 MT
 Ng, Benson – 3769 WTh
 Ng, Kenneth – 3702 WTh
 Ng, Kwun Kei – 1904 MT, 3000 WTh, **3778 WTh**
 Ngo, Gia – 1719 MT, 4100 WTh
 Ngo, Jacqueline – 1068 MT
 Nguyen, Annie – 3728 WTh
 Nguyen, Duc – 3511 WTh
 Nguyen, Duy – 3773 WTh
 Nguyen, Hoang-Dung – 3594 WTh
 Nguyen, NhuNhu – 3284 WTh
 Nguyen, Rémy – 2052 MT
 Nguyen, Trang – 1169 MT
 Nguyen, Vinh Thai – 1420 MT
 Niccolai, Valentina – 3634 WTh
 Nicholas, Rosemary – 1975 MT
 Nichols, B. Nolan – 1681 MT, 1686 MT, 1695 MT
 Nichols, Sharon – 1024 MT, 3283 WTh
 Nichols, Thomas – 1640 MT, 1671 MT, 1686 MT, 1695 MT, 1706 MT, 1708 MT, 1720 MT, 1812 MT, 1816 MT, 1849 MT, 3308 WTh, 3312 WTh, 3625 WTh, 4033 WTh, 4150 WTh, **4171 WTh**, 4178 WTh
 Nickerson, Lisa – 4043 WTh
 Nickerson, Lisa – 3942 WTh
 Nickl-Jockschat, Thomas – 1669 MT
 Nickson, Tom – 1241 MT
 Niddam, David – 1966 MT
 Nie, Shengdong – 3837 WTh
 Nie, Yingnan – 3557 WTh, 4115 WTh
 Niederer, Jacob – 3218 WTh
 Nielsen, Ashley – 3728 WTh
 Nielsen, Mette – 1429 MT
 Nieman, Lynnette – **3862 WTh**
 Niemelä, Solja – 2044 MT
 Niessen, Wiro – 1844 MT
 Nigg, Joel – 1179 MT, 1196 MT, 3978 WTh
 Nigri, Anna – 3079 WTh
 Nijher, Monica – 1438 MT
 Nijjer, Shaquile – 3574 WTh
 Nijjer, Shaquile – 3575 WTh
 Nijs, Jessica – 1615 MT
 Nikkinen, Juha – 2044 MT
 Nikolaeva, Anastasia – 1191 MT
 Nikolaidis, Aki – 3950 WTh

Nikolova, Yuliya – 1248 MT
 Nikonorov, Artem – 1690 MT
 Nikonova, Elena – 1479 MT
 Nili, Hamed – 3334 WTh
 Nilsonne, Gustav – 1909 MT
 Ninaus, Manuel – 3418 WTh, 3715 WTh
 Ning, Gang – 1206 MT
 Ning, Ming Ming – 1742 MT
 Niogi, Sumit – 3266 WTh
 Nir, Talia – 1261 MT, 1594 MT, 1600 MT
 Nishigori, Kantaro – 2216 MT
 Nishikata, Shiro – 3722 WTh
 Nishikawa, Yumiko – 1334 MT
 Niso, Guiomar – 1826 MT, 3798 WTh
 Nita, Dragos – 3127 WTh
 Nitschke, Kai – 2043 MT
 Nitzan, Mor – 1887 MT
 Niu, Chaoyang – 1294 MT
 Niu, Chen – 1223 MT, 1461 MT
 Niu, Chen – 1568 MT, 1586 MT
 Niu, Haijing – 1905 MT, 3701 WTh
 Niu, Huanghuang – 4254 WTh
 Niu, Yuyu – 4105 WTh
 Niznikiewicz, Margaret – 1368 MT
 Njau, Stephanie – 1240 MT, 1255 MT
 Noble, Stephanie – 3105 WTh
 Nobre, Anna Christina – 4192 WTh
 Nobuyoshi, Tanki – **3186 WTh**
 Noecker, Angela – 1006 MT
 Noel, Melanie – 3582 WTh
 Noh, Jihye – 1473 MT
 Noirhomme, Quentin – 1460 MT
 Nolte, Guido – 1775 MT
 Nolte, Tobias – 3140 WTh
 Nomi, Jason – 1558 MT, 3834 WTh, 4129 WTh
 Nonaka, Yulri – 1618 MT, 3738 WTh
 Noonan, MaryAnn – 4207 WTh
 Noorizadeh, Negar – 1875 MT
 Noppeney, Uta – 2132 MT
 NORCIA, Anthony – 1012 MT, 1022 MT
 Norcia, Anthony – 3511 WTh
 Nordio, Andrea – 3661 WTh
 Nordström, Tanja – 2044 MT
 Norris, David – **1551 MT**, 1552 MT
 Northcott, Colleen – 1876 MT
 Norton, Angela – 3497 WTh, 3512 WTh
 Nosarti, Chiara – 1623 MT
 Nostro, Alessandra – 3820 WTh, **4258 WTh**
 Noulhiane, Marion – 3867 WTh, 3869 WTh
 Novén, Mikael – 3672 WTh
 Novikov, Dmitry – 1463 MT, 1811 MT, 3064 WTh, 3780 WTh, 4111 WTh

Nowrouzian, Farhad – 1541 MT
 Noyan, Handan – 1548 MT
 Nozawa, Takayuki – 1897 MT
 Nucifora, Paolo – 1121 MT
 Nugent, Allison – 1221 MT, 1231 MT
 Nugent, Scott – 3961 WTh
 Nunes, Adonay – 1162 MT
 nunes, adonay – 1188 MT, 2017 MT
 Nunes, Sandro – 3992 WTh
 Nunez-Elizalde, Anwar – 1850 MT
 Nurmi, Erika – 1292 MT
 Nurminen, Jussi – 3571 WTh
 Nutt, David – 1208 MT, 2106 MT, 2152 MT, 3413 WTh
 Nwosu, Emmanuel – 4108 WTh
 Nyalakanai, Prashanth – 1519 MT
 Nyberg, Lars – 3779 WTh
 Nybing, Janus – 2135 MT
 Nyquist, Paul – 3303 WTh
 Nørgaard, Martin – 1234 MT

O
 O'Brien, Beth – 3952 WTh
 O'Brien, John – 1914 MT
 O'Brien, Kieran – 1997 MT
 O'Connell, Redmond – 3234 WTh, 3345 WTh
 O'Connor, Erin – 3488 WTh
 O'Daly, Owen – 1030 MT
 O'Donnell, Brian – 1114 MT
 O'Donnell, Kieran – 1714 MT
 O'Gorman, Ruth – 3029 WTh
 O'Grady, Christopher – 1465 MT
 O'Halloran, Rafael – 1353 MT, 1857 MT, 2119 MT
 O'Muircheartaigh, Jonathan – 3056 WTh, 3115 WTh, 3868 WTh
 O'Neil, Sharon – 1272 MT
 O'Neill, George – 1763 MT
 O'Neill, Thomas – 3071 WTh
 Oathes, Desmond – 1303 MT
 Oba, Kentaro – 3293 WTh
 Obara, Chica – 1334 MT
 Oberauer, Klaus – 3754 WTh, 3789 WTh
 Oberlander, Tim – 1736 MT
 Oberlander, Tim – 1213 MT
 Oberlin, Brandon – 4063 WTh
 Obeso, Ignacio – 1035 MT
 Obeso, José – 1035 MT
 Obeso, Jose A. – **3188 WTh**
 Oblak, Ethan – 1513 MT
 Obleser, Jonas – **2074 MT**
 Obradovic, Zoran – 1279 MT
 Obrist, Dominik – 3606 WTh

Odean, Rosalie – 3415 WTh
 Odriozola, Paola – 1180 MT, 3353 WTh
 Oei, Nicole – 2198 MT
 Oellrich, Janto – 3334 WTh
 Oeltzschner, Georg – 1273 MT, 3577 WTh
 Oesingmann, Niels – 3468 WTh
 Oestreich, Lena – 1986 MT
 Oezdemir, Ipek – 1607 MT
 Ogawa, Kenji – 1964 MT
 Ogawa, Seiji – 3487 WTh
 Ogg, Robert – 1269 MT, 3768 WTh
 Oghabian, Mohammad Ali – 1452 MT
 Oghabian, Mohammad Ali – 1455 MT, 1541 MT, 1602 MT, 3581 WTh, 3688 WTh
 Oh, Chang-Hyun – 3610 WTh
 Oh, Maeng-Keun – 4088 WTh, 4099 WTh
 Oh, Sehong – 4139 WTh
 Oh, Seung-Ha – 2126 MT
 Oh, Sun-Young – 2115 MT
 Ohashi, Kyoko – 1043 MT
 Ohata, Ryu – 1964 MT
 Ohgami, Yoshimi – 2076 MT, 3524 WTh
 Ohla, Kathrin – 2089 MT
 Ohlhauser, Lisa – 3198 WTh
 Ohn, Suk Hoon – 1034 MT
 Ohno, Masahiro – 2216 MT
 Ohta, Haruhisa – 1151 MT
 Oishi, Kenichi – 1093 MT
 Ojeda, Alejandro – 1678 MT
 Ojemann, Jeffrey – 1009 MT, 1010 MT, 1014 MT, 1697 MT, 1936 MT, 2133 MT, 3286 WTh, 3521 WTh, 3863 WTh
 Okada, Rieko – 1151 MT, 1325 MT
 Okada, Tomohisa – 2021 MT
 Okano, Kana – 1368 MT
 Okanoya, Kazuo – 1618 MT, 3738 WTh
 Okubo, Matia – 4204 WTh
 Okubo, Yoshiro – 1525 MT, 3002 WTh
 Okuno, Eiichi – 1411 MT, 3898 WTh
 Olausson, Hakan – 3095 WTh
 Olbrich, Sebastian – 3990 WTh
 Oldehinkel, Marianne – 1149 MT, 1190 MT
 Oleson, Stephanie – 3822 WTh
 Oligschläger, Sabine – **1395 MT**, 1991 MT
 Oligschläger, Sabine – 3400 WTh
 Olino, Thomas – 1279 MT
 Oliva, Piernicola – 1176 MT
 Olivares, Ela – 2170 MT
 Oliveira, Guiomar – 1160 MT
 Oliveira, Suellen – 3851 WTh
 Oliver, Michael – 1850 MT
 Olivetti, Emanuele – 2055 MT

Oliviero, Antonio – 1035 MT
 Olivo, Gaia – 1520 MT
 Ollinger, John – 3261 WTh, 3287 WTh
 Olman, Cheryl – 1347 MT
 Olofsson, Jonas – 3398 WTh
 Olsen, Fraser – 3802 WTh
 Olson, Alex – 3357 WTh
 Olson, Ingrid – 1279 MT
 Olson, Ingrid – 3727 WTh
 Olson, Jared – 3521 WTh
 Olszowy, Wiktor – 1522 MT
 Olubiyi, Olutayo – 1922 MT
 Olvera, Rene – 3313 WTh
 Olvet, Doreen – 4076 WTh
 Omidvarnia, Amir – 3984 WTh
 Omidyeganeh, Mona – 3432 WTh, 4166 WTh, 4168 WTh
 Omidyeganeh, Mona – 3440 WTh, 4159 WTh
 Omisade, Antonina – 1465 MT
 Ong, Ju Lynn – 2195 MT
 Ong, Ju Lynn – 2194 MT
 Ongur, Dost – 2209 MT
 Onopa, Alexander – 1246 MT, 3839 WTh
 Ontaneda, Daniel – 1873 MT
 Ontiveiro, Marlis – 3389 WTh
 Oogama, Noriko – 3786 WTh
 Op de Beeck, Hans – 3419 WTh
 Openneer, Thaira – 1290 MT
 Opitz, Alexander – 1028 MT, **1882 MT**
 Opmeer, Esther – 1236 MT, 1308 MT
 Orange, Joseph – 3248 WTh
 Orban, Pierre – 1713 MT, 3941 WTh
 Orekhova, Elena – 1191 MT
 Orfanos, Dimitri Papadopoulos – 3151 WTh, 3469 WTh
 Orloff, Mark – 3349 WTh
 Orlov, Natasza – 1030 MT
 Oros-Peusquens, Ana-Maria – 1061 MT
 Orr, Catherine – 1136 MT, 3146 WTh, 3151 WTh, 3317 WTh, 3360 WTh, 3469 WTh, 3871 WTh
 Orr, Scott – 1142 MT
 Ortega, Mario – 3728 WTh
 Ortinau, Cynthia – 3859 WTh
 Ortner, Rupert – 1961 MT
 Osama, Muhammad – 1931 MT
 Oschwald, Jessica – 3392 WTh
 Ose, Takayuki – 2216 MT, **3186 WTh**
 Osipova, Liliya – 1275 MT, 1277 MT
 Osler, Merete – 3818 WTh
 Osmanlioglu, Yusuf – 1751 MT
 Osnes, Kåre – 1339 MT
 Ossandon, Tomas – 3531 WTh, 3776 WTh

Ossmy, Ori – 1977 MT
 Oswald, Victor – 3767 WTh, 3771 WTh
 Ota, Miho – 1241 MT
 Otazo, Ricardo – 4193 WTh
 Otoshi, Chad – 1093 MT
 Otruba, Pavel – 3192 WTh
 Otto, Kristina – 1494 MT
 Otto, Markus – 3034 WTh
 Ou, Xiawei – 1918 MT
 Ou, Yangming – 1662 MT, **1703 MT**
 Ouchi, Yasuomi – 2219 MT
 Ourselin, Sebastien – 1655 MT, **3294 WTh**
 Ouyang, Lou – 3069 WTh
 Ouyang, Minhui – 1183 MT, 1495 MT, 3879 WTh
 Ovadia, Moran – 4214 WTh
 Owen, Adrian – 3980 WTh
 Oxtoby, Neil – 3019 WTh
 Oyefiade, Adeoye – 3093 WTh
 Ozerin, Alexei – 1866 MT
 Ozker, Muge – 3668 WTh
 Ozono, Hiroki – **1386 MT**
 Ozturk-Isik, Esin – 3187 WTh, 3200 WTh, 3584 WTh, 3585 WTh
 Ozubko, Jason – 3711 WTh
 Özyurt, Jale – 3366 WTh
 O'Brien, John – 3048 WTh
 O'Keeffe, Johnny – 3037 WTh
 O'Muircheartaigh, Jonathan – 1153 MT
 O'Murcheartaigh, Jonathan – 1148 MT
 O'Murcheartaigh, Jonathan – 3846 WTh
 O'Regan, Jonathan – 3847 WTh

P

Pacheco, Lucero – 3873 WTh
 Pacheco Hansen, Laura – 3321 WTh
 Paciello, Francesca – 3194 WTh
 Packard, Lauren – 3787 WTh
 Padberg, Frank – 1032 MT, **1049 MT**, 1250 MT, 1256 MT, 1718 MT
 Padhy, Smruti – 1706 MT
 Padula, Maria Carmela – 1312 MT, 1363 MT, 1835 MT
 Pae, Chongwon – 3391 WTh, 4017 WTh, 4088 WTh, 4090 WTh, 4094 WTh, 4096 WTh, 4099 WTh, 4146 WTh
 Pae, Youngwoo – 3513 WTh
 Pagani, Elisabetta – 4031 WTh
 Pai, Shu-Chi – 3402 WTh
 Pain, Aurélie – 3315 WTh
 Pain Team, Vi Riddell – 3582 WTh
 Paiva, Santiago – 1673 MT, 1682 MT
 Pajula, Juha – 1691 MT
 Pakpoor, Jina – 3156 WTh
 Palacios, Eva – 3284 WTh
 Palasis, Susan – 2032 MT
 Palaus, Marc – 1060 MT
 Palm, Ulrich – 1032 MT, 1250 MT
 Palmer, Jacqueline – 1070 MT, 3254 WTh
 Palmer, Jake – 1534 MT
 palmis, sarah – 3653 WTh
 Palomero-Gallagher, Nicola – **1983 MT**, 4106 WTh
 Pamplona, Gustavo – 1514 MT
 Pan, Fen – 1222 MT
 Pan, Hong – 3629 WTh
 Pan, Wei – 1479 MT
 Pan, Wen-Ju – 2208 MT
 Pan, Wenju – 1931 MT, 1945 MT
 Pan, Xiaoping – 3380 WTh
 Panagiotaropoulou, Georgia – 3690 WTh
 Panara, Valentina – 1710 MT
 Pando, Victor – 1523 MT
 Pang, Christopher – 1037 MT
 Pang, Elizabeth – 3290 WTh
 Panigrahy, Ashok – 4049 WTh
 Panizzon, Matthew – 3314 WTh
 Panman, Jessica – 1595 MT
 Pannekoek, J. Nienke – 1130 MT
 Pantazatos, Spiro – 3323 WTh
 Pantelis, Christos – 1319 MT
 Panwar, Puja – 2110 MT, 4029 WTh
 Paolini, Marco – 1032 MT, 1256 MT
 Papadaki, Eleftheria – 3805 WTh
 Papademetris, Xenophon – 4042 WTh
 Papale, Paolo – 2075 MT, **3635 WTh**
 Papale, Paolo – 2182 MT
 Papanicolaou, Andrew – 3569 WTh
 Papastergiou, Thomas – 4027 WTh
 Papazov, Boris – 1367 MT
 Papazova, Irina – 1367 MT
 Pape, Marcy – 3261 WTh
 Papma, Janne – 1595 MT
 Papoutsis, Marina – 3733 WTh
 Paquola, Casey – 3830 WTh
 Pardoe, Heath – 3919 WTh
 Parekh, Harsh – 1283 MT
 Parikh, Nehal – 3995 WTh, 3998 WTh
 Park, Bumhee – 4088 WTh, 4094 WTh
 Park, Chan-A – 1473 MT
 Park, Chang-hyun – 3113 WTh, 3319 WTh
 Park, Denise – 2203 MT
 Park, Eunhee – 1605 MT, 3238 WTh, 3239 WTh, 3252 WTh
 Park, Gilsoon – 1880 MT, 4068 WTh

Park, Hae-Jeong – 3391 WTh, 4017 WTh, 4056 WTh, 4088 WTh, 4089 WTh, 4090 WTh, 4094 WTh, 4096 WTh, 4099 WTh, 4146 WTh
 Park, Jang-Yeon – 2153 MT
 Park, Jeong Hye – 3530 WTh
 Park, Jin Gee – 3257 WTh
 Park, Kyungmo – 1446 MT
 Park, Min Kyu – 3257 WTh
 Park, Min Tae – 1158 MT
 Park, MinKyung – 1080 MT, 1085 MT
 Park, Patrick – 4103 WTh
 Park, Se Jik – 3530 WTh
 Park, Soowon – 1264 MT
 Park, Su Mi – 1078 MT
 Park, Sun-Hyung – 3416 WTh, 3417 WTh
 Park, Sunyoung – 4198 WTh
 Park, Wanjo – 3221 WTh
 Park, Yeong-Hun – 1880 MT, 4068 WTh
 Park, Yerin – 2153 MT
 Parker, David – 3973 WTh
 Parker, Drew – 1557 MT, 1751 MT
 Parker, Greg – 1746 MT
 Parker, Thomas – 3838 WTh
 Parker Jones, Oiwi – **1889 MT**
 Parkkonen, Lauri – 3562 WTh, 4101 WTh
 Parks, Emily – 3787 WTh
 Parlatini, Valeria – 3642 WTh
 Parpart, Hella – 4246 WTh
 Parra, Lucas – 1019 MT, 1022 MT
 Parrado-Hernandez, Emilio – 3893 WTh
 Parrent, Andrew – 4103 WTh
 Parrish, Todd – 1804 MT, 1895 MT
 Partanen, Marita – 1276 MT, 3651 WTh
 Partridge, Adam – 2116 MT
 Parviainen, Tiina – 2160 MT
 Parvianen, Tiina – 3562 WTh
 Parvizi, Josef – 1937 MT, 1990 MT, 2010 MT, 3716 WTh
 Paschen, Steffen – 1003 MT
 Pascual-Leone, Alvaro – 1907 MT
 Pasha, Evan – 3822 WTh
 Passamonti, Luca – 3048 WTh
 Passaro, Antony – 2113 MT
 Passerat-Palmbach, Jonathan – 3884 WTh
 Passos, Ives – 3841 WTh
 Pasternak, Ofer – 3000 WTh
 Patanaik, Amiya – 2194 MT, 2195 MT
 Patel, Gaurav – 4220 WTh
 Patel, Harshal Jayeshkumar – 1044 MT
 Patel, Khusbu – 1262 MT
 Patel, Raihaan – 1089 MT, 2058 MT, 3021 WTh
 Patel, Sejal – 2058 MT

Patel, Sunita – 1267 MT
 Pathak, Geetanjali – 3230 WTh
 Pathan, Jasmine – 3064 WTh, 4111 WTh
 Patil, Kaustubh – 1192 MT
 Paton, Angus – 2188 MT, 2189 MT
 Paton, Bryan – 4095 WTh
 Patriat, Rémi – 3218 WTh
 Patterson, Karalyn – 3638 WTh
 Patterson, Steve – 1465 MT
 Pattinson, Kyle – 1451 MT
 Patton, George – 3849 WTh
 Patton, Samantha – 1399 MT, 1415 MT
 Paul, Friedemann – 3063 WTh
 Paul, Katharina – **1058 MT**, 1242 MT, 4152 WTh
 Paul, Riya – 4074 WTh
 Paul, Robert – 1261 MT
 Paulino, Alejandro – 1353 MT, 1857 MT, 2119 MT
 Pauls, K Amande M – 3205 WTh
 Paulsen, Jane – 1932 MT, 2064 MT, 3168 WTh, 3301 WTh
 Paulus, Martin – 1226 MT, 1813 MT, 1815 MT
 Paulus, Walter – 3082 WTh
 Pauly, Katharina – 4199 WTh
 Paus, Tomas – 1320 MT, 2044 MT, 3151 WTh, 3469 WTh, 3836 WTh
 Pavlov, Yuri – 3752 WTh
 Pawlowski, Gabriela – 3040 WTh, 3084 WTh, 3281 WTh
 Paz-Alonso, Pedro – 1655 MT, 3665 WTh, 3717 WTh
 Pearce, Alaina – 3357 WTh
 Pearlson, Godfrey – 1688 MT, 3953 WTh
 Peatfield, Nicholas – 1188 MT, 1787 MT, 2017 MT, 3563 WTh, 3574 WTh, 3576 WTh
 Peatfield, Nicholas – 3575 WTh
 Pechenkova, Ekaterina – 3646 WTh
 Pedersen, Mangor – 3984 WTh
 Pedreira, Carlos – 3496 WTh
 Pedret, Kayla – 4085 WTh
 Pedroni, Andreas – 3789 WTh
 Pedroni, Andreas – 3754 WTh
 Peer, Michael – 1887 MT, 3148 WTh
 Peeters, Ron – 1263 MT
 Peeters, Ronald – 2077 MT, 3112 WTh, 3627 WTh
 Peeters, Tim – 1667 MT, 1687 MT
 Peifer, Maria – 4145 WTh
 Péligrini-Issac, Mélanie – 3749 WTh
 Pellicano, Antonello – 1044 MT
 Pels, Elmar – 3544 WTh
 Peltier, Scott – 3816 WTh, 3943 WTh
 Peltsch, Alicia – 3248 WTh
 Pendekanti, Shrita – 1990 MT

Pender, Niall – 3506 WTh
 Pendlebury, Sarah – 3819 WTh
 Penedo, Frank – 1262 MT
 Peng, Limin – 3420 WTh
 Peng, Qinmu – 3879 WTh
 Peng, Rong – 3161 WTh
 Peng, Rui – 3107 WTh, 3803 WTh
 Peng, Shichun – 3176 WTh, 3177 WTh, 3181 WTh, 3182 WTh
 Peng, Shin-Lei – 2203 MT
 Peng, Shinn-Fong – 3072 WTh
 Peng, Syu-Jyun – 3134 WTh
 Peng, Yujia – 3414 WTh
 Peng, Yun – 1183 MT, 1576 MT, 1622 MT
 Pennec, Xavier – 1261 MT
 Penttilä, Jani – 3151 WTh, 3469 WTh
 Pepes, Sophia – 3733 WTh
 Péran, Patrice – 3858 WTh
 Perani, Suejen – 3115 WTh, 3131 WTh
 Peraza, Luis – 1914 MT, 3195 WTh
 Perea, José – 4176 WTh
 Perea, Rodrigo – 3003 WTh
 Pereira, Andreia – 1160 MT
 Pereira, Fabricio – 1268 MT, 3299 WTh
 Pereira, Joana – 3706 WTh
 Pérez, Johanna – 2170 MT
 Pérez, Johanna – 1589 MT
 Perez-Palacios, Pamela – 1089 MT
 Perkins, Diana – 4076 WTh
 Perkins, Scott – 3611 WTh
 Pernet, Cyril – 1860 MT, 1871 MT, 4148 WTh
 Perrachione, Tyler – 3647 WTh
 Perret, Thomas – 3609 WTh
 Perrone, Anders – 1196 MT
 Perrone-Bizzozero, Nora – **1215 MT**, **1330 MT**, 1351 MT
 Perry, Alistair – 1200 MT, 1201 MT, 3047 WTh
 Perry, Emily – 1148 MT, 1153 MT, 3846 WTh
 Perry-Ziv, Daniella – 4214 WTh
 Peruzzo, Denis – 3661 WTh
 Peterburs, Jutta – 1130 MT
 Peterchev, Angel – 3772 WTh, 3773 WTh
 Peters, Megan – **3379 WTh**
 Peters, Sue – 2111 MT, 3229 WTh, 4085 WTh
 Peters, Terry – 4103 WTh
 Peterse, Yorick – 4074 WTh
 Petersen, Ronald – 3908 WTh
 Petersen, Steven – 3728 WTh
 Peterson, Andre – 3382 WTh
 Peterson, Daniel – 1707 MT, 1738 MT, 3005 WTh
 Peterson, Elizabeth – 3747 WTh
 Petoe, Matthew – 3244 WTh

Petra, Schweinhardt – 3077 WTh
 Petracca, Maria – 1877 MT, 3468 WTh, 3996 WTh
 Petrican, Raluca – 3362 WTh
 Petrides, Georgios – 1217 MT
 Petridou, Natalia – 4121 WTh
 Petro, Lucy – 2107 MT, 2180 MT, 2188 MT, 2189 MT, 2192 MT
 Petrov, Dmitry – 3937 WTh
 Petrovic, Predrag – 2152 MT
 Petrovich, Predrag – 1501 MT
 Petton, Mathilde – 2112 MT
 Peverill, Matthew – 1132 MT, 4162 WTh
 Peyvandi, Shabnam – 3843 WTh
 Pfabigan, Daniela – **1058 MT**, 1242 MT, 4152 WTh, 4216 WTh
 Pfannmöller, Jörg – 2136 MT
 Pfefferbaum, Adolf – 1995 MT
 Pfeifer, Jennifer – 1423 MT, 4211 WTh
 Pfeleiderer, Bettina – 1131 MT
 Phan, K. Luan – 1130 MT, 1584 MT
 Philippe, Anne – 1560 MT
 Philipsen, Alexandra – 3143 WTh, 3366 WTh
 Phillips, Christophe – 1860 MT, 2196 MT, 3167 WTh, 3894 WTh
 Phillips, Mary – 4049 WTh
 Phillips, Matthew – 1800 MT
 Phillips, Micheal – 3162 WTh
 Phillips, Nicole – 1271 MT
 Phillips, Owen – 1246 MT, 3839 WTh
 Phillips, Raquel – 1128 MT, 1459 MT, 1462 MT, **1613 MT**, 1614 MT, 3138 WTh
 Philpot, Benjamin – 3546 WTh
 Piccirelli, Marco – 1142 MT
 Picht, Thomas – **1039 MT**
 Picó-Perez, Maria – 1295 MT
 Picon, Felipe – 3139 WTh
 Pienaar, Rudolph – 1711 MT, 3471 WTh, 3859 WTh
 Pieper, Steve – 1662 MT
 Piercy, Jamie – 3878 WTh, 3887 WTh
 Pierpaoli, Carlo – 1598 MT, 1616 MT
 Pierre, AUGÉ – 3607 WTh
 Pietrini, Pietro – 2075 MT, 2182 MT, **3635 WTh**
 Pietsch, Maximilian – 3884 WTh
 Pihl, Robert – 1896 MT
 Piitulainen, Harri – 2160 MT
 Pijl, Hanno – 1259 MT, 1447 MT
 Pijnenborg, Gerdina – 1338 MT
 Pijnenburg, Yolande – 3015 WTh, 3028 WTh, 3031 WTh
 Pike, Bruce – 2044 MT
 Pillai, Ajay – 3526 WTh
 Pilly, Praveen – 1800 MT, 3726 WTh

Pine, Daniel – 3153 WTh, 4135 WTh
 Pineda-Pardo, José – 1035 MT
 Pineda-Pardo, Jose A. – 1535 MT, **3188 WTh**
 Pinho, Ana Luisa – 1656 MT
 Pinto, Joana – 3992 WTh
 Pinto, Maíra – 3795 WTh, 3824 WTh
 Pipper, Christian – 2135 MT
 Piradov, Michael – 1934 MT
 Piroth, Tobias – **1000 MT**
 Pisani, Antonio – 1520 MT
 Pisner, Derek – 3997 WTh
 Pitcher, David – 1054 MT
 Pittman, Daniel – 3103 WTh, 3119 WTh
 Pizzagalli, Diego – 1253 MT, 1436 MT
 Pizzagalli, Fabrizio – 2020 MT, 3305 WTh
 Pizzella, Vittorio – 1775 MT, 4101 WTh
 Pizzella, Vittorio – 2083 MT
 Pizzo, Francesca – 1635 MT
 Plachti, Anna – 3820 WTh, 3821 WTh
 Plailly, Jane – 2088 MT
 Pläschke, Rachel – 3820 WTh, 3821 WTh, **4258 WTh**
 Plassard, Andrew – 3199 WTh
 Plewnia, Christian – 1250 MT
 Plis, Sergey – 1553 MT, 1866 MT, 3407 WTh, 3926 WTh, 4140 WTh, 4191 WTh
 Pluta, Agnieszka – 1442 MT
 Pluta, Anthony – 3497 WTh
 Podranski, Kornelius – 3468 WTh
 Podranski, Kornelius – 1877 MT
 Poepl, Timm – 4251 WTh
 Pogarell, Oliver – 1256 MT
 Poh, Jia-Hou – 2194 MT
 Pohl, Kilian – 1995 MT
 Polczynska, Monika – 3105 WTh
 Poldrack, Benjamin – 1670 MT
 Poldrack, Russell – 1398 MT, **1677 MT**, 1680 MT, 1704 MT, 1717 MT, 1802 MT, 1820 MT, 1951 MT, 3375 WTh, 4072 WTh
 Poliakov, Andrew – 3286 WTh
 Polimeni, Jonathan – 1528 MT, 1641 MT, 2018 MT, 2211 MT, 4137 WTh
 Poline, Jean-Baptiste – 1485 MT, 1686 MT, 1695 MT, 1696 MT, 1706 MT, 1712 MT
 Polk, Thad – 3816 WTh
 Pollak, Seth – 1432 MT
 Pollick, Frank – 1691 MT
 Pollok, Bettina – 3558 WTh, 3744 WTh
 Pomares, Florence – 1370 MT
 Pomarol-Clotet, Edith – 1865 MT, 3464 WTh, 3899 WTh, 4125 WTh
 Ponsford, Jennie – 3267 WTh

Ponticorvo, Sara – 4109 WTh, 4185 WTh
 Pontillo, Giuseppe – 1520 MT
 Poole, Victoria – 3826 WTh
 Pooseh, Shakoor – **4032 WTh**
 Popa, Traian – 3749 WTh
 Popal, Haroon – 3954 WTh
 Popov, Tzvetan – 2190 MT
 Popp, Pauline – 2134 MT
 Poppe, Andrew – 1814 MT, 4048 WTh
 Poppelaars, Eefje – 1134 MT
 Popuri, Karteek – 3036 WTh
 Porges, Eric – 1261 MT, 1544 MT
 Portella, Maria – 1241 MT
 Poser, Benedikt A. – **1567 MT**, 1960 MT, 2206 MT, 3605 WTh
 Poskitt, Ken – 4189 WTh
 Posse, Stefan – 1941 MT, 4167 WTh
 Posse, Stefan – 4193 WTh
 Poston, Kathleen – 3180 WTh, 3216 WTh
 Postuma, Ronald – **3212 WTh**
 Pote, Ines – 1153 MT, 3846 WTh
 potenza, marc – 1391 MT
 Potkin, Steven – 1345 MT
 Potkin, Steven G. – **1330 MT**, 3035 WTh, 3757 WTh
 Potocki, Kendra – 3423 WTh
 Potter, Alexandra – 1136 MT, 3151 WTh, 3469 WTh
 Potter, Guy – 3787 WTh
 Poudel, Ranjita – 1098 MT, **1428 MT**
 Poupon, Cyril – 1733 MT, 1734 MT, 1867 MT, 2039 MT, 2048 MT, 3485 WTh, 3533 WTh, 4104 WTh
 Poupon, Cyril – 3175 WTh
 Poupon, Fabrice – 1733 MT, 1734 MT, 2039 MT
 Poustka, Luise – 3151 WTh, 3469 WTh
 Power, Jonathan – 1821 MT
 Poydasheva, Alexandra – 1934 MT
 Prabhakaran, Vivek – 2006 MT, 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh, 4170 WTh
 Prabhu, Gita – 1822 MT, 1832 MT
 Prague, Julia – 1438 MT
 Prasad, Gautam – 4157 WTh
 Prasad, Konasale – 3588 WTh
 Prasitsuebsai, Wasana – 1261 MT
 Prayer, Daniela – 3630 WTh, 3855 WTh
 Prčkovska, Vesna – 1667 MT, 1687 MT, 2027 MT
 Preciado, Ronny – 3403 WTh
 Preda, Adrian – 3757 WTh
 Preissl, Hubert – 1915 MT, 3337 WTh
 Preller, Katrin – 1072 MT, 2213 MT, 2218 MT
 Preti, Maria Giulia – 3791 WTh
 Preuss, Nina – 1665 MT, 1696 MT
 Preuss, Todd – 1998 MT

Price, Anthony – 1153 MT, 1748 MT, 3868 WTh, 3884 WTh
 Price, Cathy – 3251 WTh, 3443 WTh, 3650 WTh, 3804 WTh
 Price, Gavin – 2007 MT, 3426 WTh
 Price, Nick – 1648 MT, 1781 MT
 Price, Nick – 1771 MT
 Prilepin, Evgeny – 1690 MT
 Primašin, Annika – 3082 WTh
 Prinsen, Jellina – 1962 MT, 3419 WTh
 Prokofiev, Andrey – 1191 MT
 Prokopiou, Prokopis – 1636 MT
 Proskovec, Amy – 3553 WTh, 3561 WTh, 3568 WTh, 3770 WTh, 3885 WTh
 Proskovec, Amy – 3564 WTh, 3567 WTh
 Pruden, Shannon – 3415 WTh
 Pruessmann, Klaas P. – 1482 MT, 1521 MT, 1604 MT
 Pruim, Raimon – 1844 MT
 Pruksakaew, Kanchana – 1261 MT
 Prüss, Harald – 3063 WTh
 Przewdzik, Izabela – 1912 MT
 Przybelski, Scott – 3908 WTh
 Ptito, Maurice – 2068 MT
 Pu, Yi – 3628 WTh
 Pua, Emmanuel – 1948 MT
 Puce, Aina – 3516 WTh
 Puckett, Alexander – 1534 MT
 Pueyo, Maria – 3025 WTh
 Pugh, Kenneth – 3587 WTh, 3592 WTh
 Pukropski, Anna – 3269 WTh
 Pulcrano, Giuseppe – 1985 MT
 Pulkkinen, Johannes – 1320 MT
 Punyamurthula, Sanjana – 1150 MT
 Pur, Daiana – 1739 MT
 Puschmann, Sebastian – 2073 MT
 Pushkov, Alexander – 1275 MT, 1277 MT
 Pustina, Dorian – 2067 MT
 Puts, Nicolaas – 3577 WTh, 3807 WTh
 Pütz, Benno – 4074 WTh
 Pyatigorskaya, Nadya – 3175 WTh, 3215 WTh

Q
 Qi, Shile – **1215 MT**, 3757 WTh
 Qi, Ting – 3660 WTh
 Qi, Yanyan – 1938 MT, 1946 MT, 4228 WTh
 Qi, Yue – 4231 WTh
 Qi, Zhangzhang – 1218 MT, 1223 MT, 1586 MT
 Qian, Long – 1549 MT
 Qian, Shu-Fang – 1893 MT
 Qian, Zhenying – 1067 MT
 Qian, Zhou – 1357 MT

Qin, Jian – 1609 MT
 Qin, Jie – 3559 WTh
 Qin, Wei – 1472 MT, 2140 MT, 3058 WTh, 3065 WTh
 Qin, Wen – 1476 MT
 Qiu, Anqi – 3309 WTh
 Qiu, Lily – 3489 WTh
 Qiu, Nan – 3352 WTh
 Qiu, Shijun – 1609 MT
 Qiu, Yingwei – 3000 WTh
 Qiu, Yunhai – 1204 MT
 Qu, Pengfei – 3669 WTh
 Qu, Xiaoping – 3318 WTh, **3320 WTh**
 Quarantelli, Mario – 1520 MT, 3194 WTh
 Quarmley, Megan – 1577 MT
 Quatieri, Thomas – 3686 WTh
 Quednow, Boris – 1072 MT, 3344 WTh
 Quinn, Andrew – 1846 MT, 1892 MT, 4192 WTh
 Quirion, Pierre-Olivier – 1704 MT, 1713 MT

R
 Raamana, Pradeep Reddy – 1704 MT, 3896 WTh
 Raatikainen, Ville – 1809 MT, 3045 WTh, 3124 WTh, 4010 WTh
 Rabin, Jennifer – 3003 WTh
 Rabiner, Eugenii – 1438 MT
 Rabinowitz, Amanda – 1557 MT
 Raccah, Omri – 1990 MT
 Rachakonda, Srinivas – 1841 MT, 1935 MT, 3371 WTh
 Racicka, Ewa – 3493 WTh
 Rademakers, Rosa – 3018 WTh
 Radetz, Angela – 1002 MT
 Radke, Sina – 4253 WTh
 Radua, Joaquim – 1865 MT, 3464 WTh, 3642 WTh, 3899 WTh, 4125 WTh
 Raedt, Robrecht – 1064 MT
 Raffa, Giovanni – **1039 MT**
 Raffel, Joel – 3277 WTh
 Raffelt, David – 1704 MT
 Rafidi, Nicole – 1782 MT
 Ragert, Patrick – 3740 WTh
 Raghava, Jayachandra – 3818 WTh
 Raghava, Jayachandra – 1429 MT
 Raghavan, Manoj – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh
 Ragland, J Daniel – **4000 WTh**
 Ragothaman, Anjanibhargavi – 3055 WTh, 3282 WTh, 3318 WTh
 Raguz, Marina – 3857 WTh
 Rahim, Mehdi – 3025 WTh, 3916 WTh, 3934 WTh
 Rahmim, Arman – 3183 WTh
 Rai, Laura – 1433 MT

Raichle, Marcus – 1634 MT
 Raiha, Syeda – 4228 WTh
 Raitamaa, Lauri – 1809 MT, 4010 WTh
 Rajan, Sabreena – 1707 MT
 Rajendra, Justin – 1006 MT, 1252 MT
 Rajsic, Jason – 2179 MT
 Ralph, James – 3160 WTh
 Ramanna, Sudhir – 4193 WTh
 Ramaseshan, Karthik – 1283 MT, 1285 MT, 1286 MT, 1448 MT, 1978 MT, 3070 WTh
 Ramasubbu, Rajamannar – 1001 MT
 Ramb, Rebecca – 4193 WTh
 Ramig, Lorraine – 3747 WTh
 raminfard, Samira – 3581 WTh
 Ramirez, Joel – 3248 WTh
 Ramirez, Julian – **1882 MT**
 Ramirez, Mercedes – 1307 MT
 Ramos, Marc – 1667 MT, 2027 MT
 Ramos Badaya, Esperanza – 3626 WTh, 4260 WTh
 Ramos da Cruz, Janir – 1321 MT, 3527 WTh
 Ramos-Duran, Luis – 1307 MT
 Ramos-Nuñez, Aurora – 4070 WTh
 Ramot, Michal – 3954 WTh
 Ramsey, Nick – 3386 WTh, 3544 WTh
 Ramus, Franck – 3652 WTh
 Ran, Bowen – 4228 WTh
 Rance, Mariela – 1297 MT
 Randeniya, Roshini – 1986 MT
 Randolph, Timothy – 4173 WTh
 Rangaprakash, D – **1389 MT**, 3096 WTh
 Rangel, Anthony – 3883 WTh
 Raniga, Parnesh – 4095 WTh
 Ranjeva, Jean-Philippe – 1637 MT
 Rannou, Nicolas – 1711 MT
 Rao, Anil – 1832 MT
 Rao, Hengyi – 1118 MT
 Rao, Isa – 3495 WTh
 Rao, Rajesh – 1009 MT, 1010 MT, 1697 MT, 3521 WTh
 Rao, Stephen – 1442 MT, 3162 WTh
 Rao, Vikram – 3004 WTh
 Rapkin, Andrea – 2144 MT
 Rapoport, Judith – 1313 MT
 Rasch, Björn – 1929 MT
 Rasero Daparte, Javier – 3959 WTh
 Rasetti, Roberta – 3704 WTh
 Rasgon, Alexander – 1353 MT
 Rashid, Barnaly – 1345 MT, 1935 MT
 Rashid, Faisal – 1138 MT, 1600 MT
 Rashid, Faisal – 1603 MT
 Rashid, Ishtiaque – 1345 MT
 Rasic, Nivez – 3582 WTh

Rasila, Aleksii – 1809 MT, 3124 WTh, 4010 WTh
 Rath, Yogesh – 1611 MT
 Ratnanather, Tilak – 1334 MT
 Ratnasabapathy, Risheka – 1438 MT
 Rattay, Frank – 1484 MT, 4023 WTh
 Rauchmann, Boris-Stephan – 3580 WTh
 Rausch, Annika – 1167 MT
 Rauscher, Alexander – 1601 MT, 3269 WTh, 3271 WTh, **3537 WTh**, **3541 WTh**, 3542 WTh
 Raut, Ryan – 3728 WTh
 Ravel, Nadine – 2088 MT
 Ravishankar, Mathura – 1286 MT, 1978 MT
 Ray, Jim – 3004 WTh
 Ray, Kimberly – **4000 WTh**
 Raymont, Vanessa – 3276 WTh
 Raz, Amir – 1891 MT
 Raz, Ayel – 2095 MT
 Raz, Gal – 4214 WTh
 Razi, Adeel – 1721 MT, 2213 MT, 3989 WTh, 4022 WTh
 Razlighi, Qolamreza – 3785 WTh, 3793 WTh, 3808 WTh, 3831 WTh
 Razlighi, Qolamreza – 3973 WTh
 Raznahan, Armin – 1158 MT, 1645 MT, 2001 MT
 Read, Stephen – 1545 MT
 Reardon, Paul – 1645 MT
 Rechtman, Elza – 1560 MT
 Reckfort, Julia – **3613 WTh**
 Recla, Mauro – 1985 MT
 Reddan, Marianne – 4164 WTh
 Reddick, Wilburn – 3910 WTh
 Reddy, Y.C. – 1291 MT, 1292 MT
 Redick, Thomas – 1580 MT
 Reding, Katherine – **3862 WTh**
 Redolar-Ripoll, Diego – 1060 MT
 Reed, Nick – 3602 WTh
 Rees, Geraint – 3733 WTh, 3804 WTh, 4022 WTh
 Reetz, Kathrin – 1044 MT
 Rehme, Anne – 1061 MT
 Reich, Daniel – 3604 WTh
 Reichel, Pia – 1883 MT
 Reichenbach, N – 1032 MT
 Reichert, Christoph – 3918 WTh
 Reichert, Johanna – 1443 MT, 3715 WTh
 Reid, Andrew – 2000 MT, 3332 WTh, 3339 WTh
 Reid, Meredith – 1511 MT, 1884 MT, 3158 WTh
 Reilly, Melissa – 1186 MT
 Reilmann, Ralf – 3733 WTh
 Reineberg, Andrew – 4084 WTh
 Reinelt, Janis – 3400 WTh, 3812 WTh
 Reingardt, Maria – 1501 MT
 Reinl, Maren – 1239 MT

Reisert, Marco – 2043 MT
 Reiss, Allan – 1908 MT
 Reiter, Andrea – 3812 WTh
 Reker, Paul – **3189 WTh**
 Relatives Group, ENIGMA – 1324 MT
 Remes, Anne – 3045 WTh
 Ren, Weicong – 1066 MT
 Renard, Felix – 3488 WTh
 Renken, Remco – 1237 MT, 1308 MT, 1318 MT, 3949 WTh, 3977 WTh
 Rennig, Johannes – 3418 WTh
 Rennig, Johannes – 3429 WTh, 3675 WTh
 Repovs, Grega – 1309 MT, 1431 MT
 Research Consortium, GENDAAR – 1182 MT, 3452 WTh, 3930 WTh, 3931 WTh
 Reske, Martina – 1372 MT
 Retico, Alessandra – 1176 MT, 1878 MT
 Rettenmeier, Christoph – **3545 WTh**
 Retzepis, Kallirro – 1662 MT
 Reus, Lianne – 3438 WTh
 Reuters, David – 1997 MT
 Reuter, Martin – 4118 WTh
 Reuter-Lorenz, Patricia – 3816 WTh
 Reyes, Daisy – 1935 MT
 Reyes, Pablo – 1647 MT
 Reyes-Aguilar, Azalea – 3643 WTh
 Reyes-Zamorano, Ernesto – 1089 MT, 1105 MT, 1111 MT
 Reynolds, Richard – 1588 MT, 4097 WTh
 Rezaie, Roozbeh – 3569 WTh
 Rezk, Mohamed – 2177 MT
 Rheims, Sylvain – 2088 MT, 2112 MT
 Rhoads, Shawn – 2061 MT
 Rhyerd, Kayleigh – 3587 WTh
 Riad, Karine – 3808 WTh
 Ribary, Urs – 1755 MT, 1787 MT
 Ricciardi, Emiliano – 2075 MT, 2182 MT, **3635 WTh**
 Riccio, Eleonora – 1520 MT
 Rice, Patrick – 3863 WTh
 Richard-Devantoy, Stéphane – 3299 WTh
 Richards, Emily – 2146 MT, 2147 MT
 Richards, Marcus – 3838 WTh
 Richards, Todd – 1186 MT
 Richardson, Mark – 3115 WTh
 Richlan, Fabio – 3648 WTh
 Richmond, Sally – 3864 WTh
 Richter, Anja – 1324 MT, 1425 MT, **1504 MT**
 Richter, Monika – 1999 MT
 Richter, Monika – 2045 MT
 Ridderbusch, Isabelle – 1131 MT
 Ridley, Ben – 1637 MT
 Ridley, Julia – 4049 WTh

Rieck, Jenny – 3781 WTh, 3827 WTh
 Riecke, Lars – 1956 MT
 Riedel, Brandalyn – 1227 MT, 4157 WTh
 Riedel, Brandalyn – 3051 WTh
 Riedel, Michael – 1098 MT, **1428 MT**, **1674 MT**, 1942 MT, 3415 WTh, **4226 WTh**
 Riedel, Philipp – 1421 MT
 Riedel-Heller, Steffi – 3800 WTh
 Riedner, Brady – 2202 MT
 Riedy, Gerard – 3261 WTh
 Riedy, Gerard – 3287 WTh
 Riegel, Monika – 3365 WTh, 3698 WTh, 3709 WTh
 Ries, Anja – 3421 WTh
 Riese, Florian – 3029 WTh
 Riese, Harriëte – 1237 MT
 Riesel, Anja – 1298 MT, 1299 MT
 Rigolo, Laura – 1922 MT
 Rigolo, Laura – 1518 MT
 Rigoux, Lionel – 1387 MT, 1509 MT, 3344 WTh
 Rijks, Yvonne – 1145 MT
 Rikir, Estelle – 1762 MT
 Riklund, Katrine – 3779 WTh
 Rilling, James – 1998 MT
 Ringman, John – 1653 MT
 Rinker, Daniel – 3089 WTh, 3314 WTh
 Rioux, James – 1465 MT
 Rioux, Pierre – 1679 MT, 3313 WTh
 Risacher, Shannon – 3016 WTh
 Rish, Irina – 3939 WTh, 3940 WTh
 Rispoli, Joseph – 1580 MT
 Ritchie, Jacob – 3323 WTh
 Ritchie, Lesley – 3023 WTh
 Ritter, Jan – 1404 MT
 Ritter, Markus – 2184 MT
 Ritter, Petra – 3047 WTh
 Ritter, Stella – 3247 WTh
 Rittner, Letícia – 3073 WTh
 Riva, Federica – 4215 WTh
 Riva-Posse, Patricio – 1006 MT
 Rivero- Martínez, Fernando – 3490 WTh
 Rivière, Denis – 1867 MT, 2001 MT, 2048 MT, 4104 WTh
 Rivière, Denis – 2004 MT, 3869 WTh
 Rivière, Denis – 3533 WTh
 Roach, Shane – 1800 MT
 Roalf, David – **1302 MT**, 1577 MT, 1821 MT, 3153 WTh, 3318 WTh, **3320 WTh**, 4179 WTh
 Robaey, Philippe – 3767 WTh, 3771 WTh
 Robb Swan, Ashley – 1024 MT, 3283 WTh
 Robbins, Kay – 1678 MT
 Robert, Bradley – 3726 WTh
 Roberts, Angela – 3248 WTh

Roberts, Christopher – 2100 MT, 2104 MT
 Roberts, Gloria – 1200 MT, 1201 MT, 1324 MT
 Roberts, James – 1772 MT, 4066 WTh
 Roberts, Larry – 3563 WTh
 Roberts, Reece – 4136 WTh
 Roberts, Stuart – 3277 WTh
 Roberts, Timothy – 1197 MT
 Robertson, Dene – 1147 MT
 Robertson, Edwin M. – 3690 WTh
 Robertson, Frances – 1590 MT, 4108 WTh
 Robertson, Ian – 3234 WTh
 Robertson, Michaela – 1663 MT
 Robertsson, Naianna – 2068 MT, 3241 WTh
 Robin, Donald – 3747 WTh
 Robinson, Bradley – 4200 WTh, 4225 WTh, 4250 WTh
 Robinson, Charles – 3726 WTh
 Robinson, Elizabeth – **3862 WTh**
 Robinson, Emma – 3868 WTh, 3884 WTh
 Robinson, Jennifer – 1511 MT, 1884 MT, 1942 MT, 3158 WTh
 Robinson, Michael – 3974 WTh
 Robinson, Paul – 3760 WTh
 Robinson, Paul – 3766 WTh
 Robinson, Peter – 1757 MT, 1786 MT, 4119 WTh, 4124 WTh
 Robinson, Simon – 1413 MT, 1810 MT, 2035 MT
 Robinson Sterling, Amy – **1672 MT**, 1675 MT, 1681 MT
 Rocca, Maria – 4031 WTh
 Rocco, Brad – 1248 MT
 ROCHE-LABARBE, Nadège – 2159 MT
 Rodgers, Derek – 1957 MT
 Rodrigue, Karen – 3827 WTh
 Rodrigue, Karen – 2203 MT
 Rodrigues, Erika – 3245 WTh
 Rodrigues, Julia – 1916 MT
 Rodrigues, Paulo – 1667 MT, 1687 MT, 2027 MT
 Rodriguez, Teresa – 4133 WTh
 Rodriguez Moreno, Diana – 1251 MT
 Rodriguez-Herreros, Borja – 3315 WTh
 Rodriguez-Nieto, Geraldine – 1437 MT
 Rodriguez-Oroz, Maria Cruz – 1803 MT
 Rodriguez-Raecke, Rea – 4044 WTh
 Rodriguez-Rojas, Rafael – **3188 WTh**
 Roebbig, Josefin – 3812 WTh
 Roeber, Barb – 1432 MT
 Roebroek, Alard – **1567 MT**, 1740 MT
 Roediger, Jan – 1005 MT
 Roehri, Nicolas – 1635 MT
 Roelofs, Karin – 1130 MT, 3994 WTh
 Roes, Meighen – 1364 MT, 4086 WTh

Roesch, Etienne – 4177 WTh
 Rogachov, Anton – 2138 MT
 Rogalski, Emily – **3001 WTh**, **3632 WTh**
 Rogers, Baxter – 1163 MT, 3663 WTh
 Rogers, Christine – 1673 MT, 1682 MT, 1714 MT
 Rogers, Peter – 3337 WTh
 Rogowska, Jadiwga – 3067 WTh
 Rohan, Michael – 1043 MT
 Rohde, Luis Augusto – 3139 WTh
 Rohe, Tim – 2132 MT
 Rohloff, Robert – 2100 MT, 2104 MT
 Rohr, Christiane – 3272 WTh
 Rohrbach, Morgan – 1557 MT
 Rohrer, Jonathan – 3019 WTh
 Rohrig, Stephanie – 1018 MT
 Roinishvili, Maya – 1321 MT
 Rojas, Daniel – 3776 WTh
 Rojas, Gonzalo – 1992 MT
 Rokem, Ariel – 1732 MT
 Rokem, Ariel – 3656 WTh
 Roll, Mikael – 3672 WTh
 Rollins, Caitlin – 3859 WTh
 Rollins, Nancy – 1495 MT, 3879 WTh
 Rolls, Edmund T. – 3625 WTh, 4127 WTh
 Román, Claudio – 1867 MT
 Romani, Gian Luca – 2083 MT, 4101 WTh
 Romano, Marco – 3851 WTh
 Romano-Silva, Marco – 3601 WTh
 Romanzetti, Sandro – 1044 MT
 Rombouts, Serge – 1447 MT, 1595 MT, 3015 WTh
 Romero-Garcia, Rafael – 1161 MT, 1645 MT, **3860 WTh**
 Rommel, Nathalie – 3112 WTh
 Ronan, Lisa – 3104 WTh
 Rong, Menglin – 1361 MT
 Roopchansingh, Vinai – 1054 MT, 3954 WTh, 4155 WTh
 Roos, Annerine – 1132 MT, 1235 MT, 1241 MT
 Roovers, Tom – 1390 MT
 Roppelt, Christopher – 3421 WTh
 Rorden, Chris – 3242 WTh
 Rosa, Agostinho – 3527 WTh
 Rosa, Maria – 1822 MT, 1832 MT
 Rosa, Pedro – 1227 MT, 4157 WTh
 Rosanova, Mario – 2095 MT
 Rosazza, Cristina – 3079 WTh
 Rosch, Keri – 1519 MT
 Rose, Emma – 3832 WTh
 Roseman, Leor – 1208 MT, 2106 MT, 2152 MT, 3413 WTh
 Rosen, Adon – 1577 MT, 3153 WTh, 4179 WTh
 Rosen, Bruce – 1641 MT, 1744 MT, 2211 MT

Rosen, Howard – 3018 WTh, **3050 WTh**
 Rosenberg, David – 1283 MT, 1285 MT, 1978 MT, 3070 WTh
 Rosenberg, Jessica – 1372 MT
 Rosenberg, Monica – 2110 MT, 4040 WTh
 Rosenblatt, Jonathan – 4184 WTh
 Rosenke, Mona – 1661 MT
 Rosenstock, Tizian – **1039 MT**
 Rosenthal, Eric – 1742 MT
 Rosenthal, Gideon – **3860 WTh**
 Roser, Mathilde – 1346 MT
 Ross, Alison – 3440 WTh
 Ross, Deborah – **1882 MT**
 Ross, Ewan – 3258 WTh, 3277 WTh
 Ross, Richard – 1121 MT
 Ross, Thomas – 1076 MT, 3923 WTh, 4120 WTh
 Rosser, Anne – 3160 WTh
 Rossi, Sonja – 3614 WTh, 3684 WTh
 Rosso, Charlotte – 2038 MT
 Rost, Natalia – 1742 MT
 Rostrup, Egill – 3818 WTh
 Rostrup, Egill – 1429 MT
 Rotem-Kohavi, Naama – 1213 MT
 Roth, Jan – 3166 WTh, 3171 WTh
 Roth, Raquel – 1891 MT
 Rothman, Douglas – 3587 WTh
 Rothwell, John – 1030 MT
 Rothwell, Peter – 3819 WTh
 Rotshtein, Pia – 3380 WTh
 Rottstaedt, Fabian – 1219 MT
 Rouillard, Maud – 3167 WTh
 Rousseau, Marc-Etienne – 1679 MT, 3483 WTh
 Rowe, James – 3048 WTh
 Rowland, Laura – 1113 MT, 3780 WTh
 Rowley, Christopher – 1203 MT
 Roy, Alice Catherine – 1972 MT
 Roy, Dipanjan – 3835 WTh
 Roy, Nipa – 1757 MT
 Royal-Evans, Caroline – 3750 WTh
 Royet, Jean-Pierre – 2088 MT
 Rozman, Megan – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh
 Rozzanigo, Umberto – 1985 MT
 Rua, Catarina – 1522 MT
 Rubbert, Christian – 3179 WTh, 3185 WTh, 3815 WTh
 Rubia, Katya – 1147 MT
 Rubino, Cristina – 3742 WTh
 Rudas, Jorge – 4024 WTh, 4176 WTh
 Rueckert, Daniel – 1748 MT, 3868 WTh, 3884 WTh
 Rueda, Andrea – 1647 MT
 Rueda Delgado, Laura – 3525 WTh

Ruehl, Ria Maxine – 2114 MT
 Rufer, Michael – 1142 MT
 Ruff, Christian – 1133 MT, 3342 WTh
 Ruffmann, Claudio – 3191 WTh
 Rugg, Michael – 3385 WTh
 Ruhé, Eric – 1237 MT
 Ruigrok, Amber – 3439 WTh
 Ruparel, Kosha – **1302 MT**, 1577 MT, 1821 MT, 3153 WTh, 3318 WTh, **3320 WTh**, 4179 WTh
 Rupert, Petra – 1577 MT
 Rupp, Andre – 2141 MT
 Rupprecht, Rainer – 4251 WTh
 Rurak, Dan – 1736 MT
 Rushworth, Matthew – **2042 MT**, 4207 WTh
 Rusiniak, Mateusz – 1442 MT
 Russell, Bruce – 1331 MT
 Russo, Andrea – 4109 WTh, 4185 WTh
 Russo, Camilla – 3194 WTh
 Rütter, Tobias – 1032 MT
 Rutherford, Mary – 3884 WTh
 Rutherford, Saige – 3891 WTh
 Rutkowski, Paweł – 2127 MT, 3617 WTh
 Rutten, Geert-Jan – 1547 MT, 3386 WTh
 Růžicka, Evžen – 3166 WTh, 3171 WTh
 Růžicka, Filip – 3166 WTh, 3171 WTh
 Ryabinkina, Julia – 1934 MT
 Ryali, Srikanth – 1729 MT, **3678 WTh**
 Ryals, Anthony – 1262 MT
 Ryan, Meghann – 1700 MT, 3780 WTh
 Rydlo, Jan – 1963 MT
 Ryttefors, Mats – 3927 WTh
 Rytty, Riikka – 3045 WTh
 Ryyppö, Elisa – 4241 WTh

S

Saadon Grosman, Noam – 2151 MT
 Saalbach, Henrik – 3684 WTh
 Saban, Sara – 3149 WTh
 Sabatier, Manning – 3081 WTh
 Sabbah, Norman – 2168 MT
 Sabbah, Norman – 3476 WTh
 Sabuncu, Mert – 1806 MT
 Saccà, Francesco – 1520 MT, 3194 WTh
 Sacchet, Matthew – 1227 MT, 1241 MT
 Sachdev, Perminder – 2037 MT, 3047 WTh, 3303 WTh
 Sacheli, Matthew – 1853 MT, 3183 WTh
 Sachs, Matthew – 1189 MT
 Sack, Alexander – 1437 MT
 Saddy, James – 4177 WTh
 Sadeghi, Neda – 1598 MT, 1616 MT
 Sadikot, Abbas – 1896 MT

Sadovnick, Dessa – 3542 WTh
 Safi-Harab, Mouna – 1673 MT
 Safran, Avinoam – 2168 MT, 3476 WTh
 Saha, Debbrata – 4140 WTh
 Saha, Rick – 1923 MT
 Sahel, José-Alain – 2168 MT, 3476 WTh
 Sahin, Mustafa – 1920 MT, 3471 WTh
 Sahlas, Demetrios – 3248 WTh
 Sahoo, Dushyant – 1827 MT, 1836 MT
 Saigle, John – 1673 MT, 1682 MT
 Saitovitch, Ana – 1560 MT, 3607 WTh
 Saive, Anne-Lise – 2088 MT
 Saj, Arnaud – 3223 WTh
 Sajda, Paul – 2191 MT
 Sakai, Joseph – 3907 WTh
 Sakaie, Ken – 2046 MT, 3162 WTh, 4139 WTh
 Sakaki, Kohei – 1897 MT
 Sakakibara, Yasubumi – 3322 WTh
 Sakoglu, Unal – 3069 WTh
 Sakuma, Atsushi – 1334 MT
 Sakurai, Noriko – 3552 WTh
 Sakurai, Takashi – 3786 WTh
 Salat, David – 1280 MT
 Salch, Andrew – 4182 WTh
 Saleh, Muhammad – 3577 WTh
 Saleh, Soha – 1976 MT, 3399 WTh, 3944 WTh
 Salem, Victoria – 1438 MT
 Salimpoor, Valorie – 3406 WTh, 3412 WTh
 Sallet, Jerome – **2042 MT**, 4207 WTh
 Salman, Mustafa – 1516 MT, 3953 WTh, 4052 WTh
 Salmeron, Betty Jo – 1076 MT
 Salminen, Lauren – 1138 MT
 Salmon, Carlos – 1514 MT, 3795 WTh, 3797 WTh, 3824 WTh
 Salo, Taylor – 1098 MT, **1428 MT**, **1674 MT**, 1942 MT, 3415 WTh
 Salomon, Ronald – 2036 MT
 Salomon, Tom – 3331 WTh
 Salthouse, Timothy – 3785 WTh
 Salvador, Raymond – 1865 MT, 3464 WTh, 4125 WTh
 Salvador, Raymond – 3899 WTh
 Salvan, Piergiorgio – 3298 WTh, 3856 WTh
 Salzwedel, Andrew – 3861 WTh, 3979 WTh
 Samanez-Larkin, Gregory – 3611 WTh
 Sämann, Philipp – 1254 MT, 2221 MT, 4074 WTh
 Sämann, Philipp – 1138 MT, 1241 MT, 1466 MT, 4157 WTh
 Samartsidis, Pantelis – 1849 MT
 Sambataro, Fabio – 3957 WTh
 Sammer, Gebhard – 3988 WTh
 Sammler, Daniela – 1970 MT

Sampat, Mehul – 4041 WTh
 Sampath, Hemalatha – 3780 WTh
 Samson, Séverine – 3132 WTh
 Sanchez-Catasus, Carlos A. – **3188 WTh**
 Sanchez-Panchuelo, Rosa – 4186 WTh
 Sanda, Nicolae – 3476 WTh
 Sanders, Robert – 2095 MT
 Sandhu, Anterpal – 3575 WTh
 Sandhu, Anterpal Singh – 3574 WTh
 Sandini, Corrado – 1312 MT, 1363 MT
 Sandoval, Hugo – 1307 MT
 Sandrine, de Ribaupierre – 3791 WTh
 Sanes, Jerome – 1980 MT, 3348 WTh
 Sanfey, Alan – 1390 MT
 Sanford, Benjamin – 3292 WTh
 Sanford, Nicole – 4093 WTh
 Sanford, Ryan – 1258 MT
 Sanfratello, Lori – 1756 MT
 Sanguinetti, Ana – 3424 WTh
 Sanmiguel, Claudia – 3141 WTh
 Sans, Anna – 3424 WTh, 3662 WTh, 3706 WTh
 Santamauro, Nicole – 1431 MT
 Santangelo, Susan – 1169 MT
 Santoro, Roberta – 3674 WTh
 Santos, Antônio – 3022 WTh, 3795 WTh
 Santos, Yusniel – 3389 WTh
 Santos Monteiro, Thiago – 1020 MT, **1026 MT**
 Santos Silva, João Paulo – 3022 WTh
 Santos-Ribeiro, Andre – 3413 WTh
 Santos-Rodríguez, Yusniel – 3091 WTh
 Sanz-Leon, Paula – 1757 MT
 Saposnik, Gustavo – 3248 WTh
 Saracco, Jérôme – 3639 WTh
 Sarhadi, Kasra – 1036 MT
 Sarlls, Joelle – 1512 MT
 Sarma, Devapratim – 3521 WTh
 Sarnhein, Johannes – 1126 MT, 1419 MT
 Sarró, Salvador – 3899 WTh
 Sarsilmaz, Aysegül – 1548 MT
 Sartori, Giuseppe – 1834 MT
 Sarubbo, Silvio – 1985 MT, 2047 MT
 Sasabayashi, Daiki – 1334 MT
 Sasaki, Erika – 3322 WTh
 Sasaki, Yukako – 1897 MT
 Sase, Takumi – 2174 MT
 Sase, Takumi – 1795 MT
 Saslow, Adam – 1881 MT
 Sathian, K – 1949 MT
 Sati, Pascal – 3604 WTh
 Sato, Cristiane – 3854 WTh
 Sato, Hiroki – 3457 WTh
 Sato, João Ricardo – 3139 WTh, 3854 WTh

Sato, Masa-aki – 1773 MT
 Sato, Takayuki – 1667 MT
 Satterthwaite, Theodore – **1302 MT**, 1303 MT, 1577 MT, 1821 MT, 1823 MT, 2031 MT, 3153 WTh, 4179 WTh
 Sattin, Davide – 3079 WTh
 Saucier, Philippe – 3746 WTh
 Sauter, Disa – 1470 MT
 Savadjiev, Peter – 1344 MT
 Saverino, Cristina – 3781 WTh
 Savitz, Jonathan – 1228 MT, 1229 MT, 1301 MT
 Savostyanov, Alexander – 2220 MT
 Savostyanov, Kirill – 1277 MT
 Savostyanov, Kirill – 1275 MT
 Savransky, Bhim Anya – 3780 WTh
 Saxena, Abhishek – 4219 WTh
 Saykin, Andrew – 3016 WTh
 Sayour, Chadi – 1947 MT
 Scalzo, Fabien – 3897 WTh
 Scantlen, Greg – 1941 MT
 Scarapicchia, Vanessa – 3011 WTh, 3012 WTh
 Scariati, Elisa – 1312 MT, 1363 MT, 1835 MT
 Scelsi, Marzia – **3294 WTh**
 Schaake, Jonathan – 2198 MT
 Schaare, H Lina – 3812 WTh
 Schabus, Manuel – 2196 MT, 3718 WTh
 Schacht, Annkathrin – 3633 WTh
 Schad, Daniel – 1095 MT
 Schaefer, Gunnar – **1677 MT**
 Schaefer, Pamela – 1742 MT
 Schaefer, Stacey – 1401 MT, 1418 MT
 Schaer, Katharina – 1979 MT
 Schaer, Marie – 1312 MT, 1363 MT, 1835 MT
 Schäfer, Andreas – 1296 MT
 Schäfer, Axel – 1084 MT
 Scharge, Marcel – 3297 WTh
 Scharnowski, Frank – 1397 MT, 1493 MT, 1514 MT, 1690 MT, 3223 WTh
 Schaufelberger, Maristela – 1227 MT, 4157 WTh
 Scheerer, Hanne – 1397 MT, 1493 MT
 Scheffler, Klaus – 2211 MT, 4149 WTh
 Scheffler, Klaus – 1987 MT, 3720 WTh
 Scheiblich, Antonia – 1397 MT
 Scheinost, Dustin – 1297 MT, 4040 WTh, 4042 WTh
 Schellong, Julia – 3435 WTh
 Scheltens, Philip – 3015 WTh
 Schelter, Björn – **1000 MT**
 Schene, Aart – 1237 MT
 Schenk, Geert – 2019 MT
 Scherer, Ethan – 3374 WTh
 Schettini, Elana – 1558 MT
 Schick, Matthis – 1142 MT

Schiffer, Anne-Marika – **3189 WTh**
 Schiffler, Patrick – 1701 MT, 1702 MT
 Schilbach, Leonhard – 3140 WTh, 4233 WTh, 4246 WTh
 Schiller, Katherine – 3750 WTh
 Schiller, Raisa – 1575 MT
 Schindler, Andreas – 3428 WTh
 Schindler, Matthew – 3604 WTh
 Schirmer, Markus – 1742 MT
 Schirner, Michael – 3047 WTh
 Schizophrenia Working Group, ENIGMA – 1356 MT
 Schlagenhauf, Florian – 1095 MT
 Schlaggar, Bradley – 3728 WTh
 Schlegel, Alex – 3745 WTh
 Schleifer, Charles – 1309 MT, 1431 MT, 1928 MT
 Schleifer, Charles – 1335 MT, 2218 MT
 Schlömer, Philipp – 4106 WTh
 Schlumm, Torsten – 1296 MT
 Schmaal, Lianne – 1227 MT
 Schmaal, Lianne – 1241 MT, 1254 MT, 1292 MT, 1356 MT, 4157 WTh
 Schmid, Thomas – 1521 MT
 Schmidhammer, Robert – 4023 WTh
 Schmidt, Andre – 1474 MT
 Schmidt, Charlotte – **3243 WTh**
 Schmidt, Julia – 3267 WTh, 3486 WTh, 4085 WTh
 Schmidt, Peter – **3862 WTh**
 Schmidt, Thomas – 1529 MT
 Schmidt, Timo – 2105 MT, 3753 WTh
 Schmidt-Erfurth, Ursula – 2184 MT
 Schmidt-Samoa, Carsten – 1524 MT
 Schmidt-Wilcke, Tobias – 4077 WTh
 Schmithorst, Vincent – 4049 WTh
 Schmitt, Andrea – 1367 MT, 3580 WTh
 Schmitt, Friedhelm – 3385 WTh
 Schmitt, J. Eric – 3318 WTh, **3320 WTh**
 Schmitz, Christina – 1181 MT, 1972 MT
 Schmitz, Christoph – **1000 MT**
 Schmitz, Taylor – 3377 WTh
 Schnack, Hugo – 1145 MT
 Schnakenberg, Ashley – 1114 MT
 Schneider, Christoph – 1563 MT
 Schneider, Daniela – 3697 WTh
 Schneider, Frank – 4253 WTh
 Schneider, Heike – **1039 MT**
 Schneider, Joerg – 3606 WTh
 Schneider, Julie – 3534 WTh, 3792 WTh, 3799 WTh
 Schneider, Marian – 2183 MT, 3467 WTh
 Schneider, Maude – 1312 MT, 1363 MT, 4218 WTh
 Schneider, Max – 1394 MT
 Schneider, Michael – 1494 MT
 Schneider, Nora – 3847 WTh

- Schneider-Axmann, Thomas – 3580 WTh
 Schnitzler, Alfons – 1273 MT, 3179 WTh, 3185 WTh, 3538 WTh, 3558 WTh, 3634 WTh
 Schnyer, David – 3997 WTh, 4213 WTh
 Schober, Martin – 4106 WTh
 Schöbi, Dario – **3501 WTh**
 Schoen, Andrew – 1401 MT
 Schoenmakers, Sanne – 1725 MT
 Schoevers, Robert – 1236 MT, 1237 MT
 Schofield, Peter – 1324 MT
 Scholte, Steven – 3700 WTh
 Scholz, Jan – 3489 WTh
 Scholz, Vanessa – 1202 MT
 Schönauer, Monika – 1840 MT, 3718 WTh, 3720 WTh, **3762 WTh**
 Schonberg, Tom – 3331 WTh
 Schoonheim, Menno – 1913 MT, 2019 MT, 3057 WTh, 3074 WTh
 Schoss, Tomke – 1524 MT
 Schott, Jonathan – 3019 WTh, **3294 WTh**, 3838 WTh
 Schouwenaars, Irena – 3386 WTh
 Schreiber, Jan – 2045 MT
 Schreiber, Jane – 1269 MT
 Schremm, Andrea – 3672 WTh
 Schröder, Chantal – 3455 WTh
 Schröder, Pia – 2105 MT
 Schroeder, Charles – 1028 MT, **1882 MT**, 2163 MT
 Schroeder, Matthew – 1262 MT
 Schroeter, Matthias – 1257 MT, 3034 WTh, 3166 WTh, 3171 WTh, 3173 WTh, 3783 WTh, 3800 WTh
 Schrooten, Maarten – 1764 MT, 2080 MT
 Schrouff, Jessica – 1937 MT
 Schubotz, Ricarda – **3189 WTh**
 Schudlo, Larissa – 3602 WTh
 Schuff, Norbert – 1529 MT
 Schuh, Andreas – 3868 WTh, 3884 WTh
 Schühly, Wolfgang – 3715 WTh
 Schuhmann, Teresa – 1437 MT
 Schuler, Anna-Lisa – 1063 MT, 3630 WTh, 3855 WTh
 Schuler, Gerhard – 1257 MT
 Schulz, Anna – 3435 WTh
 Schulz, Robert – 1605 MT
 Schumacher, Eric – 1989 MT, 4175 WTh
 Schumacher, F. Konrad – **1000 MT**
 Schumacher, Julia – 1914 MT, 3195 WTh
 Schumacher, Lena – **1000 MT**, 2043 MT
 Schumann, Andy – 1517 MT, 1796 MT
 Schumann, Gunter – 3151 WTh, 3469 WTh
 Schurz, Matthias – 4221 WTh
 Schuster, Christina – 3506 WTh
 Schuster, Verena – 1233 MT, 3455 WTh
 Schutte, Maya – 1349 MT
 Schuyler, Brianna – 1401 MT
 Schwab, Simon – 4033 WTh
 Schwartz, Ernst – 3630 WTh, 3855 WTh
 Schwartz, Sophie – 4062 WTh
 Schwartz, Yannick – 3904 WTh
 Schwartzman, Armin – **4171 WTh**
 Schwarz, Christopher – 3908 WTh
 Schwarz, Johanna – 1909 MT
 Schwarz, Lena – 1239 MT
 Schwarz, Nicolette – 1280 MT
 Schweiger, Janina – 1494 MT
 Schweinhardt, Petra – 2146 MT, 2147 MT
 Schweitzer, Susanne – 4243 WTh
 Schweizer, Renate – 1460 MT, 2158 MT, 3743 WTh
 Schweizer, Tom – 1818 MT, 3291 WTh, 3664 WTh
 Schwenck, Christina – 4210 WTh, 4212 WTh
 Schwendemann, Matthias – 3737 WTh
 Schwender, Holger – **3915 WTh**
 Schwenker, Kerstin – 1484 MT
 Schöpf, Veronika – 1443 MT, 3715 WTh
 Scinska-Bienkowska, Anna – 1442 MT
 Sclocco, Roberta – 1528 MT
 Scoggins, Matt – 1269 MT, 3768 WTh
 Scott, Cobb – 1121 MT, 3153 WTh
 Scott, David – 4041 WTh
 Scott, Erik – 3546 WTh
 Scott, Greg – 3258 WTh, 3276 WTh, 3277 WTh
 Scott, Terri – 3647 WTh
 Scrivener, Catriona – 4177 WTh
 Seal, Marc – 3829 WTh, 3833 WTh
 Seal, Marc – 1445 MT, 1948 MT, 2029 MT, 3849 WTh, 3850 WTh, 3864 WTh
 Sebold, Miriam – 1088 MT
 Seeck, Margitta – 2117 MT, 3114 WTh
 Seedat, Soraya – 1132 MT, 1138 MT, 3190 WTh
 Seelen, Henk – 1460 MT
 Seeley, William – 3018 WTh, **3050 WTh**
 Segaert, Katrien – 1552 MT
 Seghier, Mohamed – 3650 WTh
 Seguin, Jean – 1896 MT
 Sehatpour, Pejman – 1018 MT
 Sehm, Bernhard – **2074 MT**
 Sehmbi, Manpreet – 1203 MT
 Seidel, Maria – 3097 WTh
 Seidenberg, Mark – 3587 WTh
 Seidl, Rainer – 3630 WTh, 3855 WTh
 Seidler, Rachael – 3392 WTh
 Seidlitz, Jakob – 1645 MT, **3860 WTh**
 Seidman, Larry – 4076 WTh, 4219 WTh
 Seifritz, Erich – 1072 MT, 1397 MT, 1929 MT, 3077 WTh
 Seiger, Rene – 3454 WTh
 Seipäjärvi, Santtu – 2160 MT
 Seki, Misato – 3322 WTh
 Seki, Yoichi – 3552 WTh
 Sekiguchi, Atsushi – 3293 WTh
 Selvackadunco, Sashika – 4133 WTh
 Selvadurai, Louisa – 3213 WTh
 Selvan, Easter – 1976 MT
 Semmel, Eric – 1266 MT
 Semple, Scott – 1306 MT
 Semrau, Jennifer – 3228 WTh
 Senden, Mario – 1536 MT
 Sengupta, Shubharthi – **1567 MT**
 Sentis, Amy – 1895 MT, 2143 MT, 2145 MT
 Seo, Hyeon – **1051 MT**
 Seo, Jeong Pyo – 1569 MT, 1572 MT
 Seo, Youngseob – 1554 MT
 Seo, YouSung – 1570 MT, 1573 MT, 1574 MT
 Seok, Ji-woo – 1473 MT
 Seol, Jaeho – 3409 WTh
 Seong, Si-Baek – 4146 WTh
 Sepehrband, Farshid – 3307 WTh, 4194 WTh
 Sepeta, Leigh – 1944 MT
 Sereno, Martin – **2022 MT**
 Seres, Peter – 3088 WTh, 3723 WTh, 3802 WTh
 Sergeev, Dmitry – 1934 MT
 Serpa, John – 1278 MT
 Serra-Grabulosa, Josep M – 3424 WTh, 3662 WTh, 3706 WTh
 Serrano, Noelia – 3009 WTh
 Servaas, Michelle – 1237 MT, 1318 MT
 Setarehdan, Seyed Kamaledin – 2139 MT
 Setsompop, Kawin – 1641 MT, 2211 MT
 Settell, Megan – 1008 MT
 Seulgi, Eun – 1446 MT
 Seurinck, Ruth – 1950 MT, 4187 WTh
 Sexton, Claire – 1870 MT
 Seymour, Karen – 1519 MT
 Shadi, Kamal – 1055 MT, 2072 MT
 Shafto, Meredith – 1726 MT
 Shah, Amar – 1438 MT
 Shah, N.J. – 1372 MT
 Shahab, Saba – 1924 MT
 Shahdloo, Mohammad – 2079 MT
 Shahinfard, Elham – 1853 MT, 3183 WTh
 Shaikh, Javeed – 1830 MT
 Shakil, Sadia – 1945 MT
 shalbaf, reza – 1793 MT
 Shamir, Ittai – 3436 WTh
 Shampine, Larry – 3482 WTh
 Shams, Nasim – 1633 MT
 Shamshiri, Elhum – 3115 WTh, 3131 WTh
 Shan, Tong – 1322 MT
 SHAN, Zack – 3085 WTh
 Shang, Desheng – 1222 MT
 Shany, Ofir – 3411 WTh, 4214 WTh
 Shao, Junming – 1317 MT
 Shapiro, Allison – 1788 MT
 Shaqiri, Albulena – 1321 MT
 Sharan, Ashwini – 1642 MT
 Sharer, Elizabeth – 1975 MT
 Sharkey, Rachel – 1896 MT
 Sharma, Nikhil – 3838 WTh
 Sharma, Niraj – 3496 WTh
 Sharmin, Nusrat – 2055 MT
 Sharoh, Daniel – 1552 MT
 Sharp, David – 1023 MT, 3258 WTh, 3276 WTh, 3277 WTh, 3279 WTh
 Shatil, Anwar – 3484 WTh
 Shattuck, David – 1594 MT, 1650 MT, 4102 WTh
 Shaw, Calvin – 1099 MT
 Shaw, Marnie – 3404 WTh
 Shawe-Taylor, John – 1832 MT
 Shay, Elizabeth – 3636 WTh
 shayestehfard, kimia – 1014 MT
 Shaywitz, Bennett – 3663 WTh
 Shaywitz, Sally – 3663 WTh
 She, Hsiao-Ching – 3364 WTh, 3514 WTh, 3517 WTh
 Sheline, Yvette – 1303 MT
 Shen, Dinggang – 1583 MT, 1593 MT, 2008 MT, 3866 WTh, **3872 WTh**, 4053 WTh, 4105 WTh
 Shen, Dinggang – 3882 WTh, 3902 WTh, 3929 WTh
 Shen, Hui – 2200 MT, 3116 WTh, 3420 WTh
 Shen, Jun – 1329 MT
 Shen, Kelly – 3222 WTh
 Shen, Kelly – 3406 WTh, 3412 WTh, 3510 WTh
 Shen, Xilin – 4042 WTh
 Shen, Xueyi – 3438 WTh
 Shen, Yutai – 2185 MT
 Sheng, Jingwei – **1015 MT**, 3547 WTh, 3559 WTh
 Sheng, Jintao – 1222 MT
 Sherkov, Nikolay – 3183 WTh
 Shenton, Martha – 1344 MT, 1611 MT, **3320 WTh**
 Shepherd, Timothy – 3064 WTh
 Shergill, Sukhi – 1328 MT
 Shergill, Sukhi – 1030 MT
 Sheridan, Cathlin – 3213 WTh
 Sherman, Lauren – 1423 MT
 Sherr, Elliott – 1197 MT
 Shetty, Teena – 3266 WTh
 Shi, Dapeng – 1373 MT

Shi, Dapeng – 1439 MT
 Shi, Dapeng – 1376 MT
 Shi, Dapeng – 1440 MT
 Shi, Feng – 4115 WTh
 Shi, Feng – 3458 WTh
 Shi, Junxing – 2169 MT, **2172 MT**, 2173 MT
 Shi, Lei – 3895 WTh
 Shi, Ran – 4060 WTh
 Shi, Xiao – 1077 MT
 Shi, Yonggang – 1653 MT, 1743 MT, 3889 WTh, 4110 WTh
 Shi, Zhaoyue – **1481 MT**
 Shigemasu, Hiroaki – 1964 MT
 Shih, Chuan-Cheng – 3514 WTh
 Shih, Yao-Chia – 1996 MT, 3378 WTh, 3383 WTh
 Shikauchi, Yumi – 3914 WTh
 Shikuma, Cecilia – 1261 MT
 Shim, Geumsook – 3039 WTh
 Shimada, Sotaro – 2129 MT, 4240 WTh
 Shin, Chol – 1374 MT
 Shin, Dong Woo – 3555 WTh
 Shin, Jaemin – 4175 WTh
 Shin, Jung Eun – 1141 MT
 Shin, Rick – 3004 WTh
 Shin, Seong A – 1264 MT
 Shin, SoMin – 1570 MT, 1573 MT, 1574 MT
 Shin, Wanyong – 1478 MT, 1807 MT, 2210 MT, 4139 WTh
 Shin, Yong-Wook – 4097 WTh
 Shin, Yu-Bin – 1475 MT, 1722 MT, 3330 WTh
 Shine, Jonathan – 3906 WTh
 Shine, Mac – 3165 WTh, 3209 WTh, 3375 WTh, 4072 WTh
 Shinkareva, S. – 3636 WTh
 Shinn, Maxwell – 1645 MT, **3860 WTh**
 Shinohara, Russell – **1302 MT**, 1577 MT, 1821 MT, 3153 WTh, 4179 WTh
 Shirbin, Chris – 3236 WTh
 Shitara, Hitoshi – 3911 WTh
 Shmuel, Amir – **1483 MT**, 1830 MT
 Shokoufandeh, Ali – 1751 MT
 Shokri Kojori, Ehsan – 2205 MT, 4045 WTh
 Shokri-Kojori, Ehsan – 4006 WTh
 Shook, Devon – 1145 MT
 Shpigel, Emmanuel – 1059 MT
 Shu, Hua – 3640 WTh, 3652 WTh
 Shu, Hua – 3304 WTh
 Shu, Li – 1721 MT
 Shu, Ni – 3027 WTh
 Shuai, Lan – 3592 WTh
 Shuffrey, Lauren – 1144 MT
 Shulka, Dinesh – 1463 MT

Shunmugavel, Anandakumar – 3951 WTh
 Sias, Ana – 3018 WTh, **3050 WTh**
 Sibille, Etienne – 1248 MT
 Sible, Isabel – **3050 WTh**
 Siciliano, Rachel – 3787 WTh
 Sideman, Noah – 1642 MT, 3120 WTh
 Siegel, Linda – 3651 WTh
 Sieger, Tomáš – 3166 WTh, 3171 WTh
 Sieksmeyer, Jan – 3634 WTh
 Sienkiewicz-Jarosz, Halina – 1442 MT
 Sierk, Anika – 2053 MT
 Siers, Brooke – 1399 MT
 Siers, Brooke – 1416 MT
 Sigl, Benjamin – 3179 WTh, 3185 WTh, 3815 WTh
 Sik, Hin Hung – 3522 WTh, 3523 WTh
 Silani, Giorgia – 4215 WTh
 Silbersweig, David – 3629 WTh
 Silk, Timothy – 1445 MT, 3850 WTh
 Silson, Edward – 1062 MT
 Silson, Edward – 1430 MT
 Silva, Katiane – 3139 WTh
 Silva, Marcel – 3854 WTh
 Silva, Pablo – 1867 MT
 Silva, Pedro Henrique – 4030 WTh
 Silveira, Luis – 3992 WTh
 Silvera, Marta – 3626 WTh
 Silverman, Elliott – 3408 WTh
 Silverstein, Brian – 1352 MT
 Silverstein, Steven – **4000 WTh**
 Sim, Kang – 1300 MT
 Simmank, Fabian – 1427 MT
 Simmons, Julian – 3849 WTh
 Simmons, Laura – 1017 MT
 Simon, Alexander – 2085 MT
 Simon, Rozalyn – 1456 MT
 Simon, Tony J. – 3318 WTh, **3320 WTh**
 Simonet, Marie – 3518 WTh
 Simons Variation in Individuals Project Consortium, the – 1197 MT, 3315 WTh, 3316 WTh
 Simonyan, Kristina – 3938 WTh
 Simpson, Helen – 1291 MT, 1292 MT, 2066 MT
 Simsek, Fatma – 1324 MT
 Sin, Emily – 1245 MT
 Singanamalli1, Asha – 3266 WTh
 Singer, Elyse – 1594 MT
 Singer, Neomi – 3411 WTh
 Singh, Aditya – 1926 MT
 Singh, Krish – 1314 MT, 3554 WTh
 Singh, Manpreet – 1246 MT, 3839 WTh
 Singh-Manoux, Archana – 1870 MT, 3828 WTh, 3975 WTh
 Siniatchkin, Michael – 4212 WTh

Sinitsyn, Valentin – 3646 WTh
 Sinnett, Daniel – 3767 WTh
 Sirin Inan, Nermin Gorkem – 3126 WTh
 Sisakhti, Minoo – 1452 MT
 Sitek, Kevin – 3686 WTh
 Siu, Danny – 3618 WTh
 Siuda-Krzywicka, Katarzyna – 2131 MT
 Siugzdaite, Roma – 3682 WTh
 Sivia, Perveen – 3084 WTh
 Skinner, Sasha – 2085 MT
 Skocic, Jovanka – 3449 WTh, 3573 WTh
 Skocic, Jovanka – 1276 MT, 1417 MT, 3890 WTh
 Skorheim, Steven – 3726 WTh
 Skorko, Maciej – 3458 WTh
 Sladky, Ronald – **1058 MT**, 1063 MT, 1397 MT, 1413 MT, 1414 MT, 1493 MT, 1690 MT, 1810 MT
 Sleigh, Jamie – 2095 MT
 Sleurs, Charlotte – 1106 MT, 1263 MT, 3112 WTh
 Sliva, Danielle – 1920 MT
 Sliwa, Julia – **4223 WTh**
 Sliwinska, Magdalena – 3699 WTh
 Slone, Edward – 3423 WTh
 Sluming, Vanessa – 1608 MT
 Small, Dana – 2142 MT
 Small, Steven – 3618 WTh
 Smallwood, Jonathan – 1833 MT, 2091 MT, 3123 WTh, 3400 WTh, **4203 WTh**
 Smallwood, Rachel – 3086 WTh
 Smart, Colette – 3012 WTh
 Smedby, Örjan – 2059 MT
 Smelror, Runar – 1348 MT
 Smirnov, Vladimir – 1275 MT, 1277 MT
 Smith, Aynsley – 3281 WTh
 Smith, Bradley – 1229 MT
 Smith, Christopher – 3326 WTh
 Smith, David – 1426 MT
 Smith, David – 1578 MT
 Smith, Dawn – 1924 MT
 Smith, Derek – 1989 MT
 Smith, Emily – 3003 WTh
 Smith, Eric – 3817 WTh
 Smith, Fraser – 2188 MT
 Smith, Marie-Claire – 3244 WTh
 Smith, Robert – 1704 MT
 Smith, Stephen – 1666 MT, 1748 MT, 1859 MT, 1890 MT, 1892 MT, 1911 MT, 3461 WTh, 3868 WTh, 3884 WTh, **3955 WTh**, 3975 WTh, 4019 WTh, 4020 WTh, 4033 WTh, 4036 WTh, 4190 WTh
 Smith, Suzanne – 1278 MT
 Smits, Anja – 3927 WTh
 Smolka, Michael – 1088 MT, 1095 MT, 1421 MT, 3151 WTh, 3469 WTh, 3877 WTh, **4032 WTh**

Smyth, Penny – 1606 MT
 Sniderman, Dahlia – 1684 MT, 1714 MT
 Snene, Cyrine – 1268 MT
 Sneve, Markus – **3703 WTh**
 Snider, Sarah – 1082 MT
 Snipes, Sophia – 1960 MT
 Snook, Corey – 1024 MT
 Snyder, Abraham – 1634 MT, 3958 WTh
 Soares, Jair – 3841 WTh, 4157 WTh
 Sobanska, Marta – 1442 MT
 Sobhani, Mona – 3232 WTh
 Soch, Joram – 1709 MT, 1728 MT
 Soddu, Andrea – 4024 WTh, 4176 WTh
 Söderholm, Johan – 1260 MT
 Sohn, Bo Kyoung – 1264 MT
 Sokołowski, Andrzej – 1422 MT
 Solanes, Aleix – 1865 MT, 3464 WTh, 3899 WTh, 4125 WTh
 Solar, Kevin – 1643 MT, 3484 WTh
 Soldin, Steven – **3862 WTh**
 Soliman, Ramy – 1446 MT
 Solmaz, Berkan – 1557 MT
 Solo, Victor – 4061 WTh
 Solodkin, Ana – 3047 WTh
 Soloff, Paul – 1448 MT, 1745 MT
 Solomon, Jack – 3741 WTh
 Solovieva, Anastasia – 1275 MT, 1277 MT
 Solowij, Nadia – 1079 MT, 3451 WTh
 Soltanian-Zadeh, Hamid – 4059 WTh
 Soltysik, David – 1444 MT
 Solway, Alec – 3140 WTh
 Somerville, Leah – 1383 MT
 Sommer, Christian – 1095 MT
 Sommer, Iris – 1349 MT
 Sommer, Jens – 3455 WTh
 Sommer, Martin – 3082 WTh
 Sommer, Werner – 3633 WTh
 Sommer, Wolfgang – 1084 MT
 Sommerfeld, Max – **4171 WTh**
 Sommerfeldt, Sasha – 1401 MT
 Sommerfeldt, Sasha – 1418 MT
 Son, Seung Hyun – 3041 WTh
 Son, Young-Don – 1360 MT, 3610 WTh
 Sona, Diego – 3957 WTh, 4031 WTh
 Song, Chang Geun – 3530 WTh
 Song, Ming – 1361 MT, 1362 MT, 3295 WTh
 Song, Sutaο – 1400 MT
 Song, Xiaowei – 3281 WTh, 3388 WTh
 Song, Xiaowei – 1527 MT, 3040 WTh, 3084 WTh, 3387 WTh
 SONG, Xiaoyu – 3504 WTh
 Song, xiuli – 1238 MT

Song, Yanmin – 3116 WTh
 Song, Yiyi – 1651 MT, 2166 MT
 Songsiri, Jitkomut – 1766 MT
 Soniè, Sandrine – 1181 MT
 Sonkar, Gaurav – 1650 MT
 Sonkusare, Saurabh – 1420 MT
 Sonntag, Hermann – 1776 MT
 Sood, Surabhi – 1997 MT
 Soosay, Ian – 1331 MT
 Soreni, Noam – 1291 MT, 1292 MT
 Soreq, Eyal – 3932 WTh, 3933 WTh
 Sorger, Bettina – 1960 MT
 Sorger, Bettina – 1956 MT, 3384 WTh, 3466 WTh
 Soriano-Mas, Carles – 1295 MT
 Soros, Peter – 3143 WTh
 Sossi, Vesna – 1853 MT, 3183 WTh
 Sotiras, Aristidis – 1837 MT, 2031 MT, **3915 WTh**
 Sotiropoulos, Stamatios – 1748 MT, 1749 MT, 1758 MT, 3884 WTh, 4123 WTh
 Soudi, Laila – 1246 MT
 Soulier, Elisabeth – 1637 MT
 Soutcheck, Alexander – 4247 WTh
 Southgate, Victoria – 3598 WTh
 Southgate, Victoria – 3874 WTh
 Sowell, Elizabeth – 2033 MT
 Spalletta, Gianfranco – 1291 MT, 1292 MT
 Spangler, Robert – 1765 MT
 Spaniel, Filip – 1963 MT
 Sparrey, Carolyn – 1527 MT, 3574 WTh
 Spataro, Rossella – 1961 MT
 Spechler, Philip – 1136 MT, 3146 WTh, 3151 WTh, 3317 WTh, 3360 WTh, 3470 WTh, 3871 WTh, 4120 WTh
 Spedo, Carina – 4030 WTh
 Spencer, Caroline – 3133 WTh
 Sperl, Jonathan – 3266 WTh
 Sperling, Michael – 1642 MT
 Spetsieris, Phoebe – 3176 WTh, 3177 WTh
 Spinelli, Laurent – 2117 MT
 Spittle, Alicia – 3829 WTh, 3833 WTh
 Spitzer, Hannah – 1869 MT
 Sponheim, Scott – 1347 MT
 Spooner, Rachel – 1027 MT, 3561 WTh, 3568 WTh, 3570 WTh, 3886 WTh
 Spooren, Will – 1664 MT
 Spoormaker, Victor – 1394 MT
 Sporn, Sebastian – 1974 MT
 Sporns, Olaf – **3860 WTh**, 4075 WTh
 Spreng, Nathan – 1719 MT, 4035 WTh
 Spreng, R. Nathan – 3823 WTh
 Sprooten, Emma – 1353 MT

Sreenivasan, Karthik – 2015 MT, 2069 MT, 2071 MT, 3038 WTh, 3169 WTh, 3178 WTh, 3208 WTh, 3210 WTh, 3211 WTh, 4054 WTh, 4142 WTh, 4144 WTh, 4160 WTh, 4165 WTh
 Sridhar, Anissa – 3686 WTh
 Sripada, Chandra – 3292 WTh
 St Pier, Kelly – 3131 WTh
 Stacey, Richard – **1889 MT**
 Stacks, Ann – 3887 WTh
 Stadler, Joerg – 1555 MT
 Staempfli, Philipp – 1929 MT
 Stagg, Charlotte – 1029 MT, 1052 MT, 1430 MT, **2223 MT**, 3062 WTh, 3539 WTh
 Stagnitti, Monique – 3213 WTh
 Stahl, Patrick – 1925 MT, 2137 MT
 Staines, Donald – 3085 WTh
 Staines, W. Richard – 1056 MT, 2111 MT
 Stains, Jean – 1278 MT, 2144 MT
 Stalanssens, Willeke – 1064 MT, 3114 WTh
 Stam, Cornelis – 3127 WTh
 Stämpfli, Philipp – 2213 MT, 2218 MT, 3077 WTh
 Stanfield, Andrew – 3174 WTh
 Stanley, Jeffrey – 1286 MT, 1352 MT, 3588 WTh
 Starc, Martina – 1431 MT
 Starck, Goran – 3095 WTh
 Starck, Tuomo – 1809 MT, 4010 WTh
 Staver, Alexis – 1246 MT
 Stavropoulos, Vasileios – 1042 MT
 Steel, Adam – 1616 MT
 Steel, Adam – 1430 MT
 Steele, Christopher – 1704 MT, 2058 MT
 Steenwijk, Martijn – 2019 MT
 Stefan, Mihaela – 2066 MT, 3098 WTh
 Steffener, Jason – 3808 WTh
 Stegmayer, Katharina – 1343 MT, 1344 MT, 1563 MT, 3184 WTh
 Stein, Dan – 1100 MT, 1130 MT, 1132 MT, 1138 MT, 1235 MT, 1241 MT, 1261 MT, 1271 MT, 1291 MT, 1292 MT, 1295 MT, 1463 MT, 4157 WTh
 Stein, Elliot – 1076 MT, 1100 MT, 3317 WTh, 3923 WTh, 4120 WTh
 Stein, Jason – 3546 WTh
 Stein, Joel – 3125 WTh
 Steinau, Sarah – 1563 MT
 Steinbach, Till – 1460 MT
 Steinemann, Natalie – 3345 WTh
 Steines, Miriam – 3988 WTh
 Steinkamp, Simon – 2073 MT
 Steinweg, Johannes – 1748 MT, 3846 WTh, 3868 WTh
 Steinweg, Johannes – 3884 WTh
 Stelzer, Johannes – 2211 MT, 4149 WTh

Sten, Sebastian – 1533 MT
 Stengel, Chloé – 1629 MT, 2078 MT
 Stenger, V. Andrew – **3545 WTh**
 Stenroos, Matti – 4101 WTh
 Stephan, Franziska – 3684 WTh
 Stephan, Klaas Enno – 1482 MT, 1509 MT, 1521 MT, 1982 MT, 3344 WTh, **3501 WTh**, 3759 WTh, 3989 WTh
 Stephan, Thomas – 2114 MT, 2115 MT, 2122 MT, 2134 MT
 Stephen, Julia – 1756 MT, 3883 WTh, 3885 WTh, 3886 WTh, 3963 WTh
 Stephen, Julia – 1505 MT, 4227 WTh
 Stern, Emily – 3629 WTh
 Stern, Emily – 4181 WTh
 Stern, Yaakov – 3351 WTh, 3785 WTh, 3793 WTh, 3808 WTh, 3831 WTh
 Sterpenich, Virginie – 2196 MT, 4062 WTh
 Steve, Trevor – 3477 WTh
 Stevens, Allison – 3473 WTh
 Stevens, Michael – 1814 MT, 3142 WTh, 3356 WTh, 4048 WTh
 Stevens, W. Dale – 3823 WTh
 Steventon, Jessica – 2204 MT, 3160 WTh
 Stewart, Jill – 3230 WTh
 Stewart, Natalie – 1154 MT
 Stickgold, Robert – 3690 WTh
 Stickland, Rachael – 3060 WTh
 Stigliani, Anthony – **2187 MT**
 Stilla, Randall – 1949 MT
 Stinear, Cathy – 3244 WTh
 Stirling, Jordan – 1673 MT, 1684 MT
 Stirnberg, Ruediger – 3713 WTh
 Stitzel, Joel – 1902 MT
 Stobbe, Robert – 1606 MT
 Stoddard, Joel – 4135 WTh
 Stoecker, Tony – 3713 WTh
 Stoecklein, Sophia – **1049 MT**, 1367 MT
 Stoencheva, Vladimira – 1148 MT
 Stoessl, Jon – 1853 MT, 3183 WTh
 Stoeter, Peter – 4044 WTh
 Stoffels, Gabriele – 1061 MT
 Stoica, Teodora – 1399 MT, 1415 MT
 Stoltz, Werner – 1900 MT
 Stone, Lael – 2210 MT, 3162 WTh
 Storage Diseases Working Group, for the ENIGMA – 1275 MT, 1277 MT
 Storey, Elsdon – 3213 WTh
 Storms, Gerrit – 2077 MT, 3627 WTh
 Storzer, Lena – 3558 WTh
 Stöbel, Gabriela – **4239 WTh**, 4245 WTh
 Strafella, Antonio – 3197 WTh

Stramaglia, Sebastiano – 3959 WTh
 Strange, Bryan – 1035 MT
 Strange, Bryan – 1535 MT
 Straub, Richard – 3311 WTh
 Straube, Benjamin – 1125 MT, 1131 MT, 3988 WTh
 Straube, Thomas – 1130 MT
 Strauß, Sebastian – 2136 MT
 Strauss, Timmy – 1120 MT
 Stretton, Jason – 4243 WTh
 Strik, Werner – 1343 MT, 1344 MT
 Strike, Lachlan – 1848 MT
 Strobbe, Gregor – 3114 WTh
 Strobel, Alexander – 3097 WTh
 Strober, Michael – 3096 WTh
 Stroehle, Andreas – 1125 MT, 1131 MT
 Stroganova, Tatiana – 1191 MT
 Strother, Douglas – 1276 MT
 Strother, Stephen – 1234 MT, 1704 MT, 3896 WTh
 Strother, Stephen – 1633 MT, 3248 WTh
 Struck, Aaron – 3128 WTh, 3130 WTh
 Struve, Maren – 3151 WTh, 3469 WTh
 Stuber, Garret – 3546 WTh
 Studholme, Colin – 1607 MT
 Stumvoll, Michael – 3783 WTh, 3800 WTh
 Sturgeon, Darrick – **1882 MT**
 Su, Hsien-Te – 1996 MT
 Su, Li – 3048 WTh
 Su, Lily – 2220 MT
 SU, Lin-Yan – 1489 MT
 Su, Linyan – 1127 MT
 Su, Long-fei – 1210 MT
 Su, Mengmeng – 3640 WTh, 3652 WTh
 Su, Ning – 3206 WTh
 Suchanek, Fabian – 4153 WTh
 Suckling, John – 3439 WTh
 Südmeyer, Martin – 3179 WTh, 3185 WTh, 3744 WTh
 Suetani, Hiromichi – 2174 MT
 Sugai, Masako – 3596 WTh
 Sugimoto, Hikaru – 3719 WTh, 3721 WTh
 Sugiura, Motoaki – 3329 WTh
 Suh, Sang-il – 3039 WTh
 Suhy, Joyce – 4041 WTh
 Sui, Danyang – 1903 MT
 Sui, Jing – 1031 MT, 3371 WTh, 3757 WTh
 Sui, Jing – **1215 MT**, 1217 MT, **1330 MT**, 1351 MT, 1688 MT, 3905 WTh, 3953 WTh
 Sui, Jing – 3295 WTh
 Sullivan, Edith – 1995 MT
 Sullivan, Elinor – **1882 MT**
 Sulzer, David – 2217 MT
 Sulzer, James – 1513 MT

Summerfield, Christopher – 3334 WTh
 Sun, Bomin – 1004 MT
 Sun, Daqiang – 3318 WTh, 3321 WTh, 3474 WTh
 Sun, Delin – 3482 WTh
 Sun, Fengzhu – 3913 WTh
 Sun, Jianping – 3309 WTh
 Sun, Jinbo – 1472 MT, 2140 MT, 3065 WTh
 Sun, Junfeng – 1067 MT
 Sun, Nanbo – 1806 MT
 Sun, Shengkai – 3370 WTh
 Sun, Wei – 1653 MT
 Sun, Xiaochen – 3304 WTh
 Sun, Yanlong – 3369 WTh
 Sun, Yawen – 1090 MT
 Sun, Yifan – 3559 WTh
 Sun, Zhong Yi – 2001 MT, 2004 MT
 Sunaert, Stefan – 1106 MT, 1263 MT, 3112 WTh
 Sundaresan, Vaanathi – 3460 WTh
 Sundram, Frederick – 1331 MT
 Sung, Yul-Wan – 3487 WTh
 Suo, Chao – 1079 MT, 3451 WTh
 Suo, Xueling – 3161 WTh
 Supekar, Kaustubh – 1729 MT
 Suponeva, Natalia – 1934 MT
 Surendranathan, Ajenthan – 3048 WTh
 Suri, Sana – 1870 MT, 3461 WTh, 3975 WTh
 Suri, Subhash – 1750 MT
 Surkov, Andrey – 1275 MT, 1277 MT
 Surova, Galina – 3990 WTh
 Suryadevara, Raviteja – 4182 WTh
 Sutherland, Matthew – 1098 MT, **1428 MT**, **1674 MT**,
 1942 MT, 3415 WTh, **4226 WTh**
 Suzuki, Atsunobu – 4204 WTh
 Suzuki, Hidenori – 1525 MT
 Suzuki, Hideo – 1228 MT, 1229 MT, 1301 MT
 Suzuki, Michio – 1334 MT
 Svaldi, Diana – 3263 WTh
 Svarer, Claus – 1234 MT
 Sveistrup, Heidi – 1959 MT
 Swagerman, Suzanne – 3853 WTh
 Swansburg, Rose – 1241 MT
 Swanson, Chelsea – 1138 MT, 3482 WTh
 Swartz, Rick – 3248 WTh
 Sweeney, Aoife – 1433 MT
 Sweeney, John – 1224 MT, 3953 WTh
 Sweeney-Reed, Catherine – 3385 WTh
 Sweigert, Julia – 1186 MT
 Sweitzer, Maggie – 3923 WTh
 Świerkosz, Sara – 4249 WTh
 Swinnen, Stephan – 1020 MT, **1026 MT**, 1566 MT,
 3525 WTh, 3807 WTh
 Swisher, Christopher – 3509 WTh

Sydnor, Valerie – 1611 MT
 Symmank, Anja – 3435 WTh
 Symons, Sean – 3248 WTh
 Syrjänen, Elmeri – 3398 WTh
 Sysoeva, Olga – 1191 MT
 Syu, YaSyun – 1550 MT
 Szabó, Dóra – 1435 MT
 Szabo, Steve – 3482 WTh
 Szaflarski, Jerzy – 3110 WTh, 3135 WTh
 Szanto, Katalin – 3343 WTh
 Szatmari, Peter – 1195 MT
 Szczepanik, Michał – 3368 WTh, 3616 WTh,
 3617 WTh, 3698 WTh
 Szulc, Kamila – 3449 WTh
 Szwed, Marcin – 2127 MT, 3616 WTh, 3617 WTh
 Szymanska, Bogna – 1442 MT

T

Ta, Daniel – 3088 WTh
 Ta, Duyan – 1540 MT
 Tabrizi, Sarah – 3733 WTh
 Tabuchi, Hajime – 1441 MT
 Tacchella, Jean-Marc – 1560 MT, 3607 WTh
 Tagawa, Minami – 3552 WTh
 Taghia, Jalil – 1729 MT
 Taghizadeh Sarabi, Mitra – 3714 WTh, 4004 WTh
 Tak, Sungho – 3598 WTh
 Takahashi, Emi – 1154 MT, 2041 MT, **2056 MT**,
 3442 WTh
 Takahashi, Jun – **3186 WTh**
 Takahashi, Tsutomu – 1334 MT
 Takayanagi, Yoichiro – 1334 MT
 Takeda, Yusuke – 1773 MT
 Takei, Yuichi – 1405 MT, 3552 WTh
 Takeuchi, Hikaru – 1993 MT, 3293 WTh, 3457 WTh
 Taki, Yasuyuki – 3293 WTh, 3457 WTh
 Tal, Zohar – 2151 MT
 Talagala, Lalith – 1512 MT
 Talavage, Thomas – 1580 MT, 3263 WTh, 3270
 WTh, 4087 WTh
 Talebi Amiri, Anahita – 1502 MT
 Tallman, Catherine – 3787 WTh
 Tallman, Eileen – 3016 WTh
 Tallot, Lucille – 1759 MT
 Talpalaru, Alexandra – 3563 WTh, 3576 WTh
 Tam, Angela – 3941 WTh
 Tam, Cindy W. C. – 3020 WTh
 Tam, Fred – 1818 MT, 3664 WTh
 Tam, Grace – 1908 MT
 Tamaki, Takaya – 3898 WTh
 Tamara Bonertz, Tamara – 1038 MT
 Tambini, Arielle – 1485 MT

Tamm, Sandra – 1909 MT
 Tamminga, Carol – 3953 WTh
 Tan, Changlian – 1294 MT
 Tan, Ek – 3266 WTh
 Tan, Giles – 3444 WTh
 Tan, Hanzhuo – 4050 WTh
 Tan, Rui – 1450 MT, 4151 WTh
 Tan, Shuangquan – 1477 MT
 Tan, Shuping – 1323 MT, 1336 MT
 Tan, Song – 3107 WTh
 Tan, Xiangliang – 1461 MT
 Tan, Ying – 1450 MT
 Tan, Yunlong – 1323 MT, 1336 MT
 Tanaka, Ayuko – 3777 WTh, 3786 WTh, 3788 WTh
 Tanaka, Hirofumi – 3822 WTh
 Tandi, Jesisca – 2195 MT, **3778 WTh**
 Tang, Akaysha – 3459 WTh
 Tang, Chris – 3176 WTh
 Tang, Da-Lun – 3378 WTh, 3383 WTh
 Tang, Hao – 3550 WTh
 Tang, Pei-Fang – 3784 WTh
 Tang, Weijun – 3275 WTh
 Tang, Xiaoying – 1185 MT, 3007 WTh
 Tang, Yanqing – 1337 MT
 Tang, Yanqing – 1357 MT
 Tang, Yingying – 1067 MT
 Tang, Yuchun – 1653 MT
 Tani, Masayuki – 1325 MT
 Tank, Jens – 2137 MT
 Tanner, Mark – 1438 MT
 Tanritanir, Asye – 3859 WTh
 Tao, Jing – 1988 MT, 3810 WTh
 Tao, Ran – 3660 WTh
 Tao, Ran – 1091 MT
 Tardif, Christine – 2058 MT
 Tarhan, Nevzat – 3080 WTh
 Tarokh, Vahid – 4013 WTh
 Tarui, Tomo – 3859 WTh
 Tarun, Anjali – 4062 WTh
 Taschereau-Dumouchel, Vincent – 1140 MT
 Taschler, Bernd – 1720 MT
 Taskin, Birol – 2154 MT
 Tate, David – 3282 WTh
 Tateno, Amame – 1525 MT, 3002 WTh
 Tatu, Karina – 1171 MT, 3076 WTh, 3450 WTh
 Taulu, Samu – 1779 MT, 3571 WTh
 Taunton, Jack – 1601 MT, 3269 WTh, 3271 WTh
 Tavabi, Kambiz – 3571 WTh, 3677 WTh
 Tavares, Paula – 1160 MT
 Tavor, Ido – 4078 WTh
 Tay, Stacey – 3952 WTh
 Taylor, Ashlee – 1229 MT

Taylor, Joanne – 3648 WTh
 Taylor, John-Paul – 1914 MT, 3195 WTh
 Taylor, Jonathan – 3839 WTh
 Taylor, Margot – 1158 MT, 1195 MT, 3290 WTh,
 3842 WTh
 Taylor, Michael – 1261 MT
 Taylor, Paul – 1588 MT, 3068 WTh, 4097 WTh
 Taylor, Paul – 1007 MT
 Teague, T – 1229 MT
 Tedeschi, Enrico – 1520 MT, 3194 WTh
 Teeuw, Jalmar – 3853 WTh
 Tegelbeckers, Jana – 3152 WTh, 3697 WTh
 Teillac, Achille – 1733 MT
 Tejpar, Tahira – 3563 WTh
 Telzer, Eva – 2030 MT
 Tenberge, Jan-Gerd – 1701 MT, 1702 MT
 Tenev, Tencho – 3884 WTh
 Teng, James – 2081 MT
 Tennekoon, Michael – 1076 MT
 Tenney, Jeffrey – 3133 WTh, 3135 WTh
 ter Horst, Gert – 3949 WTh
 Terabe, Kazunori – 1952 MT
 Terada, Tatsuhiko – 2219 MT
 Terasawa, Yuri – 1441 MT, 1994 MT, 3722 WTh
 Teren, Andrej – 1257 MT
 Terranova, Kate – 3098 WTh
 Tervo-Clemmens, Brenden – 3880 WTh
 Tervonen, Osmo – 4010 WTh
 Tesche, Claudia – 1016 MT
 Tetreault, Aaron – 3326 WTh
 Teunissen, Charlotte – 1595 MT
 Tewarie, Prejaas – 1763 MT
 Thai, N. Jade – 3756 WTh
 Thalamuthu, Anbupalam – 2037 MT
 Tham, Joseph – 1230 MT
 Thambirajah, Anita – 3310 WTh
 Thames, April – 1261 MT, 1594 MT
 Thanellou, Alexandra – 1409 MT
 Thapa-Chhetry, Binod – 3069 WTh
 Thein, Shaun – 1029 MT
 Theiner, Pavel – 1531 MT
 Thermenos, Heidi – 4076 WTh
 Thesen, Thomas – **3379 WTh**
 Thévenet, Marc – 2088 MT
 Theves, Stephanie – **1515 MT**
 Thibault, Robert – 1891 MT
 Thieba, camilia – 1468 MT
 Thiebaut de Schotten, Michel – 2005 MT, 2038 MT,
2040 MT, 2052 MT, 3476 WTh, 3642 WTh,
 3652 WTh, 3683 WTh
 Thiel, Alexander – 3612 WTh

Thiel, Christiane – 2073 MT, **2074 MT**, 2215 MT,
3300 WTh, 3366 WTh, 4021 WTh
Thiel, Friederike – 1257 MT
Thielscher, Axel – 1028 MT
Thiery, Joachim – 1257 MT, 3783 WTh
Thiery, Thomas – 1314 MT
THIERY, TT – 2102 MT
THIRIAUX, Anne – 1762 MT
Thirion, Bertrand – 1656 MT, 1829 MT, 3904 WTh,
3916 WTh, 3934 WTh, 4147 WTh, 4153 WTh
Tholen, Matthias – 4221 WTh
Thomas, Adam – 1696 MT
Thomas, Alan – 1914 MT
Thomas, Cibu – 1598 MT, 1616 MT
Thomas, David – 3838 WTh
Thomas, Hummel – 1219 MT
Thomas, Kathleen – 1104 MT
Thomas, Maryse – 3551 WTh
Thomas, Rajat – 3031 WTh, 3683 WTh
Thomas, Staci – 1578 MT
Thomason, Moriah – 3878 WTh, 3887 WTh,
3891 WTh
Thompson, Cynthia – **3001 WTh**
Thompson, Cynthia – **3632 WTh**
Thompson, Deanne – 3829 WTh, 3833 WTh
Thompson, Megan – 3689 WTh
Thompson, Paul – 1227 MT, 1261 MT, 3308 WTh
Thompson, Paul – 1132 MT, 1254 MT, 1291 MT,
1324 MT, 1594 MT, 1600 MT, 1715 MT,
3054 WTh, 3306 WTh, **3320 WTh**, 3895 WTh,
4002 WTh, 4157 WTh
Thompson, Paul – 1292 MT, 1848 MT
Thompson, Paul M. – 1138 MT, 1205 MT, 1241 MT,
1275 MT, 1277 MT, 1356 MT, 1463 MT, 1603 MT,
1731 MT, 2020 MT, 3051 WTh, 3055 WTh,
3089 WTh, 3282 WTh, 3305 WTh, 3318 WTh,
3321 WTh, 3937 WTh, 4128 WTh, 4130 WTh,
4195 WTh
Thorwart, Anna – 1412 MT
Thrikutam, Nikhitha – 3071 WTh
Thurley, Kay – 3421 WTh
Tian, Feng – 3206 WTh
Tian, Lin – 3295 WTh
Tian, Lixia – 1797 MT
Tian, Qiyuan – 1732 MT, 2018 MT
Tian, Shui – 3550 WTh
Tian, Weiming – 3044 WTh
TIAN, Xin – 3504 WTh
Tibboel, Dick – 1575 MT
Tie, Yanmei – 1922 MT
Tie, Yanmei – 1518 MT
Tiemeier, Henning – 3870 WTh

Tierney, Patrick – 3317 WTh
Tierney, Tim – 3131 WTh, 4172 WTh
Tik, Martin – **1058 MT**, 1063 MT, 1242 MT, 1413 MT,
1414 MT, 1810 MT, 2184 MT, 4152 WTh
Tillisch, Kirsten – 1278 MT, 2144 MT, 2149 MT,
3141 WTh, 3935 WTh
Timmermann, Christopher – 2106 MT
Timmermann, Lars – 3205 WTh
Timmers, Inge – 1460 MT, 3735 WTh
Timmons, Brian – 3449 WTh
Tintěra, Jaroslav – 1943 MT
Tipper, Christine – 2086 MT, 4232 WTh
Tirrell, Lee – 3473 WTh, 4118 WTh
Tissier, Cloélia – 2001 MT
Tittgemeyer, Marc – 1387 MT, 1509 MT, 3297 WTh
Tobia, Michael – 1385 MT
Tobler, Philippe – 4247 WTh
Todd, Nick – 3972 WTh
Toft, Alexandra – 3163 WTh, 3164 WTh
Toga, Arthur – 1653 MT, 1743 MT, 1881 MT,
3889 WTh
Toga, Arthur – 3307 WTh
Togashi, Kaori – 2021 MT
Tohka, Jussi – 1691 MT, 3892 WTh, 3893 WTh
Toledo, Jon – 2031 MT
Tolin, David – 1291 MT, 1292 MT
Toma, Afra – **4226 WTh**
Tomasi, Dardo – 2205 MT, 4006 WTh, 4045 WTh
Tomassini, Valentina – 3060 WTh
Tomeček, David – 1943 MT
Tomer, Omri – 3436 WTh
Tomiello, Sara – **3501 WTh**
Tomita, Hiroaki – 3293 WTh, 3457 WTh
Tong, Hanghang – 3895 WTh
Tong, Li – 2165 MT
Tong, Yunjie – 1043 MT, 1497 MT, 2207 MT
Tononi, Giulio – 2095 MT, 2202 MT
Topçu, Cemre – 3589 WTh
Topiwala, Anya – 1870 MT, 3975 WTh
Topolski, Natasha – 3540 WTh, 4029 WTh
Topolski, Natasha – 3947 WTh
Torgerson, Carinna – 2063 MT, 3288 WTh,
3452 WTh
Torgerson, Carinna – 1165 MT, 3274 WTh
Torgerson, Carinna – 2016 MT, **3840 WTh**,
3930 WTh, 3931 WTh
Torgerson, Carinna – 1698 MT
Toro, Roberto – 1170 MT, 1174 MT, **1672 MT**,
1675 MT, 1681 MT, 3481 WTh
Toro Serey, Claudio – 1638 MT
Torre, Gabrielle-Ann – 3655 WTh
Torrise, Salvatore – 1139 MT

Toschi, Nicola – 1528 MT
Tosetti, Michela – 3480 WTh
Tost, Heike – 1494 MT, 4163 WTh, **4239 WTh**
Tosun-Turgut, Duygu – 1529 MT
Totxo, Sebastian – 1112 MT
Tournier, Donald – 1748 MT, 3856 WTh
Tournier, Jacques-Donald – 3884 WTh
Touroutoglou, Alexandra – 3794 WTh
Toussaint, Paule – 1847 MT, 3612 WTh
Tovar-Moll, Fernanda – 3245 WTh
Tozzi, Leonardo – 1241 MT
Traboulsee, Anthony – 3056 WTh, 3542 WTh
Tracy, John – 1163 MT
Tracy, Joseph – 1642 MT, 3120 WTh
Trapp, Cameron – 1941 MT, 4167 WTh, 4193 WTh
Travers, Matt – 1696 MT
Trebuchon, Agnes – 1635 MT
Treder, Matthias – 2186 MT
Treede, Rolf-Detlef – 2141 MT
Trefler, Aaron – 1616 MT
Tregellas, Jason – 1542 MT, 3903 WTh
Tremblay, Pascale – 3620 WTh
Trempler, Ima – **3189 WTh**
Trezzi, Vittoria – 3661 WTh
Trinka, Eugen – 1484 MT
Troakes, Claire – 4133 WTh
Troyer, Angela – 3248 WTh
Trska, Robert – 3497 WTh
Tsai, Kevin – 4235 WTh
Tsai, Nai-Wen – 3159 WTh, 3201 WTh
Tsai, Pei-Yi – 3364 WTh
Tsai, Shang-Yueh – 1966 MT
Tsai, Tzu-Hsun – 1996 MT
Tsang, Adrian – 1628 MT
Tsang, Tawny – 1155 MT, 1164 MT
Tsapkini, Kyrana – 1050 MT
Tschernegg, Melanie – 4215 WTh
Tscherpel, Caroline – 3247 WTh, 3253 WTh
Tseng, Chieh-En Jane – 1623 MT
Tseng, Chih-Hsien – 1571 MT
Tseng, Wen-Yih – 1184 MT, 1198 MT, 3378 WTh,
3383 WTh
Tseng, Wen-Yih – 1310 MT, 1571 MT, 1996 MT,
3072 WTh
Tseng, Yi-Jhan – 2156 MT
Tseng, Yi-Li – 2125 MT
Tshibanda, Luaba – 4024 WTh
Tsiouris, John – 3266 WTh
Tsitsopoulou, Sophia – 2116 MT
Tsoi, Tom Chun Wai – 3394 WTh
Tsouli, Andromachi – 1340 MT
Tsuang, Ming – 3314 WTh, 4076 WTh

Tsuchida, Ami – 1500 MT
Tsukada, Hideo – 2219 MT
Tsukiura, Takashi – 3719 WTh, 3721 WTh
Tsumura, Kaho – 4004 WTh
Tsvetanov, Kamen – 3987 WTh
Tu, Pei-Chi – 1366 MT
Tucker, Don – 1771 MT, 1781 MT, 1783 MT
Tüdös, Zbyněk – 3192 WTh
Tufekcioglu, Zeynep – 3187 WTh, 3200 WTh,
3584 WTh, 3585 WTh
Tunc, Birkan – 1557 MT, 1751 MT
Tuovinen, Timo – 1809 MT, 3045 WTh, 3124 WTh,
4010 WTh
Turchan, Maxim – 3199 WTh
Turcotte-Giroux, Alexandre – 3285 WTh
Turecki, Gustavo – 3299 WTh
Turesky, Ted – 1917 MT
Turk, Elise – 3878 WTh, 3887 WTh
Turkeltaub, Peter – 4080 WTh
Turken, And – 1652 MT
Turkheimer, Federico – 3970 WTh, 4016 WTh
Turner, Duncan – 1954 MT
Turner, Gary – 3823 WTh
Turner, Jessica – 1700 MT
Turner, Jessica – 1324 MT, **1330 MT**, 1463 MT,
3144 WTh, 3168 WTh, 3301 WTh, 3757 WTh
Turner, Jessica – 1345 MT, 1356 MT, 1365 MT,
1674 MT, 1686 MT, 1695 MT, 1932 MT, 2064 MT
Turner, Matthew – **1674 MT**
Turner, Raymond – 1768 MT
Turner, Ryan – 1620 MT
Turovets, Sergei – 1648 MT, 1771 MT, 1781 MT,
1783 MT
Turowski, Bernd – 3179 WTh, 3185 WTh, 3815 WTh
Turton, Samuel – 1107 MT
Tüscher, Oliver – 1135 MT
Tusor, Nora – 1748 MT, 3868 WTh, 3884 WTh
Tward, Daniel – 1185 MT
Tyler, Kath – 3108 WTh
Tymko, Michael – 2204 MT
Tyvaert, Louise – 1637 MT
Tzourio-Mazoyer, Nathalie – 1646 MT, 2023 MT,
3431 WTh, 3433 WTh, 3434 WTh, 3639 WTh
Tzovara, Athina – 1126 MT, 1419 MT, 2117 MT

U

Ua Cruadhlaoich, Matthew – 3216 WTh
Ubaldi, Silvia – 3725 WTh
Üçok, Alp – 1548 MT
Uddin, Lucina – 1157 MT, 1178 MT, 1180 MT,
1558 MT, 3353 WTh, 3834 WTh, 4129 WTh
Uddin, Md Nasir – 3484 WTh, 3536 WTh

Ueno, Mika – 1952 MT, 3777 WTh, 3786 WTh, 3788 WTh, 4204 WTh
 Ugazio, Giuseppe – 3342 WTh
 Ugurbil, Kamil – 1596 MT
 Uhlig, Marie – 3812 WTh
 Uhlmann, Anne – 1100 MT, 1463 MT
 Uhr, Manfred – 1466 MT
 Uji, Makoto – 1624 MT
 Ulasoglu Yildiz, Cigdem – 4039 WTh
 Uluc, Isil – 3753 WTh
 Uludag, Kamil – 1640 MT, 2206 MT
 Ulug, Aziz Mufit – 3187 WTh, 3200 WTh, 3584 WTh, 3585 WTh
 Umeda, Satoshi – 1405 MT, 1441 MT, 1994 MT
 Umeda, Satoshi – 3722 WTh
 Umiltá, Alberto – 3423 WTh
 Unadkat, Prashin – 1518 MT, 1922 MT
 Ungerleider, Leslie – 1054 MT
 Unternaehrer, Eva – 1714 MT
 Upfal, Eli – 1980 MT
 Ur, Jin Seok – 4099 WTh
 Ur, Jinseok – 4088 WTh
 Urbach, Horst – 2043 MT
 Urbain, Charline – 1777 MT
 Urban, Jillian – 1902 MT
 Urban, Karolina – 3290 WTh, 3602 WTh
 Urbanski, Marika – 2038 MT, **2040 MT**
 Uriza, Felipe – 1647 MT
 Ursh, Sebastian – 3941 WTh
 Ursini, Gianluca – 3311 WTh
 Urushino, Naoko – 2216 MT
 Üstün, Sertaç – 3427 WTh
 Uyttebroeck, Anne – 1263 MT

V

Vafai, Nasim – 3183 WTh
 Vahdat, Shahabeddin – 1455 MT, 1947 MT
 Vaidya, Chadán – 3357 WTh
 Vaidya, Chandan – 1199 MT, 1944 MT, 4080 WTh
 Vaidya, Jatin – 2064 MT, 3168 WTh, 3965 WTh
 Vainik, Uku – 3373 WTh
 Vajda, Alice – 3506 WTh
 Vajdi, Ariana – 3321 WTh
 Vajkoczy, Peter – **1039 MT**
 Vakamudi, Kishore – 1941 MT, 4167 WTh, 4193 WTh
 Vakorin, Vasily – 1162 MT, 1188 MT, 2017 MT, 3127 WTh, 3563 WTh
 Valabregue, Romain – 3175 WTh, 3215 WTh
 Valcour, Victor – 1261 MT
 Valdés Cabrera, Diana – 1606 MT
 Valdes Hernandez, Maria – 4148 WTh

Valdes-Herrera, Jose – 3695 WTh
 Valdes-Herrera, Jose – 3906 WTh
 Valdés-Sosa, Mitchell – 3430 WTh
 Valdes-Sosa, Mitchell – 3389 WTh
 Valdés-Sosa, Pedro – 1766 MT, 1774 MT
 Valdés-Sosa, Pedro – 2170 MT
 Valdes-Sosa, Pedro – 1612 MT
 Valentini, Bruna – 3139 WTh
 Valero-Cabre, Antoni – 1629 MT, 2078 MT
 Valiente, Alicia – 3899 WTh
 Valk, Sofie – **1172 MT**
 Valli, Mikael – 3197 WTh
 Valsasina, Paola – 4031 WTh
 van Amelsvoort, Therese – 3318 WTh, **3320 WTh**
 van Antwerpen, Christelle – 3756 WTh
 van Belkum, Sjoerd – 1236 MT
 van Cappellen van Walsum, Anne-Marie – 4019 WTh
 van Casteren, Maarten – 1769 MT
 van Dam, Wessel – 3636 WTh
 Van de Steen, Frederik – 1766 MT
 Van De Ville, Dimitri – 1312 MT, 1363 MT, 1502 MT, 1690 MT, 1835 MT, 3223 WTh, 3505 WTh, 3674 WTh, 3724 WTh, 3791 WTh, 3857 WTh, 4025 WTh, 4062 WTh, 4073 WTh, **4122 WTh**, 4161 WTh, 4183 WTh
 van de Wauw, Cynthia – 1956 MT
 van den Berg-Huysmans, Annette – 1447 MT
 van den Boom, Max – 3544 WTh
 van den Bulk, Leonieke – 1725 MT
 Van den Heuvel, Leigh – 1138 MT, 3190 WTh
 van den Heuvel, Marion – 3878 WTh
 van den Heuvel, Martijn – 3878 WTh, 3887 WTh, 3969 WTh, 4075 WTh, 4121 WTh
 van den Heuvel, Odile – 1284 MT, 1291 MT, 1292 MT, 1463 MT
 van der Flier, Wiesje – 3015 WTh
 van der Grond, Jeroen – 1259 MT, 1447 MT, 3015 WTh
 van der Kouwe, Andre – 1502 MT, 1590 MT, 1900 MT, 3068 WTh, 3446 WTh, 3456 WTh, 3473 WTh, 4108 WTh
 van der Meer, Johan – 1041 MT, 3990 WTh
 van der Meer, Lisette – 1338 MT
 van der Molen, Melle – 1134 MT
 van der Straten, Anouk – 1281 MT
 van der Wee, Nic – 1241 MT
 van der Werf, Ysbrand – 1284 MT
 van der Werff, Steven – 1241 MT
 van der Zwaag, Wietske – 1470 MT
 van Dijk, Mirjan – 4082 WTh
 van Dongen, Eelco – 1390 MT

van Donkelaar, Paul – 3267 WTh
 Van Dyke, Russell – 2033 MT
 van Eede, Matthijs – 1716 MT
 van Eijk, Liza – 1848 MT
 van Eimeren, Thilo – 3008 WTh
 van Elk, Michiel – 1470 MT
 van Elst, Marjan – 1259 MT
 van Erp, Theo – 1324 MT, **1330 MT**, 1345 MT, 1356 MT, 3035 WTh, 3757 WTh, 4076 WTh
 Van Essen, David – 1864 MT, 1998 MT, 2021 MT
 van Ettinger-Veenstra, Helene – 3363 WTh
 van Geest, Quinten – 3061 WTh
 van Gelderen, Peter – 3604 WTh
 van Gerven, Marcel – 3332 WTh
 van Gerven, Marcel – 1725 MT
 van Haren, Neeltje – 1324 MT, 1340 MT, 1615 MT
 van Harmelen, anne-Laura – 4243 WTh
 van Hedel, Hubertus – 3729 WTh
 van Heemst, Diana – 1259 MT
 Van Holen, Roel – 3114 WTh
 van Hoof, Rick – 1530 MT
 Van Horn, John – 2016 MT, 2063 MT, 3288 WTh, 3452 WTh, **3840 WTh**
 Van Horn, John – 1165 MT, 3274 WTh, 3930 WTh, 3931 WTh
 Van Horn, John – 1698 MT
 van Hulst, Branko – 1145 MT
 Van Laere, Koen – 1106 MT, 1839 MT, 1854 MT
 Van Leemput, Koen – 1655 MT
 Van Lieshout, Pascal – 1767 MT
 van Mierlo, Pieter – 1064 MT, 3114 WTh
 van Minkelen, Rick – 1595 MT
 van Mourik, Tim – 1552 MT
 van Opstal, Annemarieke – 1259 MT, 1447 MT
 Van Overwalle, Frank – **4203 WTh**
 van Rooij, Daan – 1290 MT
 Van Ryzin, Carol – 1598 MT
 van Schie, Hein – 1470 MT
 Van Snellenberg, Jared – 1817 MT
 van Steenbergen, Henk – 1130 MT
 Van Steenkiste, Gwendolyn – 1607 MT
 van Straaten, Elisabeth – 3127 WTh
 van Swieten, John – 1595 MT, 3015 WTh
 van Tol, Marie-Jose – 1318 MT
 van Velzen, Laura – 1241 MT, 1254 MT
 van Wassenhove, Virginie – 1759 MT
 Van Weehaeghe, Donatienne – 1854 MT
 van Well, Sonja – 3700 WTh
 van Wingen, Guido – 1281 MT, 1293 MT, 3028 WTh, 3031 WTh, 3700 WTh
 van Wouwe, Nelleke – 3199 WTh
 van't Westeinde, Annelies – 1170 MT, 1174 MT

Vanasse, Thomas – 1663 MT
 Vanbellinghen, Tim – 1344 MT, 3184 WTh
 Vandekar, Simon – 3153 WTh, 4179 WTh
 Vandenbergh, Rik – 1764 MT, 1874 MT, 2077 MT, 2080 MT, 3627 WTh
 Vandenbergh, Stefaan – 3114 WTh
 Vander Linden, Catharine – 3256 WTh
 Vanderauwera, Jolijn – 3419 WTh
 vanello, nicola – 1778 MT
 Vanes, Lucy – 1328 MT
 Vangel, Mark – 1169 MT
 Vanhove, Christian – 1565 MT
 Vanicek, Thomas – **1058 MT**, 1242 MT, 4152 WTh
 Vanmeter, John – 3832 WTh
 Vannest, Jennifer – 3133 WTh, 3135 WTh
 Vansteensel, Mariska – 3544 WTh
 Vanyukov, Polina – 3343 WTh
 Varadarajan, Divya – 1747 MT
 Varikuti, Deepthi – 3820 WTh, **3915 WTh**, **4258 WTh**
 Varjabedian, Ani – 3473 WTh
 Varjacic, Andreja – 3231 WTh, 3539 WTh
 Varol, Erdem – 1837 MT
 Varoquaux, Gael – 1656 MT, 1704 MT, 1829 MT, 3904 WTh, 4147 WTh
 Varoquaux, Gael – 3916 WTh, 3934 WTh, 4153 WTh
 Vasa, Frantisek – 1645 MT, **3860 WTh**
 Vasai, Nasim – 1853 MT
 Vasavada, Megha – 1240 MT, 1255 MT
 Vashakmadze, Nato – 1275 MT, 1277 MT
 Vasquez-Hernandez, Angelica – 1101 MT
 Vassallo, Matteo – 1261 MT
 Vassileiou, Benedict – 3624 WTh
 Vasung, Lana – **2056 MT**, 3857 WTh
 Vaugoyeau, Marianne – 3858 WTh
 Vavasour, Irene – 3056 WTh
 Vázquez Rodríguez, Patricia – 3048 WTh
 Vedolin, Leonardo – 3139 WTh
 Veer, Ilya – 1088 MT, 1227 MT, 1254 MT, **1395 MT**, 2198 MT, 4157 WTh, 4163 WTh
 Vegh, Viktor – 1997 MT
 Veijola, Juha – 1320 MT, 2044 MT
 Veit, Ralf – 1915 MT, 3337 WTh
 Velasco-Segura, Roberto – 3873 WTh
 Velasquez, Francisco – 1186 MT
 Velay, Jean-Luc – 3653 WTh
 Veldhuizen, Marga – 2142 MT
 Veldsman, Michele – 3024 WTh, 3236 WTh
 Veltman, Dick – 1100 MT, 1227 MT, 1241 MT, 1254 MT, 4157 WTh
 Vemuri, Prashanthi – 3908 WTh
 Veraart, Jelle – 1463 MT, 1811 MT, 3780 WTh, 4111 WTh

Verbunt, Jeanine – 3735 WTh
 Vercelli, Ugo – 1171 MT, 3076 WTh, 3445 WTh, 3450 WTh
 Vergara, Victor – 1110 MT, 1932 MT, 1935 MT, 4051 WTh
 Vergne, Judith – 1181 MT, 1972 MT
 Verhagen, Lennart – **2042 MT**, 4207 WTh
 Verhelst, Helena – 3256 WTh
 Verhulst, Frank – 3870 WTh
 Verly, Marjolein – 1263 MT
 Verly, Marjolein – 3112 WTh
 Verma, Amit – 4060 WTh
 Verma, Ragini – 1557 MT, 1751 MT
 Vermeiren, R.R.J.M. – 1241 MT
 Vernooij, Meike – 1844 MT
 Versace, Amelia – 4049 WTh
 Verstraelen, Stefanie – 3807 WTh
 Vertes, Petra – 1645 MT, **3860 WTh**
 Veselova, Anna – 1275 MT
 Veselova, Anna – 1277 MT
 Vespa, Paul – 3268 WTh, 3289 WTh
 Vetlman, Dick – 1284 MT
 Vettel, Jean – 2113 MT
 Viana, Maria Candida – 3851 WTh
 Victor, Marcelo – 3139 WTh
 Vidailhet, Marie – 3175 WTh
 Vidailhet, Marie – 3215 WTh
 Vidal-Piñeiro, Didac – **3703 WTh**
 Vidaurre, Diego – 1892 MT, 1921 MT, **3955 WTh**
 Vidovszky, Anna – 3018 WTh
 Vieira, Bruno – 3797 WTh, 3824 WTh
 Vieira, Diego – 3792 WTh
 Viejo-Sobera, Raquel – 1060 MT
 Vieta, Eduard – 3899 WTh
 VIGNAL, Jean-Pierre – 1013 MT, 1762 MT
 Viher, Petra – 1343 MT, 1344 MT
 Vij, Shruti – 1119 MT, 1157 MT, 1178 MT, 3834 WTh, 4129 WTh
 Vijayakumar, Nandita – 4211 WTh
 Vijverberg, Everard – 3028 WTh, 3031 WTh
 Vike, Nicole – 1580 MT
 Vila-Rodriguez, Fidel – 1065 MT
 Vila-Rodriguez, Fidel – 1037 MT, 1793 MT
 Vila-Rodriguez, Fidel – 1230 MT, 1876 MT
 Vilares, Iris – 1244 MT, 3140 WTh
 Vilgis, Veronika – 2061 MT, 3881 WTh
 Villalon, Julio – 1600 MT, 3318 WTh, **3320 WTh**
 Villamayor, Anica – 3742 WTh
 Villeneuve, Martin – 1830 MT
 Villien, M – 1742 MT
 Villoslada, Pablo – 2027 MT

Villringer, Arno – 1257 MT, **1395 MT**, 1970 MT, **2022 MT**, 2089 MT, 2154 MT, 3250 WTh, 3783 WTh, 3800 WTh, 3812 WTh
 Villringer, Kersten – 3250 WTh
 Vinall, Jillian – 3582 WTh
 Vincent, Robert – 3432 WTh, 3440 WTh, 3483 WTh, 4159 WTh, 4166 WTh, 4168 WTh
 Vinçon-Leite, Alice – 1560 MT
 Vingerhoets, Guy – 3256 WTh, 3682 WTh
 Vink, Matthijs – 3190 WTh
 Violante, Ines – 1017 MT, 1023 MT, **3359 WTh**, 3699 WTh, 3933 WTh
 Vipin, Ashwati – 3000 WTh
 Virji-Babul, Naznin – 1213 MT, 3259 WTh
 Visconti di Oleggio Castello, Matteo – 2082 MT
 Visser, Eelke – 1824 MT
 Visser, Renée – 3700 WTh
 Viswanathan, Shivakumar – 1061 MT
 Vitek, Jerrold – 3218 WTh
 Viviano, Joseph – 1700 MT, 1924 MT
 Vlaeyen, Johan – 1393 MT
 Vlasova, Roza – 3646 WTh
 Vo, An – 3177 WTh
 Voets, Natalie – **1889 MT**, 3062 WTh
 Vogeley, Kai – **4203 WTh**
 Vogels, Rufin – 2077 MT
 Voges, Jürgen – 3385 WTh
 Voineskos, Aristotle – 1158 MT, 1700 MT, 1924 MT, 3021 WTh
 Volkow, Nora – 2205 MT, 4006 WTh, 4045 WTh
 Volle, Emmanuelle – 2038 MT, **2040 MT**
 Vollenweider, Franz – 2213 MT, 2218 MT
 Vollmer, Mattias – 3247 WTh
 Vollstadt-Klein, Sabine – 1086 MT
 Vollstädt-Klein, Sabine – 1102 MT, 4163 WTh
 Volz, Lukas – 1750 MT, 3247 WTh, 3745 WTh
 von Bastian, Claudia – 3754 WTh
 von Ellenrieder, Nicolas – 1467 MT, 3118 WTh
 von Gudenberg, Alexander – 3082 WTh
 von Kienlin, Markus – 2214 MT
 von Kriegstein, Katharina – 1146 MT, 4248 WTh
 Vonck, Kristl – 1064 MT, 3114 WTh
 Vonmoos, Matthias – 1072 MT
 Voon, Valerie – 3999 WTh
 Voorhies, Willa – 1178 MT, 1180 MT
 Vopli, John – 3408 WTh
 Vorstman, Jacob – 3318 WTh
 Vorwerk, Johannes – 1754 MT
 Vos, Frans – 1844 MT
 Vos, Sjoerd – 1602 MT, 3496 WTh
 Voss, Joel – 1262 MT
 Votinov, Mikhail – 4253 WTh

Votinov, Mikhail – 1434 MT
 Vousden, Dulcie – 3489 WTh
 Voyer, Arnaud – 3440 WTh
 Voyvodic, James – 3757 WTh
 Vrana, Andrea – 3077 WTh
 Vrenken, Hugo – 3015 WTh
 Vriend, Chris – 1284 MT
 Vrooman, Henri – 1844 MT
 Vrticka, Pascal – 4218 WTh
 Vu, An Thanh – 1596 MT
 Vu, Katja – 1429 MT
 Vuilleumier, Patrik – 3223 WTh, 3698 WTh, 3724 WTh
 Vulliémoz, Serge – 3114 WTh
 Vuoksima, Eero – 3314 WTh
 Vyas, Rutvi – 3471 WTh
 Vymazal, Josef – 3166 WTh, 3171 WTh

W

W. Cornelissen, Frans – 1526 MT, 2181 MT, 4082 WTh
 Wada, Hiroshi – 3503 WTh
 Wade, Benjamin – 1217 MT, 3282 WTh
 Wade, Benjamin – 1031 MT, 1255 MT
 Wagels, Lisa – 1434 MT, 4253 WTh
 Wagener, Carolin – 2161 MT
 Wager, Tor – 1519 MT, 4164 WTh
 Wager, Tor – 2148 MT, 4257 WTh
 Wagner, Ben – 1902 MT
 Wagner, Gerd – 1517 MT, 1796 MT
 Wagner, Henry – 3482 WTh
 Wagner, Johanna – 3372 WTh
 Wagner, Lynne – 1262 MT
 Wagner, Michael – 1298 MT, 1299 MT
 Wagstyl, Konrad – 3104 WTh
 Wagstyl, Konrad – 1862 MT
 Wahlund, Lars-Olof – 4011 WTh
 Wainstein, Gabriel – 3531 WTh, 3776 WTh
 Wakabayashi, Toshihiko – 1994 MT
 Wald, Lawrence – 1528 MT, 1744 MT, 3992 WTh, 4137 WTh
 Waldie, Karen – 2051 MT
 Walhovd, Kristine – **3703 WTh**
 Walitza, Susanne – 1291 MT, 1292 MT
 Walker, Elaine – 4076 WTh
 Walker, Kendal – 3292 WTh
 Walker, Simon – 2160 MT
 Wall, Matt – 1208 MT, 1438 MT
 Waller, Lea – 4163 WTh
 Waller, Rebecca – 3887 WTh
 Wallroth, Raphael – 2089 MT
 Walsh, Nick – 4243 WTh

Walsh, Ryan – 2069 MT, 2071 MT, 3178 WTh, 3208 WTh, 3210 WTh, 3211 WTh, 4054 WTh, 4160 WTh
 Walsh (co-first), Ryan R – 3169 WTh
 Walshaw, Patricia – 3105 WTh
 Walter, Henrik – 1088 MT, 1227 MT, 1241 MT, 1254 MT, **1395 MT**, 2053 MT, 2198 MT, 3097 WTh, 3151 WTh, 3469 WTh, 4157 WTh, 4163 WTh
 Walter, Martin – 1041 MT, 1241 MT, 1933 MT, 3385 WTh, 3990 WTh
 Walter, Susanna – 1260 MT, 1456 MT
 Walters, James – 1314 MT
 Walther, Sebastian – 1343 MT, 1344 MT, 1563 MT, 3184 WTh
 Walton, Courtney – 3165 WTh, 3209 WTh
 Walton, Esther – 1356 MT
 Walukevich, Katherine – 3370 WTh
 Wan, Lin – 4131 WTh
 Wan, Nicholas – 4250 WTh
 Wan, Nick – 4200 WTh, 4225 WTh
 Wan, Ping – 1361 MT, 1362 MT, 3295 WTh
 Wan, Shuangai – 3559 WTh
 Wan, Wenyu – 4228 WTh
 Wandell, Brian – **1677 MT**
 Wander, Jeremiah – 3521 WTh
 Wang, Binqun – 2146 MT, 2147 MT
 Wang, Changqing – 3309 WTh
 Wang, Chenhao – **3778 WTh**
 Wang, Chenhao – 1904 MT
 Wang, Chunjie – 3739 WTh
 Wang, Dahai – 1357 MT
 Wang, Danny – 1047 MT, 3897 WTh, 4003 WTh, 4011 WTh
 Wang, Enfeng – 1373 MT, 1376 MT
 Wang, Fei – 1337 MT, 1357 MT
 Wang, Feng – **1481 MT**
 Wang, Gene-Jack – 4045 WTh
 Wang, Haibao – 1086 MT
 Wang, Hailing – 4169 WTh
 WANG, HAO – 1705 MT
 Wang, Hongbin – 3369 WTh
 Wang, Huali – 3196 WTh
 Wang, Huaning – 1361 MT, 1362 MT, 3295 WTh
 Wang, Huiling – 1361 MT, 1362 MT, 3295 WTh
 Wang, Ji-Jun – 1342 MT
 Wang, Jian – 3181 WTh, 3182 WTh
 Wang, Jiaojian – 4261 WTh
 Wang, Jiawei – 3324 WTh
 Wang, Jijun – 1067 MT, 1124 MT
 Wang, Jing – 1662 MT
 Wang, Jinhui – 1222 MT, 1224 MT, 1705 MT
 Wang, Jiunn-Kae – 1315 MT

Wang, John – 3333 WTh
 Wang, Juan – 1904 MT
 Wang, Junjie – 1067 MT
 Wang, Junjing – 1218 MT, 1568 MT
 Wang, Lei – 1262 MT, 1324 MT, 2033 MT, 3036 WTh
 Wang, Li – 4105 WTh
 Wang, Li – 2008 MT, **3872 WTh**, 3882 WTh
 Wang, Lihong – 1212 MT, 1639 MT
 Wang, Lihong – 3154 WTh
 Wang, Lijuan – 3170 WTh
 Wang, Linlin – 1797 MT
 Wang, Linyuan – 2165 MT
 Wang, Lubin – 2099 MT
 Wang, Meiyun – 1373 MT, 1376 MT, 3161 WTh
 Wang, Mingwei – 1066 MT
 wang, peng – 3969 WTh
 Wang, Po-Shang – 1366 MT
 Wang, Qingsong – 4002 WTh
 Wang, Qun – 4115 WTh
 Wang, Qwa-Fun – 2212 MT
 Wang, Rui – 1369 MT
 Wang, Ruilin – 1288 MT
 Wang, Shaoyu – 3546 WTh
 Wang, Shengpei – 1622 MT
 Wang, Sijia – 1738 MT
 Wang, Tianqi – 1476 MT
 Wang, Ting – 3993 WTh
 Wang, Wei – 3013 WTh
 Wang, Xiaoni – 3027 WTh
 Wang, Xin Ru (Nancy) – 1697 MT
 Wang, Xindi – 1705 MT
 Wang, Xingchao – 3349 WTh
 Wang, Xiuyuan – 1019 MT
 Wang, Xue – 1804 MT, 1895 MT
 Wang, Yalin – 1540 MT
 Wang, Yang – 3608 WTh
 Wang, Yao – 1090 MT
 Wang, Yida – 1704 MT
 Wang, yikai – 3971 WTh
 Wang, Yin – 3727 WTh
 Wang, Yin-Shan – 1938 MT
 Wang, Ying – 1218 MT, 1223 MT, 1586 MT
 Wang, Ying – 1086 MT
 Wang, Yong – 1738 MT
 Wang, You – 1487 MT, 3078 WTh
 Wang, Yu – 3913 WTh
 Wang, Yu – 1874 MT
 Wang, Yu-Ping – 1332 MT, 3885 WTh, 3886 WTh, 3963 WTh, 4028 WTh, 4227 WTh
 Wang, Yu-Ping – 3883 WTh
 Wang, Yue – 1439 MT
 Wang, Zhen – 1291 MT, 1292 MT

Wang, Zheng – 3406 WTh, 3412 WTh
 Wang, Zhijiang – 3196 WTh
 Wang, Zhiquan – 4009 WTh
 Wang, Zhiren – 1336 MT
 Wang, Zhishun – 1251 MT
 Wang, Zi – 3298 WTh
 Wannez, Sarah – 1631 MT
 Wanserski, Emily – 1881 MT
 Ward, B. – 3645 WTh
 Ward, Barney – 2100 MT, 2104 MT
 Warfield, Simon – 1791 MT, 3833 WTh
 Warnaby, Catherine – 1619 MT
 Warren, David – 3883 WTh, 4227 WTh
 Warren, David – 3886 WTh
 Warrior, Varun – 1161 MT
 Wartel, Andreas – 3398 WTh
 Warthen, Katherine – 3292 WTh
 Warton, Christopher – 2003 MT, 3068 WTh
 Warton, Fleur – 2003 MT, 3068 WTh
 Wassermann, Demian – 1659 MT, 3560 WTh, 4037 WTh
 Wassermann, Eric – 3260 WTh
 Wastling, Stephen – 3598 WTh
 Watanabe, Atsushi – 1525 MT
 Watts, Richard – 1136 MT
 Waugh, Christian – 1385 MT
 Wazylink, Suzanne – 1297 MT
 Weaver, Kurt – 1009 MT, 1010 MT, 1936 MT, 2133 MT, 3863 WTh
 Weber, Alexander – 1601 MT, 3269 WTh, 3271 WTh
 Weber, Kenneth – 1804 MT, 1895 MT
 Weber, Kirsten – 1552 MT
 Weber, Lilian Aline – **3501 WTh**
 Webster, Matthew – 4190 WTh
 Wedeen, Van – 1744 MT
 Weder, Bruno – 3184 WTh
 Wedervang-Resell, Kirsten – 1348 MT
 Wee, Chong-Yaw – 3929 WTh
 Wee, Nic van der – 1130 MT, 1132 MT, 1227 MT
 Weeda, Wouter – 1383 MT, 4126 WTh
 Wegen, Erwin – 3226 WTh
 Wehbe, Leila – **1838 MT**
 Wehenkel, Marie – 3894 WTh
 Wehner, Tim – 3496 WTh
 Wehrl, Hans – 1853 MT
 Wei, Gaoxia – 1579 MT
 Wei, Kequan – 3559 WTh
 Wei, Long – 3837 WTh
 Wei, Ming-Xiang – 1489 MT
 Wei, Shau-Ming – **3862 WTh**
 Wei, Shengnan – 1357 MT
 Wei, Wei – 3225 WTh

Wei, Zhengde – **1092 MT**, 3335 WTh
 Weidner, Kerstin – 1120 MT, 1219 MT, 3435 WTh
 Weigand, Daniel – **3613 WTh**
 Weik, Ella – 2086 MT
 Weiland, Barbara – 1110 MT
 Weilenmann, Anina – 1142 MT
 Weiller, Cornelius – **1000 MT**, 2043 MT, **3243 WTh**
 Weinberger, Daniel – 1329 MT, 3704 WTh
 Weinberger, Daniel – 3311 WTh
 Weiner, Kevin – 1661 MT
 Weinstein, Jodi – 2217 MT
 Weintraub, Sandra – **3001 WTh**, **3632 WTh**
 Weiß Lucas, Carolin – 1061 MT
 Weisholtz, Dan – 3629 WTh
 Weiskopf, Nikolaus – 1493 MT, 3075 WTh, 3733 WTh, 3804 WTh, 3972 WTh, 4109 WTh, 4138 WTh
 Weiskopf, Nikolaus – 1604 MT
 Weisman, Lizzy – 1246 MT
 Weiss, Béla – 1769 MT
 Weiss, Rebecca – 1662 MT
 Weissman, Myrna M – 3462 WTh
 Weisz, Nathan – 2082 MT
 Weitkamp, Liselore – 3949 WTh
 Weizel, David – 3918 WTh
 Wellstein, Katharina – **3501 WTh**
 Welsh, Robert – 3292 WTh
 Welzig, Charles – 1792 MT
 Wen, Angela – 3563 WTh
 Wen, Angela – 3575 WTh, 3576 WTh
 Wen, Haiguang – 1617 MT, 2169 MT, **2172 MT**, 2173 MT, 3397 WTh
 Wen, Hongwei – 1576 MT, 1622 MT
 Wen, Tzung-Kuen – 3378 WTh, 3383 WTh
 Wen, Wei – 2037 MT, 3303 WTh
 Wen, Wei – 3047 WTh
 Wen, Xiaotong – 4067 WTh
 Wen, Zhi – 3066 WTh
 Wende, Kim – 1412 MT
 Wenderoth, Nicole – 3500 WTh, 4134 WTh
 Weng, Jian – 3739 WTh
 Wenger, Michael – 3037 WTh
 Wens, Vincent – 3572 WTh
 Wentz, Elisabet – 3095 WTh
 Werden, Emilio – 3236 WTh
 Werff, Steven van der – 1132 MT, 1227 MT
 Werker, Janet – 1213 MT
 Werner, Julie – 3232 WTh
 Wessa, Michèle – 1202 MT
 Wessel, Jan – 3372 WTh
 West, John – 3016 WTh
 West, Martin – 3374 WTh

Westbrook, Cecilia – 1418 MT
 Westenberg, Michiel – 1134 MT
 Westendorp, Rudi – 1259 MT
 Westner, Britta – 2190 MT
 Wetherill, Reagan – 1118 MT
 Wetterslev, Jørn – 2135 MT
 Wexler, Joseph – 1680 MT
 Whalley, Heather – 1306 MT, 3174 WTh, 3438 WTh
 Whang, Peter – 2142 MT
 Wheaton, Lewis – 3254 WTh
 Whelan, Christopher – 1254 MT
 Whelan, Robert – 1136 MT, 3151 WTh, 3469 WTh
 Whelan, Robert – 1433 MT
 Whitaker, Kirstie – 1645 MT, **3860 WTh**
 Whittall, Jill – 3219 WTh
 White, Emily – 3954 WTh
 White, Katherine – 3486 WTh, 4085 WTh
 White, Leah – 1606 MT
 White, Simon – 3956 WTh
 White, Simon – 1726 MT
 White, Tonya – 1575 MT, 3870 WTh
 Whitfield-Gabrieli, Susan – 1192 MT, 1368 MT, 3374 WTh
 Whitlow, Christopher – 1902 MT
 Whitlow, Laura – 1314 MT
 Whittaker, Joseph – 1954 MT
 Whittaker, Joseph – 2204 MT
 Whittingstall, Kevin – 1538 MT, 1626 MT, 1770 MT, 3532 WTh, 3961 WTh
 Whittington, Alex – 3276 WTh
 Whittle, Sarah – 3451 WTh, 3849 WTh
 Whitton, Alexis – 1253 MT
 Whyte, John – 1557 MT
 Wichers, Marieke – 1237 MT
 Wichers, Robert – 1147 MT
 Wiebels, Kristina – 4136 WTh
 Wieland, Elizabeth – 3090 WTh
 Wiers, Corinde – 4045 WTh
 Wierzba, Małgorzata – 3365 WTh, 3698 WTh, 3709 WTh
 Wieshmann, Udo – 3108 WTh, 3121 WTh
 Wiesman, Alex – 2155 MT, 3564 WTh, 3570 WTh, 3885 WTh
 Wiesman, Alex – 3553 WTh, 3561 WTh, 3568 WTh, 3770 WTh
 Wiest, Roland – 1343 MT, 1344 MT, 1563 MT, 3606 WTh
 Wiggermann, Vanessa – **3541 WTh**, 3542 WTh
 Wighton, Paul – 1502 MT
 Wigmore, Ella – 3438 WTh
 Wijtenburg, S. Andrea – 1113 MT, 3780 WTh
 Wildfong, Kevin – 2204 MT

Wildgruber, Dirk – 1404 MT, 2123 MT, 4210 WTh
 Wilke, Melanie – 1524 MT
 Wilkes, Mitch – **1481 MT**
 Wilkey, Eric – 2007 MT, 3426 WTh
 Wilkinson, Miki – 3326 WTh
 Willett, Aimee – 1479 MT, 2028 MT
 Williams, Angharad – 1954 MT
 Williams, Chad – 3328 WTh, 3512 WTh, 3615 WTh
 Williams, Guy – 1522 MT
 Williams, Leanne – 3948 WTh
 Williams, Luke – 2106 MT
 Williams, Lynne – 1213 MT, 1736 MT, 1737 MT, 3651 WTh
 Williams, Paige – 2033 MT
 Williams, Peter – 1671 MT
 Williams, Stephen – 3622 WTh
 Williams, Steven – 1858 MT, **2050 MT**, 3439 WTh, 3586 WTh, 4133 WTh
 Williamson, Brady – 2062 MT
 Willinger, David – 1063 MT, 1242 MT, 1413 MT, 1414 MT
 Wilm, Bertram – 1521 MT, 1604 MT
 Wilson, Anna – 2051 MT
 Wilson, Ross – 1537 MT, 1624 MT
 Wilson, Tony – 2155 MT, 3564 WTh, 3567 WTh, 3770 WTh, 3883 WTh, 3886 WTh, 3963 WTh, 4227 WTh
 Wilson, Tony – 1027 MT, 3553 WTh, 3561 WTh, 3568 WTh, 3570 WTh, 3885 WTh
 Wimmer, G Elliott – 1398 MT
 Windischberger, Christian – **1058 MT**, 1063 MT, 1242 MT, 1413 MT, 1414 MT, 1810 MT, 2184 MT, 4152 WTh
 Wink, Alle Meije – 1913 MT, 3015 WTh
 Winkelbeiner, Stephanie – 1048 MT
 Winkler, Anderson – 1309 MT, 2124 MT, 3308 WTh
 Winstein, Carolee – 3232 WTh
 Winston, Marquitta – 3704 WTh
 Winterer, Georg – 3805 WTh
 Wintermark, Pia – 3068 WTh
 Wirsich, Jonathan – 1637 MT
 Wirth, Anna – 1591 MT
 Wise, Richard – 3060 WTh
 Wise, Richard – 1954 MT, 3160 WTh
 Wise, Richard – 3699 WTh
 Wiseman, Natalie – 3280 WTh
 Witt, Suzanne – 1260 MT, 1456 MT, 1533 MT
 Wittchen, Hans-Ulrich – 1125 MT, 1131 MT
 Witte, Veronica – 3783 WTh, 3800 WTh, 3812 WTh
 Wittenberg, George – 3219 WTh
 Witteveen, Sterre – **3632 WTh**
 Wittfeld, Katharina – 1254 MT

Wittmann, André – 1125 MT
 Witzel, Thomas – 1641 MT, 4137 WTh
 Wobrock, Thomas – 3580 WTh
 Woelfer, Karl – 1707 MT
 Woerschling, Jana – **1049 MT**
 Wolak, Tomasz – 1442 MT
 Wolbers, Thomas – 3695 WTh, 3906 WTh
 Woletz, Michael – **1058 MT**, 1063 MT, 1413 MT, 1810 MT, 2184 MT, 4152 WTh
 Wolf, Daniel – **1302 MT**, 1821 MT, 3153 WTh
 Wolf, Jonathan – 1707 MT
 Wolf, Oliver – 3300 WTh
 Wolfson, Ouri – 4130 WTh
 Wolkowitz, Owen – 3145 WTh
 Woller, Marie – 3499 WTh
 Wölnerhanssen, Bettina – 1474 MT
 Wolter, Sarah – 3082 WTh
 Wolters, Carsten – 1754 MT, 3556 WTh
 Wolthusen, Rick – 1311 MT
 Wong, Chung Ki – 1128 MT, 1459 MT, 1462 MT, **1613 MT**, 1614 MT, 3138 WTh
 Wong, Clive – 3810 WTh
 Wong, Eric – 1885 MT, 4047 WTh
 Wong, Melinda – 1036 MT
 Wong, Nichol – 1988 MT
 Wong, Savio – 1852 MT
 Wong, Simeon – 3842 WTh
 Woo, Choong-Wan – 2148 MT
 Woo, Seong-Woo – 3597 WTh
 Wood, John – 1272 MT
 Wood, Stephen – 3849 WTh
 Woods, Adam – 1261 MT
 Woods, Roger – 1031 MT, 1255 MT, 4106 WTh
 Woods, Roger – 1235 MT, 1240 MT
 Woods, Scott – 4076 WTh
 Woodward, Todd – **1355 MT**, 1364 MT, 4086 WTh, 4093 WTh
 Woodworth, Davis – 2144 MT
 Woollams, Anna M – 3638 WTh
 Woolrich, Mark – 1758 MT, 1859 MT, 1890 MT, 1892 MT, 1911 MT, 1921 MT, **3955 WTh**, 4020 WTh, 4033 WTh, 4036 WTh, 4123 WTh, 4192 WTh
 Working Group, ENIGMA 22q11.2 – 3318 WTh
 Working Group, ENIGMA Bipolar Disorder – 1205 MT
 Wright, Bruce – 3512 WTh, 3515 WTh, 3615 WTh
 Wright, Margaret – 1241 MT, 1600 MT, 1848 MT, 3089 WTh
 Wright, Patrick – 1634 MT
 Wright, Rachael – 1036 MT
 Wright, Robert – 3868 WTh, 3884 WTh

Wrobel, Nathalie – 1501 MT
 Wroblewski, Adrian – 3988 WTh
 Wrocklage, Kristen – 1138 MT
 Wu, Allan – 1068 MT
 Wu, Bing – 2099 MT
 Wu, Bo – 1799 MT
 Wu, Bonnie – 3522 WTh
 Wu, Changwei – 1492 MT
 Wu, Chao – 3302 WTh
 Wu, Dee – 3037 WTh
 Wu, Guangyao – 3066 WTh
 Wu, Guorong – 3546 WTh
 Wu, Haiyan – 4228 WTh
 Wu, Han – 3669 WTh
 Wu, Hua – 2018 MT
 Wu, Jia – 1439 MT
 Wu, Jia – 1440 MT, 3751 WTh
 Wu, Jiafei – 3523 WTh
 Wu, Jianjun – 3181 WTh, 3182 WTh
 Wu, Jianxiao – 4100 WTh
 Wu, Jin-Feng – 1342 MT, 4229 WTh
 Wu, Jing – 3521 WTh
 Wu, Jingsong – 1988 MT
 Wu, Jinsong – 3625 WTh
 Wu, Lei – 1752 MT, 4098 WTh
 Wu, Mei – 1609 MT
 Wu, Meng-Tien – 3784 WTh
 Wu, Mon-Ju – 3841 WTh
 Wu, Ona – 1742 MT
 Wu, Ping – 3181 WTh, 3182 WTh
 Wu, Pu-Yeh – 4235 WTh
 Wu, Qichao – 1086 MT
 Wu, Ruiqi – **1481 MT**
 Wu, Shuicai – 4115 WTh
 Wu, Tung-Lin – **1481 MT**
 Wu, Wei – 1036 MT, 1059 MT, 1784 MT
 Wu, Wenchuan – 1561 MT
 Wu, Xi – 3993 WTh
 Wu, Xia – 4018 WTh, 4067 WTh, 4169 WTh
 Wu, Xiaoyan – 1218 MT, 1223 MT, 1487 MT, 1568 MT, 3078 WTh
 Wu, Xinhui – 2099 MT
 Wu, Xuehai – 3275 WTh
 Wu, Xuqin – 3680 WTh
 Wu, Yu-Chien – 3016 WTh
 Wu, Yu-Te – 1366 MT
 Wu, Yu-Ting – 1492 MT
 Wu, Yuan-hao – 3753 WTh
 Wu, Zhengwang – 4105 WTh
 Wuerfel, Jens – 1720 MT
 Wurfel, Brent – 1128 MT

Wurie, Julia – 1153 MT, 1748 MT, 3846 WTh, 3868 WTh, 3884 WTh
 Wutzi, Betty – 1484 MT
 Wyczasany, Mirosław – 1304 MT, 1408 MT
 Wylie, Glenn – 1384 MT
 Wylie, Scott – 3199 WTh
 Wymbs, Nicholas – 1187 MT
 Wymbs, Nick – 3745 WTh
 Wymbs, Nick – 1159 MT, 1975 MT
 Wypych, Marek – 1422 MT, 3365 WTh, 3368 WTh, 3658 WTh, 3667 WTh, 3698 WTh, 3709 WTh
 Wyss, Patrik – 3578 WTh

X

Xi, YiBin – 3058 WTh
 Xia, Cedric Huchuan – **1302 MT**
 Xia, Jing – 4105 WTh
 Xia, Mingrui – 1337 MT, 1705 MT, 4007 WTh, 4026 WTh
 Xia, Shunren – 2008 MT
 Xia, Zhichao – 3640 WTh
 Xiang, Xiaoping – 2185 MT
 Xiao, Bo – 3116 WTh
 XIAO, QIAN – 1489 MT
 Xie, Qiuyou – 1487 MT, 3078 WTh
 Xie, Sheng – 1587 MT
 Xie, Xin – 3679 WTh
 Xifra-Porxas, Alba – 1826 MT, 3798 WTh
 Xin, Xu – 3132 WTh
 Xing, Zhou – 3352 WTh
 Xu, Dianping – 3841 WTh
 Xu, Duan – 3843 WTh
 Xu, He A. – 3492 WTh
 Xu, Hongmin – 3475 WTh
 Xu, Huashuai – 3942 WTh
 Xu, Huaze – 2200 MT
 Xu, Jing – 1630 MT
 Xu, Jun – 1461 MT
 Xu, Junqian – 1857 MT, 1877 MT, 4181 WTh
 Xu, Kaibin – 1361 MT, 1362 MT, 1488 MT, 3295 WTh
 Xu, Ke – 1357 MT
 Xu, Peng – 1358 MT
 Xu, Pengfei – 1338 MT
 Xu, Shuai – 3349 WTh
 Xu, Ting – **1882 MT, 3844 WTh**
 Xu, Weiyong – 3671 WTh
 Xu, Yi – 1222 MT
 Xu, Yikai – 1461 MT
 Xu, Yuehua – 1495 MT
 Xu, ZiLiang – 3058 WTh, 3065 WTh
 Xue, Feng – 1545 MT

Y

- Y. Granot, Roni – 3411 WTh
 Yacoub, Essa – 1596 MT, 2121 MT, 4193 WTh
 Yadee, Don – 3496 WTh
 Yaesoubi, Maziar – 1894 MT, 3965 WTh
 Yaghi, Zeead – 2065 MT
 Yaker, Zachary – 3710 WTh
 Yakunina, Natalia – 1025 MT
 Yamagata, Bun – 1441 MT
 Yamaguchi, Masataka – 2216 MT
 Yamamoto, Rinah – 1043 MT
 Yamashita, Okito – 1773 MT
 Yamazaki, Shohei – 1897 MT
 Yan, Bin – 2165 MT
 Yan, Chao-Gan – 1668 MT
 Yan, Chao-Gan – 4091 WTh
 Yan, Fuhua – 3475 WTh
 Yan, Hao – 3295 WTh
 Yan, Hao – 1361 MT, 1362 MT
 Yan, Jun – 3295 WTh
 Yan, Jun – 1361 MT, 1362 MT
 Yan, Lirong – 1047 MT
 Yan, Rui – 3550 WTh
 Yan, Xiuxian – 3117 WTh
 Yan, Yin – 2185 MT
 Yan, Zhi-Xiong – 1232 MT, 4206 WTh
 Yanes, Julio – 1884 MT, 1942 MT, 3158 WTh
 Yanez-Lopez, Maria – 3279 WTh
 Yang, Chaoyang – 1289 MT
 Yang, Chia-Yen – 3755 WTh
 Yang, Chuang – 3150 WTh
 Yang, Chunlan – 3557 WTh, 4115 WTh
 Yang, Fan – 1477 MT
 Yang, Fan – 1127 MT
 Yang, Genevieve – 1309 MT
 Yang, Genevieve – 1335 MT
 Yang, Grant – 1732 MT, 2018 MT
 Yang, Guang – 4254 WTh
 Yang, Haichen – 1204 MT
 Yang, Herbert – 3088 WTh
 Yang, Hua – 3401 WTh
 Yang, I-Hsiao – 3159 WTh
 Yang, Ji Hyun – 3163 WTh, 3164 WTh
 Yang, Joseph – 3864 WTh
 Yang, Juan – 4197 WTh
 Yang, Lili – 1799 MT
 Yang, Liuqing – 3046 WTh
 Yang, Liyuan – 1587 MT
 Yang, Lizhuang – 1086 MT
 Yang, Mi – 1317 MT
 Yang, Pai-Feng – **1481 MT**
 Yang, Qing – 1449 MT
 Yang, Tianshi – 2140 MT
 Yang, Tony – 1227 MT, 1241 MT
 Yang, Wanqun – 3170 WTh
 Yang, Xiao – **1215 MT**
 Yang, Xiao – 1238 MT
 Yang, Xuejuan – 2140 MT, 3065 WTh
 Yang, Xun – 1450 MT
 Yang, Xunjuan – 1472 MT
 Yang, Yaling – 4050 WTh
 Yang, Yi – 2099 MT
 Yang, Yihong – 1097 MT, 1510 MT, 3923 WTh
 Yang, Yong – 1207 MT, 1362 MT
 Yang, Yong – 1207 MT
 Yang, Yongfeng – 1361 MT, 1362 MT
 Yang, Yunbo – 1125 MT, 1131 MT
 Yang, Zhen – 1303 MT
 Yang, Zheng – 2099 MT
 Yang, Zhengshi – 2015 MT, 2069 MT, 2071 MT, 3038 WTh, 3169 WTh, 3178 WTh, 3208 WTh, 3210 WTh, 3211 WTh, 4054 WTh, 4142 WTh, 4144 WTh, 4160 WTh, 4165 WTh
 Yang, Zhengyi – **1660 MT**, 2014 MT
 Yang, Zhenyi – 3295 WTh
 Yang, Zhi – 1342 MT, 4229 WTh
 Yang, Zhong – 4231 WTh
 Yanovski, Jack – **3862 WTh**
 Yao, Dezhong – 1316 MT, 1317 MT, 3107 WTh, 3401 WTh, 3803 WTh
 Yao, Ding – 1556 MT
 Yao, Li – 4018 WTh, 4169 WTh
 Yao, Li – 4067 WTh
 Yao, Shuqiao – 1490 MT, 3147 WTh, 3479 WTh
 Yao, Ye – 3625 WTh
 Yao, ZeShan – 1830 MT
 Yao, Zhi-jian – 3550 WTh
 Yap, Pew-Thian – 1583 MT, 1593 MT
 Yaqub, Muhammad Atif – 3597 WTh
 Yarkoni, Tal – **1674 MT**, 1694 MT, 1704 MT
 Yaros, Katarina – 4111 WTh
 Yassa, Michael – 3035 WTh
 Yasuda, Clarissa – 3477 WTh
 Yatvitskiy, Jacob – 3938 WTh
 Yau, Yvonne – 3202 WTh
 Ye, Annette – 3842 WTh
 Ye, Chuyang – 1879 MT
 Ye, Fengdan – 4070 WTh
 Ye, Jieping – 1227 MT
 Ye, Qun – **3705 WTh**
 Ye Chen, Su Miao – 4252 WTh, 4260 WTh
 Yeagle, Erin – 1028 MT, 2163 MT
 Yeasin, Mohammed – 3910 WTh, 3940 WTh
 Yeatman, Jason – 3656 WTh
 Yee, Yohan – 3489 WTh
 Yeh, Chun-Hung – 1649 MT
 Yeh, Henry – 1226 MT
 Yeh, Hung-wen – 1813 MT
 Yeh, Ping-Hong – 3287 WTh
 Yeh, Tzu-Chen – 1685 MT
 Yehuda, Rachel – 3145 WTh
 Yeo, B.T. Thomas – 1719 MT, 1806 MT, 3958 WTh, 3969 WTh, 4100 WTh
 Yeo, Darren – 2007 MT
 Yeo, Thomas – 1829 MT
 Yeom, Hong Gi – 1969 MT
 Yeon, Jiwon – 2153 MT
 Yetkin, Zerrin – 3071 WTh
 Yi, Jinyao – 1289 MT, 1294 MT, 1490 MT, 3147 WTh
 Yi, Joo Sung – 3102 WTh
 Yi, Liye – 3044 WTh
 Yildirim, Funda – 2181 MT
 Yim, Man Yi – **3705 WTh**
 Yin, Hong – 4219 WTh
 Yin, Shufei – 3806 WTh
 Yin, Weiyan – 3866 WTh, 3876 WTh, 4053 WTh
 Yin, Zhiyang – 1357 MT
 Ying, Chunwei – 1067 MT
 Ying, Gui-shuang – 1479 MT
 Yoder, Karmen – 3016 WTh
 Yogev, Ram – 2033 MT
 Yokoi, Atsushi – 4156 WTh
 Yokokura, Masamichi – 2219 MT
 Yokota, Susumu – 1993 MT
 Yoo, Jae Hyun – 1096 MT
 Yoo, Woo-Kyoung – 1034 MT
 Yoon, Clara – 3102 WTh
 Yoon, Taekeun – 3555 WTh
 Yoon, Uicheul – 1861 MT, 3014 WTh, 3041 WTh
 Yoonessi, Ali – 3581 WTh
 York, Gerald – 3282 WTh
 YorkWilliams, Sophie – 3216 WTh
 Yoshida, Akihiro – 1952 MT
 Yoshida, Atsushi – 2216 MT
 Yoshida, Nobukiyo – 2076 MT, 3524 WTh
 Yoshikawa, Etsuji – 2219 MT
 Yoshitake, Saki – 3603 WTh
 Yoshor, Daniel – 3668 WTh
 You, Xiaozhen – 1199 MT, 1944 MT, 3357 WTh
 Youn, Tak – 4096 WTh
 Young, Alexandra – 3019 WTh
 Young, Arlene – 3563 WTh
 Young, Gloria – 1479 MT, 2028 MT
 Young, James – 3730 WTh
 Yourganov, Grigori – 3242 WTh
 Yousefi, Behnaz – 4175 WTh
 Youssofzadeh, Vahab – 3565 WTh
 Yu, Chiun-Chieh – 3201 WTh
 Yu, Chunshui – 1476 MT
 Yu, Qingbao – 1217 MT, **1330 MT**, 1688 MT, 3757 WTh, 3905 WTh
 Yu, Qinlin – 3879 WTh
 Yu, Ronghao – 1487 MT
 Yu, Sabrina – 1053 MT
 Yu, Songlin – 3897 WTh
 Yu, Yang – 2140 MT
 Yu, Yuan – 1354 MT
 Yuan, Han – 3037 WTh
 Yuan, Lin – 1609 MT
 Yuan, Weihong – 1578 MT
 Yuan, Zhen – 1212 MT
 Yuankai, Ha – 1585 MT
 Yücel, Murat – 1079 MT, 3451 WTh
 Yue, Guang – 1976 MT, 3399 WTh
 Yue, Qiuhai – 4070 WTh
 Yue, Ryan – 1727 MT
 Yuen, Kenneth – 1409 MT, 1499 MT
 Yumoto, Atsushi – 2129 MT
 Yun, Chang-Ho – 1374 MT
 Yun, Je-Yeon – 1291 MT
 Yun, Sungjae – 4096 WTh
 Yurgelun-Todd, Deborah – 3067 WTh

Z

- Zabalía, Marc – 2159 MT
 Zabicki, Adam – 3395 WTh
 Zaborszky, Laszlo – 3805 WTh
 Zacà, Domenico – 1985 MT
 Zacharias, Norman – 3805 WTh
 Zaehle, Tino – 3152 WTh, 3385 WTh
 Zaharchuk, Greg – 4141 WTh
 Zahneisen, Benjamin – **1581 MT**
 Zakrzewska, Marta – 3398 WTh, 3493 WTh
 Zald, David – 3199 WTh, 3326 WTh, 3611 WTh
 Zalesky, Andrew – 3984 WTh
 Zamboni, Giovanna – 1870 MT, 3460 WTh, 3819 WTh
 Zanchi, Davide – 1474 MT
 Zandvliet, Sarah – 3226 WTh
 Zang, Yu-Feng – 1668 MT, 3225 WTh
 Zangrossi, Andrea – 1834 MT, 3692 WTh
 Zappasodi, Filippo – 3508 WTh, 4132 WTh
 Zar, Heather – 1235 MT
 Zarate, Carlos – 1221 MT, 1231 MT
 Zaremba, Dario – 1233 MT
 Zariffa, José – 1021 MT
 Zarnani, Kiyana – 3818 WTh

- Zatorre, Robert – 2073 MT, 3410 WTh, 3696 WTh, 4075 WTh
 Zavaliangos-Petropulu, Artemis – 3318 WTh
 Zavaliangos-Petropulu, Artemis – 3282 WTh
 Zawadzki, Miriam – **3862 WTh**
 Zaytseva, Yuliya – 1963 MT
 Zazubovits, Natalja – 1625 MT, 3118 WTh
 Zeberg, Hugo – 2133 MT
 Zecca, Luigi – 2217 MT
 Zeffiro, Thomas – 1142 MT, 2090 MT, 3099 WTh, 3488 WTh
 Zeffiro, Timothy – 3099 WTh, 3488 WTh
 Zeidman, Peter – 1690 MT, 1721 MT, 1724 MT, 2213 MT, 3972 WTh
 Zeighami, Yashar – 3202 WTh, 3204 WTh, **3212 WTh**, 3373 WTh
 Zelman, Vladimir – 1275 MT, 1277 MT
 Zemánková, Petra – 1531 MT
 Zeng, Jinkun – 1225 MT
 Zeng, Jinsheng – 1477 MT
 Zeng, Ke – 1004 MT
 Zeng, Ling-Li – 1609 MT, 2200 MT, 3116 WTh, 3420 WTh
 Zeng, Ying – 2165 MT
 Zentar, Marc – 3277 WTh
 Zentgraf, Karen – 3395 WTh
 Zerbi, Valerio – 4033 WTh
 Zeren, Anna – 1032 MT
 Zerouali, Younes – 3767 WTh, 3771 WTh
 Zha, Rujing – 3335 WTh
 Zhai, Feifei – 3206 WTh
 Zhai, Tianye – 1097 MT
 Zhai, Tianyi – 1127 MT
 Zhan, Chenyang – 3137 WTh
 Zhan, Liang – 3054 WTh, 4130 WTh
 Zhan, Minye – 3091 WTh
 Zhan, Zhichao – 4169 WTh
 Zhang, Aiyang – 4028 WTh
 Zhang, Bin – 1124 MT
 Zhang, Caiming – 4105 WTh
 Zhang, Chao – 3922 WTh, **4081 WTh**
 Zhang, Chi – 2165 MT
 Zhang, Chuncheng – 1400 MT
 Zhang, Dai – 1361 MT, 1362 MT, 3295 WTh
 Zhang, En – 2185 MT
 Zhang, Fuquan – 3295 WTh
 Zhang, Han – 3866 WTh, 4053 WTh
 Zhang, Hang – 2197 MT, 3249 WTh
 Zhang, Hongchun – 1289 MT, 1294 MT
 Zhang, Hongxing – 1361 MT, 1362 MT, 3295 WTh
 Zhang, Jiakai – 4169 WTh
 Zhang, Jiahe – 3794 WTh
 Zhang, Jian – 1238 MT
 Zhang, Jianing – 3479 WTh
 Zhang, Jie – 4127 WTh
 Zhang, Jie – 3625 WTh
 Zhang, Jing – 3479 WTh
 Zhang, Jipeng – 4018 WTh
 Zhang, Jishui – 1622 MT
 Zhang, Kai – 3180 WTh, 3216 WTh
 Zhang, Lianqing – 1282 MT, 3150 WTh
 Zhang, Lijuan – 2197 MT, 3026 WTh, 3249 WTh, 3912 WTh
 Zhang, Melvyn – 1300 MT
 Zhang, Pei-Wen – 1893 MT
 Zhang, Qiong – 4180 WTh
 Zhang, Qiumei – 3761 WTh
 Zhang, Qiumei – 3764 WTh
 Zhang, Sheng – 1100 MT
 Zhang, Shufei – 1487 MT, 1568 MT, 3170 WTh
 Zhang, Shufei – 1586 MT
 Zhang, Shuyang – 3206 WTh
 Zhang, Si-qi – 3550 WTh
 Zhang, Tao – 1450 MT
 Zhang, Tianhong – 1067 MT
 Zhang, Ting – 4242 WTh
 Zhang, Wei – 1167 MT, 3994 WTh
 Zhang, Wenpei – 1122 MT
 Zhang, Xiangsheng – 1439 MT
 Zhang, Xiangsheng – 1440 MT
 Zhang, Xiaochu – 1075 MT, 3335 WTh
 Zhang, Xiaochu – 1086 MT, **1092 MT**
 Zhang, Xiaolong – 1476 MT, 3325 WTh
 Zhang, Xin – 3557 WTh, 4115 WTh
 Zhang, Xiong – 3170 WTh
 Zhang, Yan – 1329 MT
 Zhang, Yan – 1127 MT
 Zhang, Yao – 3275 WTh
 Zhang, Yaoyu – 3547 WTh
 Zhang, Yizhen – 1617 MT, 2169 MT, **2172 MT**, 3397 WTh
 Zhang, Yong – 1593 MT
 Zhang, Yu – 1896 MT
 Zhang, Yu – 1863 MT
 Zhang, Yu – 3339 WTh
 Zhang, Yuaochao – 1579 MT
 Zhang, Yue – 1622 MT
 Zhang, Zhe – 3845 WTh
 Zhang, Zhifang – 3761 WTh
 Zhang, Zhiguo – 1899 MT, 4116 WTh
 Zhang, Zhiguo – 1204 MT, 3523 WTh
 Zhang, Ziwei – 1424 MT
 Zhao, Binghao – 3504 WTh
 Zhao, Chenxi – 1587 MT
 Zhao, Cuihua – 1373 MT, 1376 MT
 Zhao, Gengyan – 3128 WTh, 3130 WTh, 3645 WTh, 4071 WTh, 4170 WTh
 Zhao, Hui – 3590 WTh, 3701 WTh, 4237 WTh
 Zhao, Jingjing – 3652 WTh
 Zhao, Liansheng – **1215 MT**, 1238 MT
 Zhao, Ling – 1461 MT, 1568 MT
 Zhao, Lu – 3307 WTh
 Zhao, Min – 1100 MT
 Zhao, Qian – 4151 WTh
 Zhao, Tengda – 3027 WTh
 Zhao, Tiejun – 4139 WTh
 Zhao, Wan – 3761 WTh, 3764 WTh
 Zhao, Wenrui – 1371 MT
 Zhao, Xiaopeng – 2084 MT, 3814 WTh
 Zhao, Yi – 1980 MT
 Zhao, Yuan-Fang – 2166 MT
 Zhao, Yufang – 4197 WTh
 Zhen, Zonglei – 1651 MT, 2166 MT
 Zhen, Zonglei – 3302 WTh
 Zheng, Di – 3504 WTh
 Zheng, Fanfan – 3295 WTh
 Zheng, Li – 3547 WTh
 Zheng, Li – 4254 WTh
 Zheng, Lifen – 3590 WTh, 4237 WTh
 Zheng, Xubin – 3523 WTh
 Zheng, Zhiwei – 1066 MT
 Zhigalov, Alexander – 3562 WTh
 Zhong, Miao – 1568 MT, 3078 WTh, 3170 WTh
 Zhong, Mingtian – 1289 MT, 1294 MT, 1490 MT, 3147 WTh
 Zhong, Shuming – 1218 MT, 1223 MT, 1586 MT
 Zhong, Suyu – 1587 MT, 3837 WTh
 Zhong, Xiaodong – 2032 MT
 Zhou, Beinan – 3380 WTh
 Zhou, Dongming – 3059 WTh
 Zhou, Guifei – 2193 MT
 Zhou, Hui – 3739 WTh
 Zhou, Hui-Xia – 1668 MT
 Zhou, Juan – 1904 MT, 3000 WTh, **3778 WTh**, 3958 WTh
 Zhou, Liangfu – 3625 WTh
 Zhou, Luo – 3116 WTh
 Zhou, Ming – 1282 MT
 Zhou, Ming – 3150 WTh
 Zhou, Renlai – 1122 MT, 1123 MT
 Zhou, Renlai – 1087 MT
 Zhou, Wei – 3640 WTh, 3652 WTh
 Zhou, Weihua – 1222 MT
 Zhou, Xiaopeng – 1807 MT
 Zhou, Xueping – 1313 MT
 Zhou, Yan – 1090 MT
 Zhou, Yifang – 1357 MT
 Zhou, Yuan – 1721 MT
 Zhou, Yunyi – 3986 WTh
 Zhou, Yuqing – 4256 WTh, 4259 WTh
 Zhu, Bi – 3422 WTh
 Zhu, Dajiang – 1227 MT, 4157 WTh

Zhu, Hongtu – 1354 MT, 1556 MT, 1594 MT, 3046 WTh, 3306 WTh
 Zhu, Huaqiu – 1549 MT
 Zhu, Jianhong – 3275 WTh
 Zhu, Jingjing – 2140 MT
 Zhu, Li – 4196 WTh
 Zhu, Lin – 3676 WTh, 3702 WTh
 Zhu, Lingjie – 1904 MT
 Zhu, Lusha – 1244 MT
 Zhu, Meifang – 1476 MT
 Zhu, Wanlin – 2037 MT
 Zhu, Wenhao – 3013 WTh
 Zhu, Xi – 1094 MT
 Zhu, Xinyi – 3806 WTh
 zhu, xiongzhaohao – 1289 MT, 1294 MT
 Zhu, Yajing – 1288 MT
 Zhu, Yi-Cheng – 3206 WTh
 Zhu, Zhaoxia – 3660 WTh
 Zhuang, Wenxu – 1100 MT
 Zhuang, Xiaowei – 2015 MT, 2069 MT, 2071 MT, 3038 WTh, 3169 WTh, 3178 WTh, 3208 WTh, 3210 WTh, 3211 WTh, 4054 WTh, 4142 WTh, 4144 WTh, 4160 WTh, 4165 WTh
 Zhuang, Zhou – 3895 WTh
 Zhuo, Chuanjun – 1369 MT
 Zhuo, Jiachen – 3280 WTh
 Zhuo, Junjie – 2014 MT
 Zhurkova, Natalia – 1275 MT, 1277 MT
 Zhutovsky, Paul – 3028 WTh, 3031 WTh
 Ziegler, David – 2085 MT
 Ziegler, Gabriel – 1822 MT, 1832 MT
 Ziemann, Ulf – 3253 WTh
 Zietsch, Brendan – 1848 MT
 Zijdenbos, Alex – 3432 WTh, 3440 WTh, 4159 WTh, 4166 WTh, 4168 WTh
 Zilbovicius, Monica – 1560 MT, 3607 WTh
 Zille, Pascal – 3963 WTh
 Zillekens, Imme Christina – 4233 WTh
 Zilles, Karl – 1661 MT, 1862 MT, 1886 MT, **1983 MT**, 1999 MT, 3790 WTh, 3796 WTh, 4106 WTh
 Zimmerman, Karl – 3277 WTh
 Zimmermann, Joelle – 3047 WTh
 Zimmermann, Kristin – 1233 MT, 1412 MT
 Zimmermann, Maria – 2127 MT
 Zink, Inge – 3112 WTh
 Ziso, Besa – 3122 WTh
 Zmeykina, Elina – 1934 MT
 Zöllei, Lilla – 1662 MT, **1703 MT**, 3068 WTh
 Zöllner, Daniela – 1363 MT, 1835 MT
 Zöllner, Helge – 3538 WTh
 Zoltick, Brad – 1329 MT
 Zonneveld, Hazel – 1844 MT

Zotev, Vadim – 1128 MT, **1613 MT**, 1614 MT, 3138 WTh
 Zou, Chao – 3249 WTh
 Zou, Ping – 1269 MT, 3768 WTh
 Zou, Qihong – 3275 WTh
 Zou, Tong – 3528 WTh
 Zou, Yizhuang – 1323 MT
 Zou, Yukai – 1580 MT
 Zou, Zhi – 1373 MT, 1376 MT, 1439 MT
 Zou, Zhi – 1440 MT
 Zsoldos, Enikő – 1870 MT, 3975 WTh
 Zsoldos, Eniko – 3828 WTh
 zu Eulenburg, Peter – 2114 MT, 2115 MT, 2134 MT, 2141 MT, 3499 WTh
 Zuba, Daniel – 2159 MT
 Zubieta, Jon-Kar – 3292 WTh
 Zucca, Fabio – 2217 MT
 Zunta-Soares, Giovana – 3841 WTh
 Zuo, Chuantao – 3181 WTh, 3182 WTh
 Zuo, Chun – 2209 MT
 Zuo, Nianming – 3295 WTh
 Zuo, Xi-Nian – 1232 MT, 1668 MT, 1903 MT, 1938 MT, 1946 MT, **3844 WTh**, 3845 WTh, 4075 WTh, 4206 WTh, 4229 WTh
 Zwanzger, Peter – 1250 MT
 Zwicker, Jill – 3267 WTh
 Zwiers, Marcel – 1562 MT, 3586 WTh
 Zylka, Mark – 3546 WTh

L

Łuniewska, Magdalena – 3658 WTh, 3667 WTh