

BIOMAG 2026 Poster List

Posters are organized by scientific category. Within each category, posters are listed in numerical order. Please refer to the Poster Viewing Schedule for stand-by sessions.

Poster Viewing Schedule

Poster Session	Date	Time	Location	Poster Stand-by
I	Sunday, August 23	15:35–16:35	Hall 5	Clinical: Poster 1–18 Cognition: Poster 71–90 OPM: Poster 148、150–161 Other: Poster 198–209
II	Monday, August 24	15:35–16:35	Hall 5	Clinical: Poster 19–34 Cognition: Poster 91–109 OPM: Poster 149、162–173 Other: Poster 210–221
III	Monday, August 24	16:35–17:35	Hall 5	Clinical: Poster 36–53 Cognition: Poster 110–128 OPM: Poster 174–186 Other: Poster 222–232
IV	Tuesday, August 25	15:35–16:35	Hall 5	Clinical: Poster 54–70 Cognition: Poster 129–147、244 OPM: Poster 187–197 Other: Poster 233–243

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Poster viewing I:

August 23, 2026, 15:35-16: 35

Clinical

Poster 1

Sleep, Inhibitory Control, and Prefrontal Cortex Activity in Children With Autism Spectrum Disorder

Jialu Liu^{1,2}, Takashi Ikeda^{1,2}, Ken Yaoi³, Chiaki Hasegawa^{2,4}, Sumie Iwasaki⁵, Mitsuru Kikuchi^{1,2,6}, Yuko Yoshimura^{1,2,7}

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Poster 2

Atypical neural timescales in children with autism: a resting-state MEG study

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Poster 3

P100m responses to vowel-like regularities in children with autism spectrum disorders (ASD): Atypical variability and links to language and cognitive abilities

Ilacai V. Romero Reyes¹, Kirill A. Fadeev¹, Dzerassa E. Goiaeva¹, Tatiana M. Ovsianikova¹, Andrey O. Prokofyev¹, Tatiana A. Stroganova¹, Elena V. Orehkova¹

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Poster 4

Multi-dimensional OPM-MEG reveals coupling between epileptiform discharges and tics with dissociated neural profiles in a pediatric patient

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Poster 5

SHANK3 microduplications in idiopathic ASD: distinct neurophysiological phenotype

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Poster 6

Altered Neural Encoding and Network Dynamics of Vowel Structure Are Associated with Speech-in-Noise Deficits in Children with Autism

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Poster 7

Development and Validation of a Multimodal Data-Based Scale for Predicting Epilepsy Surgery Outcomes

Cai Yuan, MSc¹, Fangjie Huang, PhD^{1,2}, Yueqian Sun, PhD¹, Shihao Ge, MSc¹, Xiu Wang, PhD³, Xiaoqiu Shao, PhD^{1,5*}, Qun Wang, PhD^{1,4,5*}

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Poster 8

(Towards) Linking Mechanical Properties with Neuronal Function

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Poster 9

Assessment of the Utility of OPM-MEG in Preoperative Localization of Refractory Epilepsy: A Prospective Study

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Poster 10

Simultaneous OPM-MEG and DCS Cerebral Blood Flow Measurements of Neural-Vascular Dynamics

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Poster 11

Resting-State Multi-frequency Visual Motor Network Dysfunction in Juvenile Myoclonic Epilepsy: A MEG Study

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Poster 12

Neurophysiology-based biomarkers for psychogenic non-epileptic seizures

Vahe Poghosyan, Majed Al-Hameed, Nadia Al-Tamimi, Ali Al-Otaibi, Alia Fallatah, Fedaa Al-Mohammed and Tahani Al-Otaib
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Poster 13

Altered Brain-Network Connectivity and Neural Oscillatory Signatures of Inhibitory Control in Patients with Epilepsy

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Poster 14

MEG source localization in epilepsy: validation of dipolar methods thanks to simultaneous MEG-SEEG recordings

Maria Fratell¹, Victor J. Lopez-Madrone¹, Samuel Medina Villalon^{1,2}, Samy Mokhtari¹, Fabrice Bartolomei^{1,2}, Jean-Michel Badier¹, Francesca Bonini^{1,2}, Christian-G. Bénar¹

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Poster 15

The Role of Multi-delay Arterial Spin Labeling in Presurgical Evaluation of Drug-Resistant Epilepsy and Its Consistency with Magnetoencephalography

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Mapping Multi-frequency Absence Epilepsy Networks with both OPM-MEG and SQUID-MEG

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Optimisation of the ⁴He OPM-MEG data acquisition procedure

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Application of hidden Markov algorithm to epilepsy focus localization

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Cognition

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From high-energy consumption to efficient prediction: Developmental changes in neural dynamics of syllable processing

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MEG Decoding of Linguistic Categories in Children During Naturalistic Speech

Zhaowei Liu¹, Xiaohan Zhang¹, Jiani Ping¹, Yirong Zhang¹, Peng Gui¹, Liping Wang¹

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Poster 73

The aperiodic 1/f exponent as a marker of task-dependent functional brain states in childhood

Finnilä Elena¹, van Bijnen Sam², Kujala Jan³, Parviainen Tiina⁴

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Poster 74

Development of brain markers of auditory perception: comparison of brain responses recorded with MEG and simulation

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Constituent-Constrained Word Prediction during Language Comprehension

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Efficient neural encoding of time intervals in speech and complex sound sequences

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Hierarchical language processing relies on transformed reactivation of latent working memory

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Fast and Slow Reading Engage Distinct Temporal Dynamics of Semantic Processing

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Temporal Hierarchy and Contextual Facilitation in Mandarin Nasal Coda Processing: A Time-Resolved MEG-MVPA Study

Xiaoshan Ying¹, Li Zhong¹, Yiqing Li¹, Yuanmeng Lin¹, Xiaoqi Yang¹, Ling Liu¹

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Attention to the auditory stream modulates auditory sustained negativity but not the neural processing advantage for vowels

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Mapping the Hierarchical Tuning of Visual Word Recognition using MEG and Fast Periodic Visual Stimulation

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A MEG-Benchmarked Preprocessing Multiverse for Decoding Naturalistic Speech from Portable EEG

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Active and passive exposure to speech sounds modifies change detection brain responses in adults, a MEG study

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Preview effects and natural reading in Chinese using Co-registration of EEG and eye-tracking

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MEG investigation of adjective order preferences as a syntactic constraint

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Poster 86

MEG beta burst suppression signals semantic event boundaries during naturalistic speech

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Isolating Language-Related Working Memory in the Prefrontal Cortex with Delayed Picture Naming and MEG

Mana Tanifuji¹, Jihyun Park¹, Atsushi Mirura¹, Itsuki Hamada¹, Shinji Nishimoto^{2,3}, Hiromu Sakai¹

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Neural ramping dynamics scale with relative progress in sentences, not elapsed time

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HDND: Hierarchical Dynamic Neural Decoding Framework Unlocks Multilingual Word/Character Retrieval from Non-Invasive Brain Recordings

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Structure-Guided Predictive Preparation during Language Comprehension

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OPM

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A Compatibility Framework for Simultaneous OPM-MEG and High-Sampling-Rate fNIRS Acquisition

Jingqi Song¹, Xingyu Ru¹, Rui Yang¹, Yingchun Zhao¹, Bangxu Fan¹, Shuai Na¹, Jia-Hong Gao^{1,2}

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Assessing Neurovascular Coupling Using a Combined OPM-MEG and fNIRS Imager

Urban Marhl¹, Pichaya Tappayuthpijarn², Stanislaw Wojtkiewicz³, Piotr Sawosz³, Vojko Jazbinšek¹, Adam Liebert³, Tilmann Sander²

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Noise reduction in OPM-MEG using an optimized gradiometric sensor configuration

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HMM-Distort: an end-to-end pipeline to quantify the performance of source reconstruction algorithms for OPM-based MEG

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Alternating Optimization for Gain, Orientation, and Position in Vector OPM-MEG

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3D Visualization of Dual-Axis OPM-MEG Signals: Integrated Mapping of Radial and Tangential Magnetic Field Components

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A Comparative Study of SQUID- and OPM-based MEG for Hippocampal Research

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OPM-FLUX: A Pipeline for OPM-MEG Data Analysis

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Optimizing HPI Coil Placement for Small Number of OPM-MEG Sensors

Hayato Watanabe^{1,2}, Atsushi Shimojo², Rikuma Itabashi³, Han Yu³, Ayuri Sakai⁴, Hiromu Sakai⁵, Koichi Yokosawa²

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A Transfer Learning and Global Artifact Inversion Framework for Near-Field Metallic Artifact Assessment in SERF-MEG

Cheng Qi¹, Wen Li¹, Fuzhi Cao¹, Dongyu Liu¹, Shiqiang Zheng¹

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Single-trial assessment of gamma-frequency brain oscillations and their modulation using transcranial alternating current stimulation (tACS)

Vincent Jonany¹, David Haslacher¹, Stephen Robinson², Tilmann Sander-Thömmes³, Jan Zerfowski¹, Niels Peekhaus¹, Peter Krüger³ and Surjo R. Soekadar¹

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An OPM-MEG Study on the Spatiotemporal Patterns and Language-Specific Neural Mechanisms of Auditory Processing of Chinese lexical tones

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Cylindrical Magnetic Shielding System for Supine OPM-MEG

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Other

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Hyperscanning framework with two MEG systems

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Eye Tracking in MEG Hyperscanning

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Using Multilayer MEG Source Reconstruction to Resolve Cortical Laminar Activity in Human V1.

Matteo Maspoli^{1,2,5}, Danila Shelepenkov^{2,3}, Solène Gailhard^{1,2}, Sebastien Daligault⁴, Franck Lamberton^{4,5}, Denis Schwartz^{3,4}, Mathilde Bonnefond^{2,3}, James J. Bonaiuto^{1,2}

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Poster 201

MEG-Based Neural Spectral Gradients link Cortical Dynamics to Multiscale Brain Organization

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Poster 202

HeteroRC: Decoding latent information from dynamic neural responses with interpretable heterogeneous reservoir computing

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Validating laminar inference using high-precision MEG

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Poster 204

E/MEG alpha-band transient event characteristics during photic stimulation

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LISA: Compact and Interpretable MEG Decoding of Natural Speech through Learned Spatio-Temporal Components

Ilia Semenov^{1,2}, Daria Kleevea², Alexei Voskoboynikov², Ivan Dakhtin², Elizaveta Terekhova¹, Alexei Ossadtchi^{1,2,3}

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Forward Equations and Inversion Methods in Moment Domain For focally Extended Source Identification in MEG

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Spatiotemporal Evaluation of EEG/MEG Inverse Methods Using a Synthetic Jansen–Rit Network Model of Visual Evoked Responses

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Mutual Component Analysis: extracting meaningful M/EEG components from coupled datasets

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Poster 209

Geometry-Aware Source Localization in Unshielded Scalar Magnetoencephalography

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Clinical

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Motion tolerance in wearable MEG using dynamic field nulling

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Poster 20

A Comparative Study of Detection and Localization of Interictal Epileptiform Discharges Using a 64-Channel Optically Pumped Magnetometer and a Superconducting Quantum Interference Device.

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MEG in Surgical Epilepsy: Moving Forward or to the Front?

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Poster 22

Comparing brain responses to continuous and intermittent transcutaneous vagus nerve stimulation using magnetoencephalography

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The effects of MTL-precuneus HD-tACS on episodic memory and the underlying neural oscillatory mechanisms

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Acupuncture at Neiguan (PC6) Modulates Frequency- and Region-Specific Cortical Oscillations: Evidence from Resting-State Magnetoencephalography

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Poster 25

The neurocognitive effects of low dose psychedelics

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Poster 26

Study on the effects and mechanisms of High-Frequency rTMS Stimulation of the Bilateral Parietal Cortex in the Treatment of Insomnia and Mild Cognitive Impairment

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Poster 27

Aperiodic and periodic EEG features combined with RMSSD may serve as multimodal arousal biomarkers in neuromodulation

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Differential Resting-State MEG Microstate Dynamics in Unilateral Sudden Sensorineural Hearing Loss: A Cross-Sectional Study

Tian Ni¹, Zhengju Chen¹, Wei Sun¹, Qiujian Meng², Tianxu Kang², Yuying Jiang², Xinyi Yao¹, Xiangling Zhang¹, Shihong Yi¹, Zhijun Fu¹, Yu Zhao¹, Haotian Liu¹

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Poster 29

MEG oscillation-based functional connectivity identifies clinically relevant depression phenotypes

Wenya Liu^{1,2}, Maria Vesterinen^{1,3}, Alexandra Andersson¹, Paula Partanen^{1,4}, Samanta Knapič^{1,2}, Joonas J. Juvonen², Felix Siebenhüner^{1,2}, Antti Salonen², Hanna Renvall^{2,3}, Risto J. Ilmoniemi², Eero Castrén¹, Erkki Isometsä^{5,6}, Dimitri Hanna Renvall^{2,3}, Risto J. Ilmoniemi², Eero Castrén¹, Erkki Isometsä^{5,6}, Dimitri Van De Ville^{7,8}, J. Matias Palva^{1,2,9}, Satu Palva^{1,9}

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Dynamic Brain Network Spectral Signatures for Early Identification of Bipolar Disorder During Depressive Episodes: A MEG Study Using DyNeMo

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Poster 31

Frequency-specific β -band encoding and connectivity alterations during inhibitory control in schizophrenia

Yinglin Han¹, Yishan Du¹, Xinxin Huang¹, Zhijian Yao¹

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OPM-MEG uncovered multi-frequency band dysfunctions in the dorsal visual stream: Neural mechanisms underlying visually induced dizziness in vestibular migraine

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Proteinopathy-related changes in neurophysiological activity during preclinical Alzheimer's disease

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Modulatory Effects of GABA on Triple-Network Dynamics and Their Influence on Anhedonia and Cognitive Dysfunction in Depression

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Cognition

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Spatiotemporal Dynamics of Language Switching in Chinese-Japanese Bilinguals: An MEG Study

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Using co-registered MEG and eye-tracking to understand the cortical systems that support Chinese reading

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Neural signatures of orthographic retrieval difficulty in Chinese handwriting: an MEG study

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Temporal Dynamics of Neural Representation Formation Revealed by Time-Resolved Representational Similarity Analysis of MEG signals

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Longitudinal neural tuning of predictive coding hierarchy during second language learning

Lang Qin¹, Lea Baillargeon¹, Hao Wang¹, Jia-Hong Gao¹

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Irregular click trains reveal the resonant nature of auditory neural responses

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Neural encoding in a bilingual cocktail-party setting: When the native language is the distractor

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Cortico-kinematic and cortico-acoustic coherence during overt speech production in adults

B. Kolozsvári^{1,2}, W. Xu^{1,2}, G. Gerike^{1,2}, J. Kujala^{1,2}, T. Parvianen^{1,2}, P. Leppänen^{1,2}, A. Noiray³, J. Härmäläinen^{1,2}

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Trial-wise MEG Encoding of PROBE-Derived Latent Control Variables in Human Prefrontal Cortex

Leila Gurbanova¹, Andrey Timashkov¹, Viktoria Moiseeva¹, Anna Shestakova¹, Oksana Zinchenko¹

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Thalamocortical Disconnection and Cortical Compensation Underlie Memory Decline in Aging

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Task demands dynamically structure feature selection, routing, and integration in the human brain

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Hippocampal phase-amplitude coupling encodes the distance to hidden goals

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Preparatory rule representations are actively maintained during rule switching

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Human hippocampal theta phase precession of button pressing during memory-guided navigation

Danying Wang, Zimo Huang, James A Bisby, Neil Burgess, Daniel Bush

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THE PROBLEM IS NOT PREDICTION: NEURAL MECHANISMS OF PROBABILISTIC REINFORCEMENT LEARNING IN ADOLESCENTS

Pultsina K., Kozunova G.L., Chernyshev, B., Stroganova T

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Structural Learning Shapes Narrative Organization and Resting Neural Replay

Elie El Rassi

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Narrative Structure Constrains the Influence of Dynamic Emotional Boundaries on Event Sequence Processing

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Fluctuations in sustained attention performance relate to both periodic and aperiodic components of the MEG spectrum

Yann Harel¹, Clara El Khantour¹, Arthur Dehgan¹, Antoine Bellemare-Pepin¹, Mathieu Landry², Annalisa Pascarella³, Karim Jerbi¹

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Goal Availability at Decision Point Shapes Prospective Temporal Representation During Goal-directed Navigation

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OPM

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Performance of Hybrid OPM- and SQUID-MEG Hyperscanning Evaluated by Verbal Communication Task

Yuki Ushijima¹, Hayato Watanabe^{2,3}, Rikuma Itabashi¹, Atsushi Shimojo³, Hiromu Sakai⁴, Yuki Ueda⁵, Noriki Ochi⁶, Takuya Saito⁷, Koichi Yokosawa³

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Initial System-Level Validation of a 312-Channel Dual-Axis OPM-MEG System for High-Density Whole-Head Neuroimaging

Yuming Peng¹, Bing Yan¹, Yifu Cao¹, Haonan Zhang¹, Ming Ding¹

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A high-performance active magnetic shielding system designed for multimodal neuroimaging based on OPM-MEG

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Inter-subject correlations in OPM-MEG during movie viewing

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Perceptual Access More Than Emotion Category Modulates Aperiodic Reward Signals: An OPM-MEG Study

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Test-Retest Reliability of Duration Mismatch Negativity Measured with Optically Pumped Magnetometer Magnetoencephalography

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An Integrated OPM-MEG System for Wearable and Multichannel Applications: Validation Through Phantom and Multi-Paradigm Human Experiments

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Towards Wearable High-Density MEG: A Compact, Low-Power, and Scalable OPM-MEG Hardware with Automated Control

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Quiet Quitting Tendency Is Associated with Altered Oscillatory Emotional Reactivity: An OPM-MEG Study in Female Healthcare Workers

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Optimization of optically-pumped magnetometer arrays for cerebellar magnetoencephalography

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Mobile, On-Scalp MEG at Low Cost using OPM Modules

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Real-World Neuroimaging: Magnetoencephalography Without a Shielded Room

Yulia Bezsudnova¹, Nicholas A. Alexander¹, Stephanie J. Mellor², Sergey Mitryukovskiy³, Rudy Romain³, Agustin Palacios-Laloy³, Gareth R. Barnes¹, Martina F. Callaghan¹, Tim M. Tierney¹

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Low-power consumption SERF OPM for MEG

Zehuan Zhao¹, Kaiyan He², Yuyao Cai¹, Rui Yang¹, Yingchun Zhao¹, Zeyu Jin¹, Jia-Hong Gao^{1,2}

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Other

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Pyriodic: A python package for analysis of respiration data

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Novel ICA method to detect travelling waves in MEG data

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BLCU-1000: A Cross-Modal, Multi-Script MEG Benchmark Dataset for Covert and Overt Speech

Zhuocheng Li¹, Yanjia Zeng¹, Xiaoqi Yang¹, Xiaoshan Ying¹, Hongwei Bian¹, Ling Liu¹

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Fidelity of non-cerebral source localization in MEG depends on the strength and topography of simultaneous cerebral activation: a simulation study

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Multiscale Neural Fingerprints Across EEG, MEG, and fMRI

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Connectivity Informed Standardized Kalman Filtering for Spatio-Temporal EEG/MEG Source Localization

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Dynamic Source Reconstruction for MEG: A Nonlinear State-Space Framework for Recovering Propagating Cortical Patterns

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The role of structural heterogeneity in shaping brain flexibility

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Toward Quantum-Ready Residual-Aware Binary Optimization for Sparse MEG Source Localization

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MEG Inversion using Heterogeneous Source Model with Spherical Poisson Wavelet Expansion for Estimating the Epileptic Foci

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Interpretable Decoding of Frequency-Resolved Functional Connectivity

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Impact of Sensor Type, Shielding, and Denoising on MEG Signal Quality and Source Localization

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Clinical

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State-dependent spectral slowing in Lewy body dementia: MEG resting-state dynamic connectivity study

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Task-Specific Gamma-Band Alterations in Laryngeal dystonia: An OPM-MEG Study

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Functional Connectivity Characteristics of the Frontoparietal Control Network in Major Depressive Disorder Patients with Insomnia: A Magnetoencephalography Study

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Task-Based OPM-MEG Reveals Hippocampal Oscillatory Markers of Immediate Memory Across Two Working-Memory Paradigms in Older Adults

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Reduced neural sensitivity to semantic relatedness in mild cognitive impairment

Pietari Nurmi¹, Timo Saarinen², Antti Kinnunen^{2,4}, Ville Mäntynen², Jaakko Hotta^{2,3}, Anne Koivisto⁵, Hanna Renvall^{1,2} and Mia Liljeström^{1,2}

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Heartbeat-Evoked Responses during Bayesian Learning in Bipolar Disorder and Healthy Controls: An MEG Study

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Altered time-resolved cortical hierarchy and synergy function in first-episode drug-naïve schizophrenia during sensory attenuation: A MEG study

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Neuromelanin-sensitive imaging study in patients with bipolar disorder and their unaffected first-degree relatives

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Major Depressive Disorder with Mixed Features Exhibits Altered Structural-Functional Coupling: A Resting-State MEG and DTI Study

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Central autonomic network oscillatory alterations, heart rate variability, and symptom severity in major depressive disorder: a cross-sectional case-control MEG study

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Magnetoencephalography captures oscillatory dynamics in deep brain regions

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Reduced prefrontal gamma power mediate the relationship between evening chronotype and anhedonia in major depressive disorder

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Abnormal beta bursts of depression in the orbitofrontal cortex and its relationship with clinical symptoms

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The Neural Mechanisms of Vigilance Decrement in Individuals with Excessive Daytime Sleepiness: A MEG study

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Neurovascular Unit Impairment and Dynamic Brain Network Abnormalities in Alzheimer's Disease-Associated Subclinical Epileptiform Activity: A Multimodal Study

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A MEG Investigation of Alpha Modulation During Reward Anticipation in Bipolar Disorder and Unaffected First-Degree Relatives

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Preoperative MEG risk score predicts progression risk in diffuse glioma

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Speech Entrainment in Schizophrenia: An OPM-MEG Approach

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Temporal dynamics of valence prioritization during abstract concept-symbol associative learning: A MEG study

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Theta-band functional gradient dynamics coordinates the formation and reactivation of melodic memory

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Eye Movements Facilitate Sequential Spatial Memory Reconstruction: Evidence from Simultaneous MEG and Eye Tracking

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Active rehearsal after overnight sleep strengthens emerging semantic representations of novel action words: a two-day MEG study

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Structural bias in network learning: Spontaneous emergence of hierarchy from homogeneity

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Event Boundaries Trigger Neural Temporal Context Reinstatement that Predicts Trial-level Temporal Order Memory

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Sense of Agency Enhances Object-Spatial Memory Binding: An MEG Study

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Qingying Ye^{1,2}, Severi Santavirta^{1,2}, Asli Erdemli^{3,4}, Jinglu Chen^{1,2}, Vesa Putm kinen^{1,2}, David Sander^{3,4}, Lauri Nummenmaa^{1,2,5}

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Posterior Cortical Dynamics Underlie Visual Awareness While Prefrontal Activity Reflects Report

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A MEG Investigation of Pre-exposure Warning Effects on Neural Synchrony During Real-World Political News

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Chemoarchitectural constraints on the functional connectome confer resilience in human brain aging

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Positive Subliminal Evaluative Conditioning Reduces Stigma Toward Schizophrenia: A MEG Study

Haoyun Zhao^{1,#}, Dixin Wang^{2,#}, Qiandong Wang³, Waxun Su³, Sanwang Wang⁴, Xikai Wang¹, Tingting Li⁴, Xin Wen¹, Mingzhe Li¹, Xiao Lin^{4,*}, Lin Lu^{1,4,5,*}

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Short-term visual deprivation alters frequency of visual gamma oscillations. The direction of effect depends on excitatory drive.

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Stable task context with flexible temporal coupling across preparatory and stimulus processing

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Yangjiayi Mu, Qinhui Yao, Ziyu Wang, Yuwei Jiang

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Spatiotemporal cortical hierarchies of object real-world size, retinal size, and depth representations in natural image perception

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Adversarially Testing GNWT and IIT with a Novel Inattentional Blindness Paradigm via ME

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The role of low-frequency oscillations in visual feature prediction

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External coil-based co-registration and validation for flexible-helmet OPM-MEG

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Fully Automated SPSSA-Based Coupled Multi-Parameter Optimization for Optically Pumped Magnetometer Sensors

Yuyao Cai¹, Kaiyan He², Rui Yang¹, Zeyu Jin¹, Zehuan Zhao¹, Yingchun Zhao¹, Congcong Li², Bingjiang Lyu², Jia-Hong Gao^{1,2}

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Polarization-Dynamics Modeling of Optical-Axis Demodulation for Three-Axis Closed-Loop OPMs

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Recursively Applied Leadfield elimination (RALFE) provides accurate localization in a task-oriented paradigm

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Tangential steady-state visual evoked field for a magnetic flux concentrator-enhanced magnetoencephalography system

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Contactless OPM-Based Functional Magnetoretinotomography

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Laura Gee, Denis Schwartz, Christian Bénar, Théodore Papadopoulos

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A comparison of OPM-MEG and EEG for visual steady-state responses

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Source-Localization Accuracy of HEDscan OPM Systems using Phantoms

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Feasibility of a Dual-Wavelength Pulsed Pump-Probe Scalar Atomic Magnetometer for Motor-Cortex MEG

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Assessing Motion Tolerance in HEDscan OPMs Without Panel Coils: A Multisite Study

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OPM-MEG in a compact magnetic shield

Mikael Grön, Paavo Hietala, Olli Pikkarainen, Markus Henttonen, Eelis Eklund, Eemeli Luostarinen, Joonas Iivanainen, Lauri Parkkonen
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Tracking Social Brain Activity During Movie-Watching with OPM-MEG

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Building multi-site MEG norms: quantifying across-site variability

Lili Tian^{1,2}, Pietari Nurmi¹, Fatemeh Ahaninjan³, Jan Kujala³, Amande Pauls², Hanna Kaltiaainen², Hanna Renvall^{1,2}, Mia Liljeström^{1,2}

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MEG-GPT-2: A Generative Foundation Model for MEG with Neuroscientifically Meaningful Representations

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A Variational Framework for Comparing Brain HMM Dynamics

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Neural Network Enhanced Extraction of Fetal Magnetocardiography from Single-Channel Noncontact Recordings

Ziyan Zhou, Kun Yang, Yafen Cai, Yu Xin and Xiangyan Kong
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SQUID Gradiometer Based Magnetocardiography and Clinical Application

Xiangyan Kong, Zhidan Zhang, Kun Yang, Ben Li, Ziyan Zhou
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Investigation of the Effects of Sensor Array Geometry on Magnetocardiographic Measurements

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High Resolution Animal Magnetocardiography Using Atomic Magnetometer

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Physics-Constrained ECG-to-Cardiac Field Modeling for Computational Magnetocardiography

Jingqiu Hou, Yu Xin Ziyang Zhou, Kun Yang, Zhidan Zhang and Xiangyan Kong
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Diamond-based quantum sensors for magnetocardiography

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**Multi-Modal Magnetomechanical Fetal Cardiac Imaging:
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Echocardiography**

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**Brain-Gastric Phase-Amplitude Coupling in Healthy Adults: A
Pilot Observational Study**

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An EEG study on Transient Beta Events Features in Successful Cognitive Aging

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OPM-MEG enhances the detection of visual gamma-band responses in schizophrenia

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Developing a real-movement OPM-MEG navigation task to probe medial temporal lobe dysfunction in early Alzheimer's disease

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Multimodal EEG-MEG and Stress-Response Signatures of Sleep Reactivity and Insomnia Vulnerability

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Trait-like nap sleep microstructural deficits and stress-related emotional processing: a MEG-EEG study

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Associations Between EEG-MEG Oscillatory and Source Markers with Daytime Nap for Stress Reactivity in Insomnia

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Sex Differences in Depressive Working Memory Impairment: Common Frontal Deficits and Male-Specific Occipital Compensation

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Age-Matched MEG Network Templates in Insomnia

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Precision Identification and Subtyping of Mild Cognitive Impairment Based on MEG Brain Network Modeling

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Multimodal 3D- CNN Classification Framework for Early Detection of Mild Cognitive Impairment

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Reliable Motor Mapping With OPM-MEG for Preserving Motor Function in Brain Tumor Surgery

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Somatosensory timing and cerebellar-basal ganglia beta-band interactions in Parkinson's disease

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Monitoring Sensorimotor Plasticity During VR Mirror Training in Congenital Hand Amelia Using MEG: Case Report

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Personalised BCI for Post-Stroke Rehabilitation: A Pilot Study on the Effects of Mental Fatigue Monitoring in Patients.

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Synthesis of non-invasive neural signals to enhance motor brain-computer interface datasets with generative network model.

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MEG Study of Neurophysiological Correlates of Individual Stages of Graded Motor Imagery in Healthy Individuals and Individuals with Phantom Limb Pain

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Neural correlates of auditory stimulation induced awakening during sleep: A MEG study

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The cognitive and neural mechanisms underlying the effect of wealth sources on wealth redistribution behavior

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Representational geometry of valence and arousal in brain and body during emotional video watching

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Avatar-Mediated Communication Alters Task-Related Alpha-Band Activity Compared with Face-to-Face Communication

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Perceptual Ambiguity Flexibly Reconfigures Action Observation and Mentalizing Networks During Social Judgments

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Neural Mechanisms Underlying Scene-Interaction Matching in Contextualized Social Perception

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Heart-to-Brain Information Transfer Differentiates Focused Attention and Open Monitoring Meditation: an MEG study

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Complexity and Criticality features Reveal Distinct Neural Dynamics Across Meditation Practices: A MEG Study

Annalisa Pascarella, Philipp Thölke, David Meunier, Jordan O' byrne, Tarek Lajnef, Antonino Raffone, Roberto Guidotti, Vittorio Pizzella, Laura Marzetti, Karim Jerbi

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How wealth sources shape redistribution: Dynamic modulation of prosocial motives and their neural representations

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Brain-like Representational Geometry in Large Language Model Learning of Recursive Nested Structures

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Investigating MEG Brain States During Meditation Using Hidden Markov Models

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Source-level MEG microstates reveal distinct dynamical features of focused attention and open monitoring meditation

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MEG Investigation of Expectation-Related Modulation of Hunger Perception

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Late Higher-Order Network Integration During Incomplete Contour Perception: A Source-Space MEG Study

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Volitional muscle activation intensifies cortical processing of proprioceptive afference from the hand

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Stronger patellar tendon tap intensifies cortical processing of the respective proprioceptive afference

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Cortical regions supporting tapping rhythm control

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Anticipatory Sensorimotor Synchronization Across Limbs

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MEG reveals visual suppression during attention shifts

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Neural correlates of auditory stimulation induced awakening during sleep: A MEG study

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Markerless 3D Motion Capture for Wearable OPM-MEG

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Single probe beam tri-axial optically pumped magnetometer based on Voigt rotation for MEG detection.

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Effects of scalp-to-sensor distance on the signal-to-noise ratio in MEG

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Beta-band dynamics during naturalistic motor learning: an OPM-MEG study

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Neural Fingerprinting with MEG using a Canonical Hidden Markov Model

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Viability of Lightly Shielded Environments for OPM MEG

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A low-power, compact optically pumped magnetometer cell module with one-dimensional assembly structure

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Neural processing of attended and ignored acoustic features under binaural unmasking in second-language speech perception

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Spatiotemporal Dynamics of Fear in the Uncanny Valley: Preliminary Source-Level Findings via OPM-MEG

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Spatial sampling requirements for triaxial OPM-MEG change across the lifespan

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Wireless OPM-based synthetic gradiometer for unconstrained biomagnetic imaging

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Neural correlates of auditory stimulation induced awakening during sleep: A MEG study

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Magnetic transparency enables noninvasive multidepth laryngeal electrophysiology

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Magnetic source analysis for magnetoencephalography using the chained equivalent current element distribution method and an in-silico phantom

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Magnetoencephalographic Correlates of Muscle Sympathetic Nerve Activity Bursts: A Multi-Frequency Network Analysis of the Central Autonomic Network

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Exploring Cardiac Phase Relationships in Reading-Related Saccades During Natural Reading

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In Vivo Non-Invasive Magnetomyography for Small Animals Using SERF magnetometer

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NV center magnetometer based MMG measurements in rats

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Robust Forearm Gesture Decoding Using Electromyography and Magnetomyography Under Sensor Displacement and Inter-Subject Variability

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Multiple pathways involve in bio-response to the hypomagnetic field

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Hepatic and Splenic Sensitivity to Static Magnetic Fields: From Magnetoreception to Disease Intervention

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Magnetometer Characterization as Foundation for Non-Cryogenic Biomagnetic Sensing

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Multi-channel SQUID-MEG of cortical population spikes

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