Conference Schedule

N E U R A L T R A C E S 2 0 2 4

Day 1: Wednesday

08:30	Registration
09:00	Introduction
	Session M1: Signal Processing and Time Series Modeling
09:25 - 10:40	Natalie Schaworonkow Not just frequency: Neural oscillations and their characteristic waveform shape
	Srikantan Nagarajan Structure-function integration with MEG - Spectral graph modeling of neural oscillations
	Sara Sommariva MEG inverse problem: A word of caution towards connectivity estimation
10:40 - 11:25	Coffee Break and Mind-Matching Session I
	Session C2: Aging and Dementia
11:25 - 13:05	Kamalini Ranasinghe (Keynote) Neuronal hyperexcitability and neurophysiological manifestations in AD
	Myriam Sander Oscillatory traces of age differences in episodic memory
	Carlos Coronel Hypoexcitation and connectome disintegration via whole-brain semi-empirical modeling in neurodegeneration (#23)
	Tara Ghafari Hemispheric lateralisation of spontaneous brain oscillations predict volumetric asymmetries in the basal ganglia: Unveiling MEG biomarkers for early diagnosis of neurodegenerative diseases (#37)
	Jana Fehring Unraveling of interplay between cortical structure, function, and age using largescale time-series analysis (#63)
13:05	Lunch
13:55	Poster Session I
14:45	Coffee Break
	Session C3: Psychiatric and Developmental Disorders
15:05 - 16:45	Peter Uhlhaas (Keynote) Gamma-band oscillations and schizophrenia: A translational and developmental perspective
	Marieke van Vugt From mind-wandering to depression: Using spontaneous thinking to develop EEG biomarkers of rumination
	Daniel Kluger Multimodal brain-body coupling in health and disease (#58)
	Amirreza Nadimi Shahraki Neurocomputational characterisation of multisensory processing in autism and schizophrenia (#40)
	Antea D'Andrea Different mindfulness meditation styles are mediated by distinct MEG microstate dynamics and complexity patterns (#33)

Day 2: Thursday

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Session C1: Movement Disorders	
Ashwini Oswal (Keynote) Title: TBA	
Roxanne Lofredi Title: TBA	
Moritz Gerster Levodopa-induced spectral modulation of STN-LFPs in Parkinson's disease patients - A multi-center comparison (#26)	
Zixiao Yin Basal ganglia-muscular communication is related to REM sleep behavior disorder in Parkinson's disease (#20)	
Jasmin Del Vecchio Del Vecchio Pallidal oscillations and clinical improvement in dystonia with deep brain stimulation (#56)	
Coffee Break and Mind-Matching Session II	
Session M3: Machine Learning, Multivariate and Statistical Modeling	
Alain de Cheveigné Virtual electrode or virtual scalpel? A cancellation-based approach to data analysis and source localization	
Robin Tibor Schirrmeister Title: TBA	
Sam Gijsen Self-supervised learning for encoding pathological between-subject information in EEG data (#29)	
Sotirios Papadopoulos Fast and reliable hand motor imagery decoding based on beta burst rate modulations (#18)	
Nikolai Kapralov Optimization of M/EEG spatial filters for extraction of ROI time series based on cross-talk function (#38)	
Benedikt Ehinger A general (cluster-) permutation test for mass-univariate linear mixed models (#19)	
Lunch	
Session M1: Signal Processing and Time Series Modeling (Cont.)	
Modeling (Cont.)	
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Day 3: Friday

	Session M4: Open Science
09:00 - 10:35	Guiomar Niso (Keynote) Beyond neural traces: Open and reproducible M/EEG research throughout the full cycle
	Adina Wagner DataLad - Data management for open science
	Thomas Binns and Tien Dung Nguyen ROlconnect and PyBispectra: Open-source toolboxes for advanced EEG signal processing and functional connectivity analysis (#30 and #31)
	Anuja Negi Investigating the effect of noise-level misspecification in M/EEG inverse solutions (#47)
10:35	Coffee Break
	Session M2: Hardware, Forward and Inverse Modeling
10:55 - 12:25	Jens Haueisen (Keynote) Title: TBA
	Tilmann Sander-Thömmes MEG with OPM sensors: Opportunities for signal processing and modeling
	Nils Harmening HArtMuT—Modeling eye and muscle contributors in neuroelectric imaging (#21)
	Marion Brickwedde Signal-to-noise comparison for auditory steady-state responses between EEG, OPM-MEG and SQUID-MEG – A validation study (#65)
12:25	Lunch
13:15	Poster Session II
14:05	Coffee Break
	Session C4: Epilepsy, Sleep, Consciousness and Other Disorders
14:25 - 16:20	Pieter van Mierlo Advanced EEG analysis in epilepsy: Localization and diagnosis
	Umesh Vivekananda The cognitive implications of epilepsy at a functional network and single neuronal level
	Margarita Sison Integrating subdural EEG-derived spectral and functional connectivity features of focal seizures to improve delineation of the epileptogenic zone (#45)
	Kara Götz Minimally invasive ictal EEG source localization including sphenoidal electrodes (#66)
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