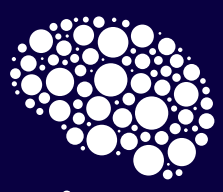


Scientific & Social Program



ant neuro
inspiring technology

inspiring technology for the human brain

Wednesday, 1 November (EEG Workshop)

Morning – Fundamentals of EEG

- 08:30 Registration & coffee
- 09:00 Opening by [ir. Krittika Choudhury, MSc](#)
- 09:10 EEG 101 - Fundamentals of EEG [ir. Krittika Choudhury, MSc](#)
- 09:40 Signal Fundamentals & Popular Paradigms [Roman Vakhrushev, PhD](#)
- 10:40 Coffee break (Lounge)
- 10:55 Novel technologies for EEG [Eshwar Ghumare, PhD](#) and [Elisa Scardanzan, MSc](#)
- 11:40 Complex analysis methods [Fabio Barollo, PhD](#)
- 12:40 Lunch



Afternoon – Applications of EEG

- 14:00 Application Domains of EEG [Sein Jeung, Prof. Francisco Parada](#)
- 15:00 Hands-on various applications [Fabio Barollo, PhD](#), [ir. Krittika Choudhury, MSc](#) and [Roman Vakhrushev, PhD](#)
- 17:00 Q&A
- 17:30 Drinks
- 18:30 Dinner & drinks

Meeting Overview

| | Thursday, 2 Nov | Friday, 3 Nov | Saturday, 4 Nov |
|-------|--|---|--|
| 8:30 | Registration & coffee | Registration & coffee | - |
| 9:00 | 9:00 – 12:30 Sleep & Neuroscience Session | 9:00 – 12:30 TMS / FUS Session | 9:00 – 12:15 Innovation Session |
| 10:00 | <i>Keynote speaker:</i> | <i>Keynote speaker:</i> | <i>Chair: Dr. Tilmann Sander-Thömmes</i> |
| 11:00 | <i>Dr. Marzia De Lucia</i> | <i>Prof. Dr. Jacintha O'Shea</i> | |
| 12:00 | <i>Chair: Prof. Dr. Giulio Bernardi</i> | <i>Chair: Prof. Dr. Thomas R. Knösche</i> | 12:15 – 13:15 |
| | 12:30 – 14:00 | 12:30 – 14:00 | Lunch |
| 13:00 | Drinks & Lunch | Group photo & Lunch | Departure |
| 14:00 | 14:00 – 17:00 Clinical EEG / psychedelics Session | 14:00 – 18:00 Neuroscience Session | |
| 15:00 | <i>Chair: Martin Brunovsky, M.D., Ph.D.</i> | <i>Chair: Associate Prof. Edmund Lalor</i> | |
| 16:00 | | | |
| 17:00 | 17:00 – 19:00 Panal discussion - Social session | | |
| 18:00 | | 18:00 – 19:00 Social session | |
| 19:00 | 19:00 | 19:00 | |
| | Dinner | Dinner | |
| 20:00 | | | |
| 21:00 | | | |

Thursday, 2 November

Morning – Sleep & Neuroscience Session



Keynote speaker: Dr. Marzia De Lucia

Senior Lecturer
Laboratoire de Recherche en Neuroimagerie
Department of Clinical Neuroscience
Lausanne University and Lausanne University Hospital



Session chair: Prof. Giulio Bernardi

Associate Professor, MoMiLab Research Unit
Sleep, Plasticity, and Conscious Experience [SPACE] Group
IMT School for Advanced Studies Lucca

Location: Room 101

- 09:00 Welcome speech by [Martijn Schreuder, PhD, CEO – ANT Neuro](#)
- 09:15 [Dr. Marzia De Lucia, keynote speaker](#), Cardiac and auditory regularity encoding in human wakefulness, sleep and coma
- 10:00 [Prof. Giulio Bernardi, morning session chair](#), Sensory processing during sleep and dreams
- 10:30 Coffee break (Lounge)
- 11:00 [Dr. Vincent Jonany](#), Assessment of single-trial evoked brain oscillations targeted by transcranial alternating current stimulation using optically-pumped magnetometry
- 11:30 [Prof. Dr. Guy Cheron](#), Brain sources of the theta EEG rhythm underlying inhibitory control and replanning in active navigation in the Virtual House Locomotor Maze
- 12:00 [Hannes Oppermann, M.Sc.](#), Transient events in single-trial EEG during photic driving
- 12:30 **Drinks & transition to lunch**
- 13:00 Lunch (Hotel Oderberger, GLS Campus)

Afternoon – Clinical EEG / psychedelics Session



Session chair: Martin Brunovský, M.D., Ph.D.

Head of the Clinical Research Program, National Institute of Mental Health, Czech Republic & Department of Psychiatry and Medical Psychology, 3rd Faculty of Medicine, Charles University Prague

Location: Room 101

- 14:00 [Martin Brunovský, M.D., Ph.D., afternoon session chair](#), Neurobiological effect of psychedelics – from animal EEG research to the measurement of human inter-brain connectivity during Ayahuasca ceremony in indigenous setting.
- 14:30 [Caspar Montgomery](#), Measuring the Effects of Amazonian Ayahuasca Retreats with EEG: The Challenges and Rewards of Naturalistic Neuroscience
- 15:00 [Prof. Dr. Peter J. Uhlhaas](#), Gamma-Band Oscillations and Schizophrenia: A Translational and Developmental Perspective
- 15:30 Coffee break (Lounge)
- 16:00 [Dr. med. Justus Marquetand](#), Sponge EEG is equivalent regarding signal quality, but faster than routine EEG
- 16:30 [Geertjan Huiskamp, PhD](#), Optimal closed loop cortical stimulation therapy in patients with focal epilepsy in primary motor cortex
- 17:00 Social session - Mind the Cloud: Decentralized Recordings, AI, and Analysis Automation in Future EEG Applications
Panel discussion moderated by [Prof. Dr. Surjo Soekadar](#)
(*Product Demonstration & Drinks*)
- 19:00 Dinner (Restaurant Tres Tapas, Lychener Str. 30)

Friday, 3 November

Morning – TMS / FUS Session



Keynote speaker: Prof. Dr. Jacintha O'Shea

Associate Professor
Wellcome/Royal Society Sir Henry Dale Fellow
Oxford Centre for Human Brain Activity (OHBA)
Wellcome Centre for Integrative Neuroimaging (WIN)
Department of Psychiatry
University of Oxford



Session chair: Prof. Thomas R. Knösche

Group Leader of Methods and Development Group – Brain Networks
Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig

Location: Room 101

- 09:00 Introduction by [Sebastian Carstens](#), *Head of Marketing – ANT Neuro*
- 09:15 [Dr. Jacinta O'Shea](#), *keynote speaker*, Neural bases of individual differences in sensorimotor plasticity
- 10:00 [Prof. Thomas R. Knösche](#), *morning session chair*, Transcranial magnetic stimulation - mapping, targeting, and computational modeling
- 10:30 Coffee break (Lounge)
- 11:00 [Dr. Caroline Tscherpel](#), Motor reorganization after stroke: From pathophysiology to treatment strategies
- 11:30 [Prof. Dr. Surjo Soekadar](#), Frontiers in Non-invasive Brain Stimulation: Clinical Applications and Future Directions
- 12:00 [Prof. Dr. Jitka Veldema](#), Non-invasive brain stimulation in supporting motor abilities in stroke patients and healthy people
- 12:30 **Group photo & transition to lunch**
- 13:00 Lunch (Hotel Oderberger, GLS Campus)

Afternoon – Neuroscience Session



Session chair: Prof. Edmund Lalor

Party of the Department of Neuroscience
Department of Biomedical Engineering and the Center for Visual Science
Del Monte Institute for Neuroscience, University of Rochester

Location: Room Room 101

- 14:00 [Prof. Edmund Lalor](#), *afternoon session chair*, Modelling the electrophysiology of hierarchical speech and language processing
- 14:30 [Dr. Guido Orgs](#), The Neurocognition of Liveness
- 15:00 [Prof. Dr. Christoph M. Michel](#), EEG microstates as a tool to capture brain network dynamics
- 15:30 Coffee break (Lounge)
- 16:00 [Prof. Dr. Elsa Kirchner](#), From SPACE to HEALTH and Back
- 16:30 [Prof. Dr. Klaus Gramann](#), Combining Mobile Brain/Body Imaging with Virtual Reality – new prospects for ecological investigations of human brain function
- 17:00 [Prof. Francisco Parada](#), A Lower-Dimensional Parameter?: Searching for Brain/Body electrophysiological metrics for individual and hyperscanning recordings
- 17:30 [Prof. Dr. Tonio Ball](#), *(To be announced at the beginning of the lecture)*
- 18:00 Social session - Closed-loop Navigated Neuromodulation
(Product demonstration & Drinks)
- 19:00 Dinner (Restaurant Montraw, Torstr. 189)

Saturday, 4 November

Morning – Innovation Session



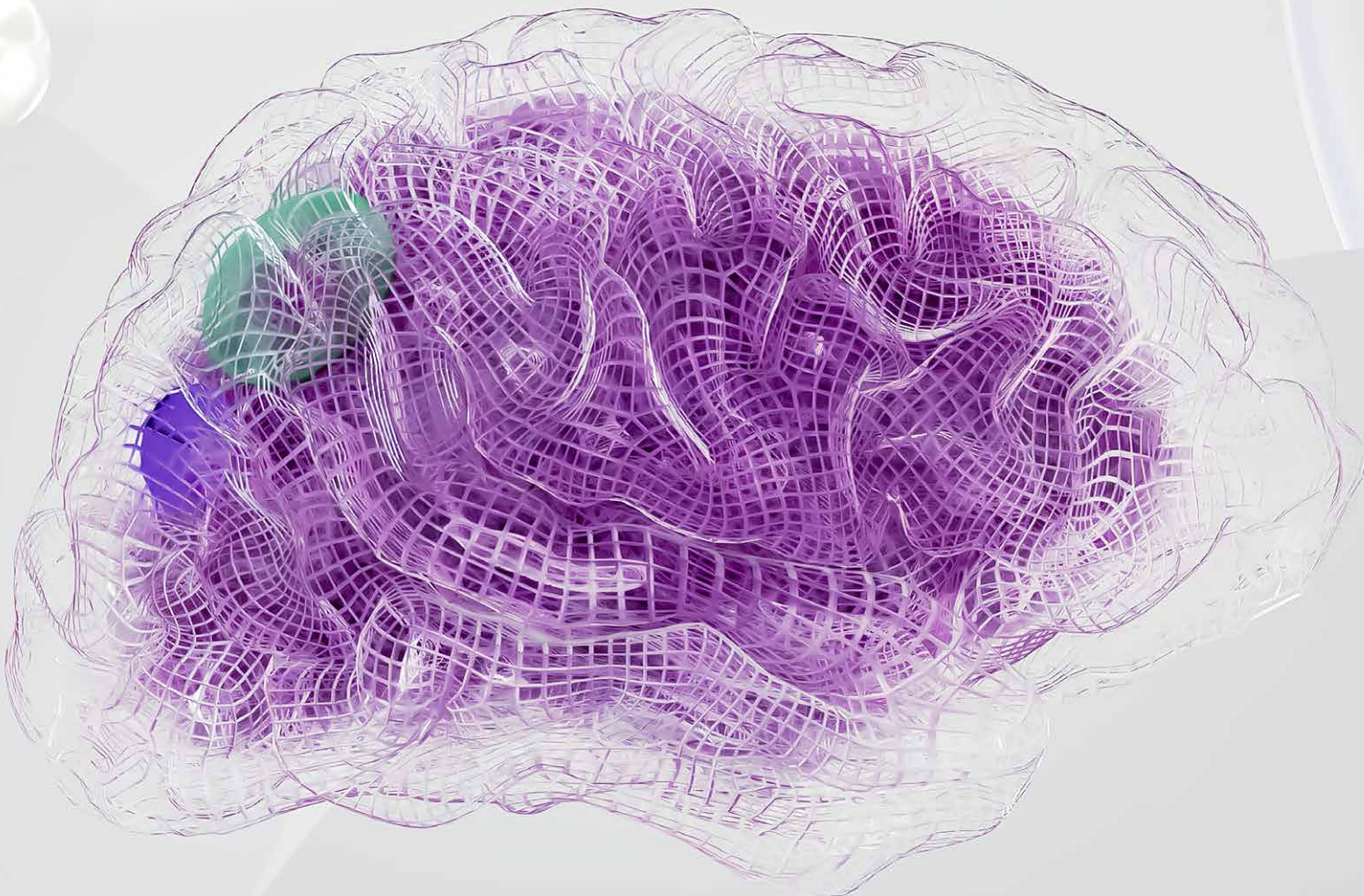
Session chair:

Dr. Tilmann Sander-Thömmes
Physikalisch-Technische Bundesanstalt (PTB)

Location:

Room 101

- 09:00 Introduction by [Dr. Frank Zanow, CEO – ANT Neuro](#)
- 09:15 [Dr. Tilmann Sander-Thömmes, morning session chair](#), Optically pumped magnetometers for neuroscience - disruptive or evolutionary?
- 09:45 [Prof. Dr. Jens Haueisen](#), Flower electrodes for comfortable dry electroencephalography
- 10:15 Coffee break (Lounge)
- 10:45 [Prof. Patrique Fiedler](#), EEG in health monitoring for long-term spaceflight
- 11:15 [Dr. Wouter Potters](#), EEG based triage of stroke patients in the ambulance
- 11:45 [Dr. Frank Zanow](#), Inspiring technology for the human brain: ANT's journey in shaping the future of neurotechnology
- 12:15 Lunch (Hotel Oderberger, GLS Campus)
- 14:00 Departure



Mark your calendars and stay tuned for the upcoming ANT Neuromeetings!

April 10-11
2024

ANT NA Neuromeeting
USA

January 16-18
2025

ANT Neuromeeting
BERLIN

Follow us for more updates!



ANT Neuromeeting 2023 is organized by:



ant neuro
inspiring technology

neuromotion

neuroscience - neurocare - neuromodulation

Members of the neuromotion group:

ANT Neuro b.v. (Hengelo - The Netherlands)
ANT North America (Philadelphia, PA - USA)
ANT Neuro Australia (Melbourne)

ANT Asia Pacific (Hong Kong)
ANT Neuro UK (London - United Kingdom)
ANT Neuro GmbH (Berlin - Germany)
eemagine GmbH (Berlin - Germany)