



Scientific & Social Program

ANT Neurometing 2020

Scientific events

Symposiums and poster session

Every scientific symposium will start with a talk by a renowned scientist in the field, and continue with a number of selected presentations. Poster presenters will give a 1-minute presentation before the poster session which will take place in a friendly and relaxed atmosphere during wine tasting.

ANT Neuro product demos

Under the guidance of ANT Neuro product experts, you can enjoy a first-hand experience with our products, and request a private demonstration.

INFANS Workshop

Co-organized with the INFANS project, this satellite event will open ANT Neurometing 2020 with sessions on biomedical signal processing.

The INFANS project is an EU funded Marie Skłodowska-Curie Innovative Training Network, aiming to develop a novel neonatal brain monitoring system, based on dry electrode technology, functional infrared spectroscopy, and comprehensive methods for automated signal processing and analysis. For more information, please visit www.infansproject.eu.

Wednesday, 15 January	Session and topic		Presenter
15:00 - 16:30	Biomedical signal processing I		
	Blind source separation		Prof. Sabine Van Huffel
	EEG artifact removal with fingerprinting		Prof. Silvia Comani
	Spatial harmonic decomposition		Dr. Uwe Graichen
16:30 - 16:45	Coffee break		
16:45 - 18:00	Hands-on session with nëo – ANT Neuro solution for aEEG and EEG monitoring of infants	Biomedical signal processing II & neonatology	
		NIRS signal analysis	Dr. Jörn M. Horschig
		Introduction to neonatology	Prof. Gunnar Naulaers

Navigated TMS Workshop: Neuronavigation for TMS brain mapping

Dr. Farnoosh Safavi, Sebastian Carstens

Products: visor2, smartmove

In this workshop, we will provide you with the principles of navigated TMS as well as the overview of therapeutic and diagnostic applications. Moreover, we will walk you through the practical workflows of general neuronavigation, motor mapping and speech mapping for therapeutic and diagnostic applications. You will also be introduced to **smartmove** coil-positioning robot and gain insights into our exciting future development plans.

EEG Workshop: Multimodal data acquisition and analysis

Dr. Patrique Fiedler, Dr. Farnoosh Safavi

Products: eego, waveguard, asa, visor2

In this workshop, we will discuss two aspects of multimodal data acquisition and recording: the simultaneous acquisition of EEG in combination with further physiological sensor data and environmental sensor data, as well as simultaneous EEG during navigated TMS stimulation. We will outline principal requirements, practical workflow recommendations and demonstrations for both applications. The workshop will conclude with an overview of analysis approaches.

Program overview

	Wed, 15 January	Thu, 16 January	Fri, 17 January	Sat, 18 January
morning	Arrival	08:30 - 12:00 Neonatology/Neurology Symposium <i>(co-organized with the INFANS Project)</i> 09:50 - 10:10 Chaired by: Prof. Mark Richardson Keynote talk by: Dr. Jeroen Dudink	09:00 - 12:00 Neuroscience Symposium 10:20 - 10:40 Chaired by: Dr. Georgios Michalareas	09:20 - 12:00 New Technologies Symposium 10:40 - 11:00 Chaired by: Dr. Lucia Talamini
afternoon		12:00 - 14:00 Lunch	12:00 - 12:10 12:10 - 14:00 Lunch	12:00 - 14:00 Self-service lunch
	15:00 - 18:00 INFANS Workshop 16:30 - 16:45 <i>(co-organized with the INFANS Project)</i>	14:00 - 16:50 Mental Health Symposium 15:50 - 16:10 Chaired by: Dr. Martin Brunovsky 16:50 - 17:10 Poster presentations	14:00 - 17:10 Mobile Brain/Body Imaging Symposium 15:50 - 16:10 Chaired by: Prof. Klaus Gramann	
evening	18:30 - 20:00 Wine tasting 20:00 ANT Neuromeeeting 2020 welcome dinner	17:15 - 18:15 nTMS Workshop 18:30 - 20:00 Wine tasting + poster session 20:00 Dinner	17:15 - 18:15 EEG Workshop 18:30 - 19:45 Social event 19:45 - 20:00 Meet-up in lobby for bus shuttle to gala dinner 20:30 Gala dinner	Departure

Thursday, 16 January

Neonatology/Neurology Symposium (co-organized with the INFANS Project)

Session chair: Prof. Mark Richardson, Head of the Division of Neuroscience, King's College London

Keynote speaker: Dr. Jeroen Dudink, Associate Professor – Department of Neonatology, University Medical Center Utrecht

08:30 – 08:50 Opening speech by Dr. Frank Zanow, neuromotion CEO

08:50 – 09:10 Dr. Jeroen Dudink, keynote speaker
aEEG in the NICU: a neonatologist perspective

09:10 – 09:30 Prof. Sabine Van Huffel
Advanced solutions for neonatal sleep analysis and perinatal stress monitoring

09:30 – 09:50 Prof. Sampsa Vanhatalo
Novel ways to assess sleep and brain maturation in the newborn

09:50 – 10:10 Coffee break

10:10 – 10:40 Prof. Mark Richardson, session chair
Modelling brain network dynamics to predict clinical outcomes in epilepsy

10:40 – 11:00 Dr. Gretchen Von Allmen, Dr. Michael Funke
Epileptic network analysis using MEG in pediatric epilepsy surgery subjects

11:00 – 11:20 Prof. Geertjan Huiskamp
Epilepsy network models based on single pulse electrical stimulation

11:20 – 11:40 Dr. Jean-Michel Badier, Mr. Bruno Colombet
AnyWave: a software tool to help presurgical decision making in epilepsy surgery

11:40 – 12:00 Prof. Fillipo Zappasodi
Outcome prediction in acute monohemispheric stroke by means of Electroencephalography

12:00 – 14:00 Lunch

Mental Health Symposium

Session chair:	Dr. Martin Brunovsky Head of Brain Electrophysiology Research Programme, National Institute of Mental Health, Czech Republic
14:00 – 14:40	Dr. Martin Brunovsky, session chair <i>qEEG in mood disorders: From biomarkers and predictors of treatment response to a new era of psychedelic research</i>
14:40 – 15:10	Dr. Salvatore Campanella <i>Towards the use of a multi-components ERP battery for screening the clinical evolution of mental diseases</i>
15:10 – 15:30	Dr. Jana Kopřivová <i>Sleep, neuroplasticity and mental health</i>
15:30 – 15:50	Prof. Stefan Götz
15:50 – 16:10	Coffee break
16:10 – 16:30	Dr. Lothar Krinke <i>The CONFIDENT clinical trial: Coil positioning in navigated TMS feasibility in depression patients trial</i>
16:30 – 16:50	Prof. Nikos Konstantinou <i>A randomized controlled trial investigating the effectiveness, mechanisms of action, and moderators of mindfulness-based cognitive therapy combined with TMS in preventing depressive relapse or recurrence</i>
16:50 – 17:10	Poster presentations
17:15 – 18:15	Navigated TMS Workshop: Neuronavigation for TMS brain mapping
18:30 – 20:00	Wine tasting + poster session
20:00	Dinner

Friday, 17 January

Neuroscience Symposium

Session chair:	Dr. Georgios Michalareas Senior Research Fellow – Department of Neuroscience, Max Planck Institute for Empirical Aesthetics, Frankfurt
09:00 – 09:40	Dr. Georgios Michalareas, session chair <i>Functional signatures of hierarchy in the human visual cortex</i>
09:40 – 10:00	Prof. Thomas Knösche <i>Localizing cortical correlates of non-invasive brain stimulation effects</i>
10:00 – 10:20	Prof. John Foxe <i>Is the speed of feedback processing delayed in Autism Spectrum Disorder</i>
10:20 – 10:40	Coffee break
10:40 – 11:00	Prof. Ute Gschwandtner <i>Feasibility of dry electrode EEG cap in patients with Parkinson's disease and deep brain stimulation</i>
11:00 – 11:20	Prof. Sophie Molholm <i>Atypical response inhibition in 22q11.2DS: diminished error registration and awareness</i>
11:20 – 11:40	Prof. Jia Jin Yuan <i>Benefits of emotion regulation by unconscious acceptance: behavioral and ERP evidence</i>
11:40 – 12:00	Prof. John Moshier <i>Inferring source extent using the Okada constant</i>
12:00 – 12:10	Gathering for group photo
12:10 – 14:00	Lunch

Mobile Brain/Body Imaging Symposium

Session chair: **Prof. Klaus Gramann**
Chair Professor – Institute of Psychology and Neuroergonomics,
Technische Universität Berlin
Professor – School of Computer Science, University of Technology
Sydney; Center for Advanced Neurological Engineering, University of
California San Diego

- 14:00 – 14:40 **Prof. Klaus Gramann, session chair**
Mobile brain/body imaging – new methods, new parameters?
- 14:40 – 15:10 **Prof. Surjo Soekadar**
Brain/neural-machine interfaces for assistance and beyond
- 15:10 – 15:30 **Prof. Guy Cheron**
eeego sports in the search of mental states related to top performance
- 15:30 – 15:50 **Prof. Edward Freedman**
MoBI: Neural measures of cognitive motor interference during task-switching
- 15:50 – 16:10 Coffee break
- 16:10 – 16:30 **Prof. Thordur Helgason**
Evoked potentials during the gait cycle in a 10 m walking test
- 16:30 – 16:50 **Prof. Maurizio Bertollo**
Brain dynamics during visual anticipation in sport
- 16:50 – 17:10 **Dr. Teodoro Solis-Escalante**
Classification of cortical activity elicited by whole-body balance perturbations suggests involvement of the theta rhythm in feedback control of balance and posture
- 17:15 – 18:15 **EEG Workshop: Multimodal data acquisition and analysis**
- 18:30 – 19:45 Social event
- 19:45 – 20:00 Meet-up in the lobby for transport to gala dinner
- 20:30 – 23:00 Gala dinner
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Saturday, 18 January

New Technologies Symposium

Session chair: **Dr. Lucia Talamini**
Principal Scientist/Lecturer – Memory and Sleep group, University of Amsterdam

09:20 – 10:00	Dr. Lucia Talamini, session chair <i>Sleep and memory manipulation through closed-loop neurostimulation</i>
10:00 – 10:20	Dr. Frank Zanow, neuromotion CEO <i>ANT Neuro's journey towards new solutions in neuroscience and brain healthcare: the founder's perspective</i>
10:20 – 10:40	Dr. Mahmoud Hassan <i>NEUROCORT: Advanced technologies for neuromarkers of brain disorders</i>
10:40 – 11:00	Coffee break
11:00 – 11:20	Dr. Sam Doesburg <i>The new CTF</i>
11:20 – 11:40	Dr. Pierpaolo Croce <i>Featureless automatic classification of independent components in multi-channel electrophysiological brain recordings by deep convolutional neural networks</i>
11:40 – 12:00	Dr. Patrique Fiedler <i>Dry EEG in sports sciences: Individual alpha peak frequency changes induced by physical effort</i>
12:00 – 14:00	Self-service lunch
14:00	Departure

Note: The program is subject to change.

Registration

Regular participant	<ul style="list-style-type: none">○ access to the entire program○ registrations after 17 November	€ 520
Student	<ul style="list-style-type: none">○ access to the entire program○ for all students	€ 265

You can register for ANT Neurometing 2020 by 15 January 2020. To find out about our other tickets and fees, please go to www.neurometing.ant-neuro.com/registration, and register by following the link!

Meeting venue

ANT Neurometing 2020 will take place in Hotel Le Panorama in Beaune, Burgundy, France (www.le-panorama.com/en/). ANT Neuro has reserved a number of rooms in Hotel Le Panorama for our participants, which are assigned on a first come, first served basis.

The following rates apply:

- single classic room with bed & breakfast € 98
- single superior room with bed & breakfast € 108
- double classic room with bed & breakfast € 113
- double superior room with bed & breakfast € 123
- city tax € 1.65 per person, per night

If you book a room **before 16 December**, you will receive a **15% discount**. Please contact the hotel directly to find out more about their offer and to reserve a room:

Tel: +33 (0)3 80 26 22 17

Email: beaune-panorama@kyriadprestige.fr

More information

To find out more about ANT Neuro, the organizer of ANT Neurometing, please check www.ant-neuro.com and follow us on [Facebook](#), [Twitter](#) and [LinkedIn](#).

Stay up to date with ANT Neurometing 2020 by visiting our website at www.neurometing.ant-neuro.com and following us at www.twitter.com/antneurometing.

If you have questions, you are always welcome to get in touch with our ANT Neurometing manager Ina Barić:

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We are looking forward to sharing the ANT Neurometing experience with you!

ANT Neuromotion 2020 is organized by:



ant neuro
inspiring technology

inspiring technology for the human brain

neuromotion

neuroscience - neurocare - neuromodulation

Members of the neuromotion group:

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

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