# Welcome to the International PharmacoEEG (IPEG) Conference

IPEG



International Pharmaco-EEG Society

**Location: Vilnius, Lithuania**

**When: November 16-19th, 2026**

Corner Hotel https://cornerhotel.lt/en/

Address: T. Ševčenkos g. 16, Vilnius 03111, Lithuania.



# CONFERENCE AT-A-GLANCE

## NOVEMBER 16–19 (Updated Nov 16th, 2026)

| TIME | DAY 1<br>TRAINING COURSE<br>MONDAY, NOVEMBER 16 | DAY 2<br>CONFERENCE & POSTERS<br>TUESDAY, NOVEMBER 17 | DAY 3<br>CONFERENCE<br>WEDNESDAY, NOVEMBER 18 | DAY 4<br>HALF-DAY CONFERENCE & CLOSURE<br>THURSDAY, NOVEMBER 19 |
|---|---|---|---|---|
| **08:30–08:45** | | **Arrival & Registration + Coffee / Tea** | **Arrival & Registration + Coffee / Tea** | **Arrival & Registration + Coffee / Tea** |
| **08:45–09:00** | | | | |
| 09:00–09:15 | Arrival & Registration + Coffee / Tea | Welcome & Introductions II (Martin Brunovsky) | Keynote III - Thomas Koenig "EEG resting state microstates: Current understanding, challenges, and opportunities" (Introduction: Inga) | Symposium 6: Hot Topics (selected from IPEG abstracts) 1. Vlastimil Koudelka, 2. Sandor Kantor, 3. Agnese Ušacka, 4. Vahid Asayesh |
| 09:15–09:30 | | Keynote I - Robert Oostenveld “New opportunities to study brain activity with OPM-MEG (Introduction: Martin B) | | |
| 09:30–09:45 | | | | |
| 09:45–10:00 | Welcome & Introductions (Martin B) | | | |
| 10:00–10:15 | Tutorial 1.1: Tomas Ros - Theory on Neurofeedback | | Q&A / Quick Coffee Break | |
| 10:15–10:30 | | Q&A / Quick Coffee Break | Symposium 4: Industry/Translational EEG, Pim Drinkenburg & Kjartan Frisch Herrik [chairs] Speakers: Roger Redondo, Kjartan Herrik, Julien Volle, Florian Adraoui | |
| 10:30–10:45 | | Symposium 1: Auditory steady-state responses, Inga [chair] Speakers: Inga Griškova-Bulanova Urtė Jašinskytė, Čestmír Vejmola, Aurimas Mockevicius | | Q&A / Quick Coffee Break |
| 10:45–11:00 | Q&A / Quick Coffee Break | | | Awards & Farewell/Closure |
| 11:00–11:15 | Tutorial 1.2: Tomas Ros - Practical Tutorial on Neurofeedback/Neurofeedback "in Action" | | | |
| 11:15–11:30 | | | Keynote IV - Pedro Mediano "Computational Models of Altered Consciousness" | |
| 11:30–11:45 | | | | |
| 11:45–12:00 | Lunch + Vendors | | | |
| 12:00–12:15 | | Lunch & poster viewing + vendors | | |
| 12:15–12:30 | | | | |
| 12:30–12:45 | | | Lunch & vendors | |
| 12:45–13:00 | Tutorial 2 - Robert Oostenveld - Lecture on BIDS/Maximal Use of Available Datasets + Demonstration of BIDS | | | |
| 13:00–13:15 | | | | |
| 13:15–13:30 | | Symposium 2: Sleep, Marcel Zeising [chair] Speakers: Jana Kopřivová, Giedrė Gelžinienė, Çağatay Demirel | | |
| 13:30–13:45 | | | Blitz Talk: Amy Bland "EEG101: Overview & Updates” | |
| 13:45–14:00 | Q&A / Quick Coffee Break | | | |

| TIME | DAY 1<br>TRAINING COURSE<br>MONDAY, NOVEMBER 16 | DAY 2<br>CONFERENCE & POSTERS<br>TUESDAY, NOVEMBER 17 | DAY 3<br>CONFERENCE<br>WEDNESDAY, NOVEMBER 18 | DAY 4<br>HALF-DAY CONFERENCE & CLOSURE<br>THURSDAY, NOVEMBER 19 |
|---|---|---|---|---|
| 14:00–14:15 | Tutorial 3 - Pedro Mediano - Information theory to analyze EEG data | | Talk & Podium Discussion: "EEG & AI: From Lab to World" Sebastian Olbrich [chair] Speakers: Sebastian Olbrich & Tomas Ros | |
| 14:15–14:30 | | | | |
| 14:30–14:45 | | Q&A / Quick Coffee Break | | |
| 14:45–15:00 | | Keynote II - Andreea Diaconescu (**virtual**) "Computational Neuromodulation: Modelling Drug Effects on Precision-Weighted Belief Updating" (Introduction: Natalia J) | | |
| 15:00–15:15 | Tutorial 4 - Thomas Koening - Tutorial on Microstates/Updates to Microstates Analyses | | Q&A / Longer Coffee Break | |
| 15:15–15:30 | | | | |
| 15:30–15:45 | | | Symposium 5: EEG studies in psychedelics: Effects of classic & non-classic psychedelics, cross-species mechanisms, inter-brain synchrony & contextual dynamics, Martin Brunovsky [chair] Speakers: Claudio Agnorelli, Filip Trbušek, Natasha Mason, Tomáš Páleníček | |
| 15:45–16:00 | | Q&A / Quick Coffee Break | | |
| 16:00–16:15 | Free evening | Symposium 3: Sex/gender considerations in EEG Research, Natalia Jaworska [chair] Speakers: Natalia Jaworska; Marie Huc; Sara de la Salle; Lee-Ann Olmstead | | |
| 16:15–16:30 | | | | |
| 16:30–16:45 | | | | |
| 16:45–17:00 | | | | |
| 17:00–17:15 | | | Free time | |
| 17:15–17:30 | | General Assembly - All IPEG Members | | |
| 17:30–17:45 | | | | |
| 17:45–18:00 | | SOCIAL DINNER (19:00) | | |
| 18:00–18:15 | | | | |

*Times are shown in 15-minute increments.*

## The meeting is generously supported by the following sponsors:

**Neuroelectrics:**

https://www.neuroelectrics.com/

**ANT Neuro:**

https://www.ant-neuro.com/

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https://www.brainaccess.ai/

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**Lithuanian Neuroscience Association:**

LITHUANIAN NEUROSCIENCE ASSOCIATION

Lietuvos neuromokslų asociacija | Lietuvos neuromokslų asociacija

# EXPANDED CONFERENCE SCHEDULE

## DAY 1 — TRAINING COURSE + 1ST DAY

***Monday, November 16***

| TIME | DAY 1 — TRAINING COURSE + 1ST DAY (NOVEMBER 16) |
|---|---|
| **09:00-09:45** | Arrival & Registration + Coffee/Tea |
| **09:45–10:00** | Welcome & Introductions |
| **10:00–10:45** | Tutorial 1.1: *Tomas Ros* — Theory on Neurofeedback |
| **10:45–11:00** | Q&A / Quick Coffee Break |
| **11:00–11:45** | Tutorial 1.2: *Tomas Ros* — Practical Tutorial on Neurofeedback / Neurofeedback “in Action” |
| **11:45–10:45** | Lunch + Vendors |
| **12:45–13:45** | Tutorial 2: *Robert Oostenveld* — Lecture on BIDS / Maximal Use of Available Datasets + Demonstration of BIDS |
| **13:45–14:00** | Q&A / Quick Coffee Break |
| **14:00–15:00** | Tutorial 3: *Pedro Mediano* — Information Theory Methods for EEG |
| **15:00–16:00** | Tutorial 4: *Thomas Koening* — Tutorial on Microstates / Updates to Microstates Analyses |

## Tutorial Speakers:

1. **Dr. Tomas Ros**, PhD, is a neuroscientist and Senior Lecturer in the Department of Clinical Neuroscience at the University of Geneva, Switzerland, where he also leads research on EEG-based neurofeedback. His work focuses on brain plasticity and the development of neurofeedback approaches for psychiatric and neurological conditions, including ADHD, post-traumatic stress disorder (PTSD), and stroke rehabilitation.

2. **Dr. Robert Oostenveld**, PhD, is an Associate Principal Investigator at the Donders Institute for Brain, Cognition & Behaviour at Radboud University in the Netherlands. His research focuses on the development of advanced methods for EEG and MEG data acquisition and analysis, including signal processing, source reconstruction, and functional connectivity; he is also the founder and lead developer of FieldTrip, a widely used open-source toolbox for electrophysiological data analysis.

3. **Prof. Dr. Thomas König**, PhD, is a neuroscientist and Group Leader of the Psychiatric Electrophysiology Unit at the University of Bern and University Hospital of Psychiatry in Switzerland. His research focuses on the temporal organization of brain activity, EEG microstates, and functional brain networks, with particular emphasis on their role in psychiatric disorders such as schizophrenia and on the development of EEG neurofeedback approaches to modulate brain network activity.

4. Dr. **Pedro A. M. Mediano**, PhD, is an Associate Professor in Neural Computation in the Department of Computing at Imperial College London, UK. His research lies at the intersection of neuroscience, information theory, and complex systems, focusing on the mathematical characterization of brain dynamics, consciousness, and emergent information processing, including the application of information-theoretic approaches to understanding neural complexity and higher-order brain interactions.

# DAY 2 — CONFERENCE / POSTERS

***Tuesday, November 17***

| TIME | DAY 2 — CONFERENCE (NOVEMBER 17) / POSTERS |
|---|---|
| **08:30–09:00** | Arrival & Registration + Coffee/Tea |
| **09:00–09:15** | Welcome & Introductions II |
| **09:15–10:15** | Keynote I — *Robert Oostenveld*: “New opportunities to study brain activity with OPM-MEG” |
| **10:15–10:30** | Q&A / Quick Coffee Break |
| **10:30–11:45** | Symposium 1: Auditory steady-state responses — Inga [chair]. Speakers: Inga Griškova-Bulanova, Urtė Jašinskytė, Čestmír Vejmola, Aurimas Mockevicius |
| **11:45–13:15** | Lunch & poster viewing + vendors |
| **13:15–14:30** | Symposium 2: Sleep — Marcel Zeising [chair]. Speakers: Jana Kopřivová, Giedrė Gelžinienė, Çağatay Demirel |
| **14:30–14:45** | Q&A / Quick Coffee Break |
| **14:45–15:45** | Keynote II — *Andreea Diaconescu* (virtual): “Computational Neuromodulation: Modelling Drug Effects on Precision-Weighted Belief Updating” |
| **15:45–16:00** | Q&A / Quick Coffee Break |
| **16:00–17:15** | Symposium 3: Sex/gender considerations in EEG Research — Natalia Jaworska [chair]. Speakers: Natalia Jaworska, Marie Huc, Sara de la Salle, Lee-Ann Olmstead (16:00–17:30) |
| **17:15–18:00** | General Assembly — All IPEG Members (17:30–18:00) |

## Keynote Speakers:

1. **Dr. Robert Oostenveld**, PhD, is an Associate Principal Investigator at the Donders Institute for Brain, Cognition & Behaviour at Radboud University in the Netherlands. His research focuses on the development of advanced methods for EEG and MEG data acquisition and analysis, including signal processing, source reconstruction, and functional connectivity; he is also the founder and lead developer of FieldTrip, a widely used open-source toolbox for electrophysiological data analysis.

2. **Andreea O. Diaconescu**, PhD, is a Scientist at the Krembil Centre for Neuroinformatics at the Centre for Addiction and Mental Health in Toronto, and an Associate Professor in the Department of Psychiatry at the University of Toronto, where she is cross-appointed to the Institute of Medical Science. She leads the Cognitive Network Modelling (CogNeMo) Laboratory. Her research combines computational modelling with EEG and fMRI to understand the mechanisms of learning and decision-making in psychosis-spectrum and mood-related disorders, with a particular interest in how these processes relate to suicidality. She serves as Co-Editor-in-Chief of Frontiers in Computational Psychiatry and as a Reviewing Editor at eLife.

**Keynote Title:** ***Computational Psychopharmacology: Modelling Drug Effects on Precision-Weighted Belief Updating***

## Abstract

Pharmaco-EEG has characterised how pharmacological agents modulate the brain's electrical activity. What those modulations imply about the computations the brain is performing has been harder to establish. Generative modelling offers a way through: spectral power and evoked responses become not endpoints in themselves, but observable consequences of a drug acting on identifiable quantities within a hierarchical inference process.

This talk develops that argument around precision-weighted belief updating. Hierarchical Bayesian accounts hold that learning is driven by prediction errors scaled by their estimated precision, and neuromodulatory systems are well placed to set those weights. Pharmacological challenge thus becomes an experimental lever on inference itself: a means of perturbing a specific computational quantity and observing the electrophysiological consequence. Drawing on work from our lab across psychosis-spectrum and mood-related populations, including ketamine and psilocybin, I will show how model-based analyses of the EEG recover drug effects on belief updating that conventional spectral measures leave implicit.

The clinical prospect is stratification. If individual differences in precision parameters predict who responds to a given compound, pharmaco-EEG becomes a means of matching patients to treatments rather than of characterising drugs. I will conclude by setting out what it would take to test this.

# DAY 3 — CONFERENCE

***Wednesday, November 18***

| TIME | DAY 3 — CONFERENCE (NOVEMBER 18) |
|---|---|
| **08:30–09:00** | Arrival & Registration + Coffee/Tea |
| **09:00–10:00** | Keynote III - *Thomas Koenig* "EEG resting state microstates: Current understanding, challenges, and opportunities" |
| **10:00–10:15** | Q&A / Quick Coffee Break |
| **10:15–11:30** | Symposium 4: Industry/Translational EEG, Pim Drinkenburg & Kjartan Frisch Herrik [chairs] Speakers: Roger Redondo, Kjartan Herrik, Julien Volle, Florian Adraoui |
| **11:30–12:30** | Keynote IV - *Pedro Mediano* "Computational Models of Altered Consciousness" |
| **12:30–13:30** | Lunch & vendors |
| **13:30-14:00** | Blitz Talk:  Amy Bland "EEG101: Overview & Updates" |
| **14:00-15:00** | Talk & Podium Discussion: "EEG & AI: From Lab to World" Sebastian Olbrich [chair] Speakers: Sebastian Olbrich & Tomas Ros |
| **15:00–15:30** | Q&A / Quick Coffee Break |
| **15:30-17:00** | Symposium 5: EEG studies in psychedelics: Effects of classic & non-classic psychedelics, cross-species mechanisms, inter-brain synchrony & contextual dynamics, Martin Brunovsky [chair] Speakers: Claudio Agnorelli, Filip Trbušek, Natasha Mason, Tomáš Páleníček |

## Keynote Speakers:

1. **Prof. Dr. Thomas König**, PhD, is a neuroscientist and Group Leader of the Psychiatric Electrophysiology Unit at the University of Bern and University Hospital of Psychiatry in Switzerland. His research focuses on the temporal organization of brain activity, EEG microstates, and functional brain networks, with particular emphasis on their role in psychiatric disorders such as schizophrenia and on the development of EEG neurofeedback approaches to modulate brain network activity.

2. Dr. **Pedro A. M. Mediano**, PhD, is an Associate Professor in Neural Computation in the Department of Computing at Imperial College London, UK. His research lies at the intersection of neuroscience, information theory, and complex systems, focusing on the mathematical characterization of brain dynamics, consciousness, and emergent information processing, including the application of information-theoretic approaches to understanding neural complexity and higher-order brain interactions.

## Speakers – Blitz Talk & Podium Sessions:

1. **Dr. Tomas Ros**, PhD, is a neuroscientist and Senior Lecturer in the Department of Clinical Neuroscience at the University of Geneva, Switzerland, where he also leads research on EEG-based neurofeedback. His work focuses on brain plasticity and the development of neurofeedback approaches for psychiatric and neurological conditions, including ADHD, post-traumatic stress disorder (PTSD), and stroke rehabilitation.
2. **Dr. Amy R. Bland**, PhD, is a cognitive neuroscientist at Manchester Metropolitan University in the United Kingdom, where she is involved in research and initiatives advancing EEG science. Her research focuses on cognitive neuroscience, emotion processing, and the neural mechanisms underlying human behaviour, with particular interests in the reproducibility of EEG findings and collaborative research initiatives such as #EEGManyLabs. She also serves as Grant Awarding Coordinator for the EEG101 European research network.
3. **Prof. Dr. Sebastian Olbrich**, MD, PhD, is a psychiatrist and neuroscientist at the University of Zurich and University Hospital of Psychiatry Zurich, Switzerland, where he leads research in electrophysiology and prediction in psychiatry. His work focuses on EEG-based biomarkers, brain connectivity, and the use of electrophysiological measures to predict treatment response and advance personalized approaches to psychiatric care, particularly in depression and other psychiatric disorders.

# DAY 4 — CONFERENCE

***Thursday, November 19***

| TIME | DAY 4 — CONFERENCE (NOVEMBER 19) |
|---|---|
| **08:30–09:00** | Coffee/Tea |
| **09:00–10:30** | Symposium 6: Hot Topics (selected from IPEG abstracts) 1. Vlastimil Koudelka, 2. Naser Hakimi (**unable to attend**) 3. Sandor Kantor, 4. Agnese Ušacka, 5. Vahid Asayesh |
| **10:30–10:45** | Q&A / Quick Coffee Break |
| **10:45–11:15** | Closing Remarks / Wrap-up / Farewell! |

Pertinent details can be found on our website: https://www.ipeg-society.org/meetings/