



**International
Pharmaco-EEG Society**
Association for Electrophysiological Brain Research
in Preclinical and Clinical Pharmacology and Related Fields



**Psychiatrische
Universitätsklinik Zürich**

20th biennial IPEG Meeting

in Zurich, Switzerland
21st-25th November 2018

Program





Dear colleagues, researchers and friends,

The International Pharmaco-EEG Society (IPEG, <http://www.ipeg-society.org>) is a professional association for researchers involved in electrophysiological brain research in preclinical and clinical pharmacology, neurotoxicology, personalized medicine and related areas. The IPEG provides a platform for a vivid exchange of experiences, methods and opinions, as well as a place for networking with the community. The upcoming IPEG 2018 conference will allow researchers from all over the world - and from the clinic, academia or industry - to present their latest findings and discuss the progress of electrophysiological research in clinical and preclinical contexts.

In cooperation with **Parexel**, the IPEG also announces the '**Prof Werner M. Herrmann Prize**' which will be given to a young researcher for an outstanding presentation at the IPEG 2018 meeting (2000€).

Further, we are proud to be enabled by Yasmin Itil Leland to announce for the first time the '**Prof. Dr. Turan M. Itil, MD, FAPA, FACNP Memorial Grant**', which is aimed to support high-quality EEG scientists, future neuropsychiatrists, psychopharmacologists, electrophysiologists and inventors to participate and present at the IPEG biennial International Symposium and Training course.

We are looking forward to an exciting meeting at the PUK Zurich in November 2018.



Prof. Erich Seifritz
Director of the Department
for Psychiatry, Psychotherapy
and Psychosomatics,
University Hospital Zurich,
Organizer



PD Dr. Sebastian Olbrich
President of the IPEG,
Department for Psychiatry,
Psychotherapy and
Psychosomatics, University
Hospital Zurich,
Organizer



Prof. Dr. Hans Peter-Landolt,
Institute of Pharmacology
and Toxicology, University
Zurich,
Scientific Committee



Prof. Dr. sc. nat. Thomas
Koenig
Department of Psychiatric
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University Hospital of
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Dr. Madelon Vollebregt
Secretary of the IPEG,
Brainclinics Research Institu
Nijmegen, The Netherlands,
Organizer



Dr. Marcel Pawlowski
Treasurer of the IPEG,
Centre of Mental Health,
Klinikum Ingolstadt, Ger
many,
Organizer

Additional scientific advice by:

Prof. Dr. Christopher Pryce, Laboratory Head Preclinical Lab for
Translational Research, Department of Psychiatry, Psychotherapy and
Psychosomatics, University Hospital Zurich

Local Organizing Committee:

Sebastian Olbrich
Erna Silvestri
Tania Villar



Preliminary Program IPEG Meeting Zurich, Switzerland, November 21st -25th, 2018

Training Course – Wednesday: November 21st

09:00-09:30 Light Breakfast

09:30-09:45 Introduction

09:45-10:30 Sleep EEG – *Marcel Pawlowski, Ingolstadt, Germany*

10:30-11:15 Practical principles of developing artificial neural networks for EEG data– *Hanneke van Dijk, Nijmegen, Netherlands*

11:15-11:45 Coffee Break

11:45-13:15 EEG-Microstates – *Thomas Koenig, Bern, Switzerland*

13:15-14:15 Lunch at “Obstgarten” Restaurant

14:15-15:00 Clinical EEG – *Oliver Pogarell, Munich, Germany*

15:00-15:45 Animal Recording – *Pim Drinkenburg, Beerse, Belgium*

15:45-16:15 Coffee Break

16:15-17:00 Vigilance Analysis – *Christine Ulke, Leipzig, Germany*

17:00-17:45 LORETA Source Localization – *Sebastian Olbrich, Zurich, Switzerland*

Wednesday evening

18:00-18:15 Presidential address and welcome

Sebastian Olbrich (IPEG President)

Gilles van Luijtelaar / Martijn Arns (IPEG 2016)

18:15-20:00 Welcome reception



Thursday: November 22nd

08:30-09:00 Light Breakfast

09:00-09:15 Welcoming addresses by Prof. Dr. med. Erich Seifritz, Organizer

09:15-10:00 **Keynote 1: Derk-Jan Dijk, Guildford, UK:**

“What makes a good night’s sleep: physiology and pharmacology”

10:00-11:15 **Symposium 1: “Chronobiology and Sleep-Wake Regulation”,**

Chair: Hans-Peter Landolt, Zurich, Switzerland

1. “Sleep and circadian rhythm disruption in neuropsychiatric illness: insights from molecular mechanisms that regulate the circadian clock”

Aarti Jagannath, University of Oxford, Oxford, UK

2. “Caffeine and sleep: chronic caffeine deepens sleep in mice”

Tom de Boer, Leiden, Netherlands

3. “GHB, sleep and performance: Polysomnographic and MRS studies”

Dario Dornbierer, Zurich, Switzerland

11:15-11:45 Coffee Break

11:45-13:15 **Symposium 2: “New insights into precision medicine and target engagement in depression treatments”**

Chair: Martijn Arns, Nijmegen, Netherlands

1. “New Insights into Precision Medicine and Target Engagement in Depression Treatments”

Tabitha Iseger, Nijmegen, Netherlands



2. “EEG-Vigilance Regulation in Prediction of Treatment” (correct title tba)
Ulrich Hegerl, Leipzig, Germany
3. “Temporal Development of Depression Biomarkers from the iSPOT-D study: State of Trait”
Nikita van der Vinne, Nijmegen, Netherlands
4. “Can psychological features predict antidepressant response to rTMS? A Discovery-Replication approach”
Noralie Krepel, Nijmegen, Netherlands

13:15-14:15 Lunch at “Obstgarten” Restaurant

14:15-15:00 **Keynote 2: Martijn Arns, Nijmegen, Netherlands:**

“EEG Based Personalized Medicine in ADHD and Depression: Dream or reality.”

15:00-15:45 **Free Communications (2 Speakers, tba)**

15:45-16:15 Coffee Break

16:15-17:15 **Symposium 3 (ECNS sponsored): “Gamma Oscillations”**

Chair: Nevzat Tarhan, Istanbul, Turkey

1. “Gamma Oscillations: Mechanisms, Methods and Applications”
Emine Elif Tulay, Istanbul, Turkey
2. “Biomarkers for predicting suicide risk”
Kemal Arıkan, Istanbul, Turkey
3. “Gamma oscillations in depression”
Baris Metin, Istanbul, Turkey
4. “Future research directions in quantitative EEG”



Nevzat Tarhan, Istanbul, Turkey

17:15-17:45 **Free Communications (1-2 Speakers, tba)**

Thursday evening

18:00-20:00 **Welcome reception Stadtrat Zurich with Apéro**



Friday: November 23rd

08:30-09:00 Light Breakfast

09:00-09:45 **Keynote 3: Franz Vollenweider, Zurich, Switzerland:**
„Psychedelic Drugs“

09:45-11:15 **Symposium 4: “Microstates and Connectivity”**
Chair: Thomas König, Bern, Switzerland

11:15-11:45 Coffee Break

11:45-12:30 **Keynote 4: Daniel Brandeis, Zurich, Switzerland:**
“The Neurophysiology of ADHD - a translational update on mechanisms, biomarker candidates and treatment”

12:30-14:15 General Assembly

13:15-14:15 Lunch at “Obstgarten” Restaurant

14:15-15:00 **Keynote 5: Nikos Logothetis, Tübingen, Germany:**
“Investigation of Brain function - Where do we come from and where do we go?”

15:00-16:30 **Symposium 5: „EEG-based dissection of Autism Spectrum Disorder for personalized treatment“**

Chair: Klaus Linkenkaer-Hansen, Amsterdam, Netherlands

1. “EEG abnormalities in Autism Spectrum Disorder are associated with paradoxically low excitation-inhibition ratios”
Erika Juárez-Martínez, Utrecht, Netherlands
2. “Dissection of neurophysiological variability in ASD through auditory event-related potentials”



Jan Sprengers, Utrecht, Netherlands

3. “Association between local excitation-inhibition ratio and long-range functional connectivity in autism spectrum disorder”

Simon Houtman, Amsterdam, Netherlands

4. “An EEG-based machine-learning approach for stratifying autism spectrum disorder”

Sonja Simpraga, Amsterdam, Netherlands

16:30-18:30 **Poster and Drinks**

Presentation of accepted poster submissions, presented in the meeting hall. While hearing about the latest findings of your colleagues, you can enjoy a glass of wine and have some snacks to enhance your networking abilities.



Saturday: November 24th

08:30-09:00 Light Breakfast

09:00-09:45 **Keynote 5: Jonathan Downar, Toronto, Canada:**

“TMS-Treatment and prediction” (precise title tba)

09:45-11:15 **Symposium 6: “Translational Research: Psychedelic Drugs”**

Chair: Tomas Palenicek, Prague, Czech Republic

1. “EEG and Psylocibin in humans and animals”

Tomas Palenicek, Prague, Czech Republic

2. “The effects of psilocybin on sleep architecture”

Giancarlo Allocca

3. “Effects of Ayahuasca on human EEG”

Eduardo Schenberg, Sao Paulo, Brasil

4. “Effects of i.v. DMT on EEG”

Christopher Timmerman, London, UK

5. “The olfactory bulb is a source of high-frequency oscillations (130–180 Hz) associated with a subanesthetic dose of ketamine in rodents”

Mark Hunt, York, UK

11:15-11:45 Coffee Break

11:45-13:15 **Symposium 7: “Deep Learning and EEG”**

Chair: Sebastian Olbrich, Zurich, Switzerland

1. “Deep Nets and LSTMs for EEG analysis in diagnosis and prediction psychiatric disorders”

Sebastian Olbrich, Zurich, Switzerland



2. “Deep learning for EEG analysis”

Tonia Ball, Freiburg, Deutschland

3. Michel van Putten, Utrecht, Netherlands

4. “Deep learning applicability in clinical practice; Classifying sex and specific brain activity from the EEG”

Hanneke van Dijk, Nijmegen, Netherlands

13:15-14:15 Lunch at “Obstgarten” Restaurant

14:15-15:00 **Keynote 7: Nikolai Axmacher, Tübingen, Germany:**

“Oscillatory engram patterns”

15:00-16:30 **Symposium 8: “Preclinical EEG Research” (precise title tba)**

Chair: Pim Drinkenburg, Beerse, Belgium

16:30-17:00 Coffee Break

17:30-18:30 **Prof. Turan Itil Memorial Grant with speech from Yasmin Itil and winner Keynote (tba)**



Saturday evening

19:00-22:00 **Social Event: Dinner at the Zunfthaus “Zur Waag”**

Address: Münsterhof 8, 8001 Zürich





Sunday: November 25th

08:30-09:00 Light Breakfast

09:00-10:00 **Free communications** (4 talks tba)

10:00-11:00 **Free communications** (4 talks tba)

11:00-11:15 **Werner Hermann Winner Announcement**

11:15-11:30 Farewell