

4th OHBM Alpine Chapter Meeting 9th/10th November 2018

Medical University Innsbruck

- 09.11.2018** **Advanced course in clinical fMRI**
- 08:30** **Welcome** (Beisteiner, Stippich, Gizewski)
- 08:45 - 9:30** **Advanced analyses (Chair: Anja Ischebeck, Graz)**
GLM (new software features) – Rainer Goebel / Michael Lührs,
Maastricht
Resting State fMRI: state of the art and clinical examples – Noora
Tuovinen, Innsbruck
Resting State fMRI: new developments - Bharat Biswal, New Jersey
- 9:30 – 10:15** **Advanced Clinical applications (Chair: Wolfgang Staffen, Salzburg)**
Neuronal Current Imaging – Roland Wiest, Bern
Paradigms + Pitfalls – Christoph Stippich, Zürich
Clinical benefits of Ultrahigh Field – Roland Beisteiner, Vienna
- 10:15 – 10:30** **Coffee Break**
- 10:30 – 11:00** **Practical examples and discussions (Chair: Elke Gizewski, Innsbruck)**
Typical procedures (scanning, processing) – Innsbruck Group / Ruth Steiger
- 11:00 – 11:30** **Examples and Interpretation** – Innsbruck group / Christian Siedentopf
- 11:30 – 12:30** **Certificate & Lunch**
- 12:30** **Start Alpine Chapter Symposium**
Welcome (Beisteiner, Stippich, Gizewski)
- 12:45 – 14:00** **Neurodegenerative Diseases**
Chair: Christoph Scherfler, Innsbruck
- 12:45 - 13:05** Diagnostic potential of automated volumetric magnetic resonance imaging analysis in the differentiation of neurodegenerative parkinsonian syndromes.
Jan Kassubeck (Department of Neurology, University of Ulm)
- 13:05 – 13:25** The potential of diffusion tensor imaging in the differentiation of neurodegenerative parkinsonian syndromes.
Florian Krismer (Department of Neurology, Innsbruck)
- 13:25 – 13:45** Does the identification of morphometric signatures contribute to the diagnosis of neurodegenerative dementias?

Christoph Scherfler (Department of Neurology and Neuroimaging
Research Core Facility at the Medical University of Innsbruck)

- 13:45 – 14:00** Discussion
- 14:00 – 15:15** **Multiple Sclerosis**
Chair: Chair: Daniela Pinter, Graz
- 14:00 – 14:20** Resting State fMRI in MS.
Daniela Pinter (Graz)
- 14:20 – 14:40** Explaining the heterogeneity of functional connectivity findings in MS.
Menno Schoonheim (Amsterdam)
- 14:40 – 15:00** Insights from MRI into fatigue in MS.
Paolo Preziosa (Milan)
- 15:00 – 15:15** Discussion
- 15:15 – 15:45** **Coffee Break / Poster**
- 15:45 – 17:00** **Stroke**
Chair: Christoph Stippich, Zürich
- 15:45 – 16:15** Imaging acute stroke
C. Stippich
- 16:15 – 16:45** Advanced MRI in stroke imaging
Roland Wiest, Bern
- 16:45 – 17:00** Discussion
- 17:00 – 18:15** **Machine Learning**
Chair: Roland Wiest, Bern
- 17:00 – 17:20** Interpretability of Machine Learning Models in Neuroimaging
R. Meier (Biomedical Engineering)
- 17:20 – 17:40** Segmentation with error bounds: applications to longitudinal volumetry
in multiple sclerosis
R. McKinley (Mathematics)
- 17:40 - 18:00** Subtype classification of temporal lobe epilepsies by surface based
morphometric analysis
C. Rummel (Physics)
- 18:00 – 18:15** Discussion
- 19:00** **Dinner**

10.11.2018

09:00 – 10:15

Chapter communications Cognition

Chair: *Martin Kronbichler, Salzburg*

9:00 – 9:15

Function and connectivity in the temporo-parietal junction area.
Matthias Schurz, Salzburg, Oxford

9:15 – 9:30

What's in a hub? Identity in Language, Maths, and Face Recognition.
Josef Perner, Salzburg

9:30 – 9:45

Sex hormones and hubs - examples from language, math and face processing.
Belinda Pletzer, Salzburg

9:45 – 10:00

Frequency modulation of neural oscillations according to visual task demands
Andreas Wutz, Salzburg, MIT Cambridge

10:00 – 10:15

Fractal music elucidates neural mechanisms supporting the generation and discrimination of tonal hierarchies
Mauricio Martins, Vienna, Berlin, Leipzig

10:15 – 11:00

Keynote Lecture

Vincent P. Clark "New developments in brain stimulation and imaging – clinical potential"

Director: Psychology Clinical Neuroscience Center, University of New Mexico

11:00 – 11:15

Coffee Break / Poster

11:15 – 12:15

Chapter communications: Methods (Chair: Martin Kronbichler, Salzburg)

11:00 – 11:20

Multimodal Segmentation (Roberto Viviani, Innsbruck)

11:20 – 11:35

Real time fMRI using Turbo Brain Voyager (Kleiser, Linz)

11:35 – 11:50

High resolution structural and functional MRI at 3T, 7T and 9.4T: a cognitive neuroscientist's experience (*Natalia Zaretskaya, Graz*)

11:50 – 12:05

NN

12:05 – 12:20

NN

12:20 – 13:00

Lunch Break

13:00 – 14:00

Chapter communications: Clinical Methods (Chair: Stefan Golaszewski, Salzburg)

13:00 – 13:20

Multimodal Neuroimaging in Neuropsychopharmacology – From fMRI to PET and transcriptomics (*Rupert Lanzenberger, Vienna*)

13:20 – 13:35

Segmentation of Hippocampal Subfields and Nuclei of the Amygdala before and after SSRI treatment in Patients with Major Depressive Disorder (*Thomas Vanicek, Vienna*)

13:35 – 13:50

fMRI and stroke: results to Mesh Glove examinations (K. Schwenker, Salzburg)

13:50 – 14:05

Vegetative state (S. Golaszewski, Salzburg)

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| 14.05 – 15:00 | Chapter communications: Mixed (Chair: Bogdan Draganski, Lausanne) |
| 14:00 – 14:15 | Improving sensitivity, specificity, and reproducibility of individual brainstem activation (<i>Eva Matt, Vienna</i>) |
| 14:15 – 14:30 | NN (Bogdan Draganski) |
| 14:30 – 14:45 | Psychological Pain (Karin Labek, Innsbruck) |
| 14:45 – 15:00 | Mapping of GABA and glutamate in psychiatric diseases at 3T (<i>Benjamin Spurny, Vienna</i>) |
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| 15:00h | Farewell and Outlook 5th OHBM Chapter |