We cordially invite you to the Second International Workshop on High-Frequency Oscillations in Epilepsy. Following the first workshop in Montreal 2012, the field has evolved rapidly, covering a wide range of topics. Researchers from around the world will present the newest developments in hot topics such as frequency ranges, new recording techniques, and the separation between physiological and pathological High-Frequency Oscillations. We warmly encourage researchers and clinicians to submit abstracts for our poster and platform sessions covering the latest scientific discoveries and clinical challenges. Beyond scientific discussions, we will offer teaching sessions for anyone interested in joining this research area.

We hope to see you in Freiburg to enjoy with us an interesting meeting, talks of renowned speakers, stimulating discussions and the enjoyable environment of the black forest.

Prof. Dr. Julia Jacobs                   Prof. Dr. Andreas Schulze-Bonhage
Thursday afternoon  •  Teaching workshop

13:00 - 14:00 Define the HFO
13:00 - 13:30 A new set of frequencies – define an HFO; what will we be talking about
Jean Gotman, Canada
13:30 - 14:00 How does the brain generate HFOs – basic science explained for clinicians
Premylt Jiruška, Czech Republic
14:00 - 16:00 Identify the HFO
14:00 - 14:25 Visual identification of interictal in tracranial HFOs –
Julia Jacobs, Germany
14:25 - 14:50 Pitfalls of identifying ictal and interictal HFOs
Greg Worrell, USA
14:50 - 15:15 Automatic detection – different types
of detection algorithms, validation and adaptation
Fabrice Wendling, France
15:15 - 15:35 Identification of scalp HFOs
Marke Zijlmans, Netherlands
15:35 - 16:00 High frequency activity patterns at seizure onset
Philippe Kahane, France
16:00 - 16:30 Coffee break

16:30 - 18:30 Helpful tools: A hands-on session
Chair: Matthias Dümpelmann, Germany
In this session participants will be organized into small work groups and will be able to analyze two example EEG files with different tool boxes. Six computers will be equipped with different tool boxes and participants will have time to spend around 15 min at each computer station.
16:30 - 16:50 Short intro to the different tools
16:50 - 18:10 Hands on at computer stations
18:10 - 18:30 Questions and answers
After 18:30 Optional common evening with registration

Friday afternoon  •  Scientific program

14:00 - 15:40 Session 3: Modulators of HFOs
14:00 - 14:20 Influence of pathology on HFOs
Rick Staba, USA
14:20 - 14:40 Influence of sleep on HFOs
Birgit Trautwein, Austria
14:40 - 15:00 Interactions between spikes and HFOs
Julia Jacobs, Germany
15:00 - 15:20 Effect of medication on HFOs
Stefan Rampf, Germany
15:20 - 15:40 Stimulation and HFOs (high frequency, single pulse, TMS)
Wayne van T Klooster, Netherlands
15:40 - 16:00 Coffee Break

16:00 - 18:00 Session 4: Is there only one kind of HFO?
16:00 - 16:30 When are ripples and fast ripples fundamentally distinct oscillations?
Anatol Bragin, USA
16:30 - 17:00 Intercital and ictal HFOs
Michel Le Van Quyen, France
17:00 - 17:20 DC and HFO
Akio Ikeda, Japan
17:20 - 17:40 Very HFO
Natsuku Usui, Japan
17:40 - 18:00 Discussion Round
19:00  Common evening at the Peterhofkeller
in Freiburg

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Saturday • scientific program

14:00 - 15:30 Session 5: New developments in analysing HFOs
8:30 - 9:00 How do we record and analyze HFOs? Micro vs. macro electrodes, automatic vs. visual analysis
Jean Gotman, Canada
Development of new electrodes
9:00 - 9:20 Grid electrodes  •  Thomas Stieglitz, Germany
9:20 - 9:40 Depth electrodes  •  Andrei Barborica, Romania
9:40 - 10:00 HFOs recorded with MEG
Marcel Heers, Germany
10:00 - 10:30 Coffee break
10:30 - 12:30 Platform
(5 min talks from submitted abstracts)
12:30 - 14:00 Lunch and Poster session
14:00 - 15:30 Session 6: HFOs in the pediatric population
14:00 - 14:30 Intra-cranial HFO analysis in pediatric epilepsy
Hiroshi Otsubo, Canada
14:30 - 15:00 Scalp HFOs in different childhood epilepsies
Katsuhiko Kohashi, Japan
15:00 - 15:30 HFOs to measure disease activity with scalp EEG  •  Joyce Wu, USA
15:30 - 18:00 Session 7: What is the evidence for clinical use of HFOs
15:30 - 15:50 A meta-Analysis of published trials
Yvonne Höller, Austria
15:50 - 16:10 Current evidence from intraoperative recordings  •  Marke Zijlmans, Netherlands
16:10 - 16:30 Cochrane Institute: what would be needed for first class evidence? (to be announced)
16:30 - 16:40 Discussion: what do we need for a multicenter trial?
16:40 - 17:40 The clinical challenge: All centers are invited to give a short presentation on how they use HFOs in clinical practice
17:40 - 18:00 Discussion: Have we learned anything critically important from HFOs?