

Program for the 1st workshop in WWU:

Monday, Sept.21:

19: 00 *Get together dinner for those arriving on 21st Sept (Restaurant "Wolters im Speicher":*

<http://www.wolters-imspeicher.de/>, Phone: +49 (0)251- 6743310)

Tuesday, Sept.22:

9:00 Welcome (Christo Pantev, director of WWU-IBB, and Carsten Wolters, organizer of the workshop)

9:10 Opening (Paavo Leppänen/Jyväskylä)

9:15 What is ChildBrain and Introduction to neurocognitive disorders (Paavo)

Time for questions

Coffee break

11:00 Basics of EEG/MEG: neurophysiological basis of the signals, source models, volume conduction, response dynamics, averaging, somatosensory and auditory stimuli (Lauri Parkkonen/Elekta Oy, Helsinki)

11:30 Introduction to MRI and MEG/EEG hardware (Lauri)

12:00 Organizing the rotation schedule for the hands-on sessions (3-4 groups, Carsten)

12:30 *Lunch and foto session*

13:30 Forming of the ESR assembly

14:30 ESR assembly

15:30-16:30 Introduction to MRI and M/EEG based source analysis: current standard approaches for forward and inverse problem (Lauri)

17:30 *Guided tour (in english) through the LWL Museum für Kunst und Kultur*

19:00 *Dinner in restaurant Altes Gasthaus Leve* (<http://www.gasthaus-leve.de/>, Phone: +49 (0)251-45595)

Wednesday, Sept.23:

8:00-13:00 ESRs: Hands-on practice (3-4 groups): Measurement of MRI and combined EEG/MEG using auditory and somatosensory stimuli (IBB-team: Karin Berning, Ute Trompeter, Hildegard Deitermann, Andreas Wollbrink, Carsten; IKR: Harald Kugel). During waiting times, the ESR's study literature about SEP/SEF and AEP/AEF.

8:00-13:00 PIs: EC and DOC meetings, SB meeting

13:00 *Lunch*

14:00-16:00 BESA (Isabella Paul-Jordanov/BESA GmbH, München): Preprocessing of M/EEG and MRI data: lecture on filtering, artifact rejection/correction, averaging, evaluating EEG/MEG topographies etc. Source analysis of measured MEG/EEG and MRI data. Which processing pipelines does BESA offer already and a short outlook what will be developed within ChildBrain. Possibly already a hands-on to the data that were measured in the morning.

16:00-18:00 Fieldtrip (Robert Oostenveld/Donders Nijmegen): Preprocessing of M/EEG and MRI data: lecture on filtering, artifact rejection/correction, averaging, evaluating EEG/MEG topographies etc.. Source analysis of measured MEG/EEG and MRI data. Which processing pipelines does Fieldtrip offer already and a short outlook what will be developed within ChildBrain. Possibly already a hands-on to the data that were measured in the morning.

19:00 *Dinner in restaurant "A2 am See"* (<http://www.a2amsee.de/>, Phone: +49 (0) 251/ 284 684-0)

Thursday, Sept.24:

9:00 The finite element method for the EEG/MEG forward problem (Carsten and Andreas Nüßing)

9:45 New approaches for the EEG/MEG inverse problem and comparison to standard approaches (Carsten)

10:30 Combined EEG/MEG source analysis, application in presurgical epilepsy diagnosis (Carsten)

11:00 Practical challenges of doing MEG with children (Caroline Witton/Aston)

11:40 MEG measures in developmental studies (Tiina Parviainen/Jyväskylä)

12:20 Auditory steady-state responses in children (Jan Wouters/KU Leuven)

13:00 *Lunch*

14:00 Ethics and informed consent (Jarmo Hämäläinen/JYU)

15:00 Planning of secondments, practical issues (Jarmo)

17:00 End of Workshop1