SS2023: Program for the lecture "New mathematical methods in bioelectromagnetism and their neuroscientific applications, Part II"

Wed, April 5, 2023: **Wolters:** Non-parametric registration of MRI

Wed, April 12, 2023: **Bauer:** Advanced methods in MRI (DTI and others)

Wed, April 19, 2023: **Wolters:** DTI artifact correction and registration and segmentation of MRI

Wed, April 26, 2023: **Wolters:** EEG/MEG inverse problems, part I (dipole fit and scan, regularization)

Wed, May 3, 2023: **Wolters:** EEG/MEG inverse problems, part II (current density reconstruction, hierarchical Bayesian modeling)

Wed, May 10, 2023: **Wolters**: EEG/MEG inverse problems, part III (beamforming)

Wed, May 17, 2023: ?**Gross?:** Basics of brain oscillations and methods for their localization

Start of brain stimulation:

Wed, May 24, 2023: **Möddel:** Electrical neurostimulation for treatment of epilepsy

Wed, May 31, 2023 **(Pfingstwoche, vorlesungsfrei).**

Wed, June 7, 2023: **Wolters**: Helmholtz reciprocity to relate the EEG and transcranial electrical stimulation (TES) forward problems

Wed, June 14, 2023: **Wolters**: Inverse problem of TES, part I (targeted multi-channel optimization)

Wed, June 21, 2023: **Wolters**: Inverse problem of TES (part II) and TMS (targeted multi-channel optimization)

Wed, June 28, 2023: **Wolters**: Application of source analysis and TES in epilepsy

Wed, July 5, 2023: **Wolters**: Diskussion zum Tutorial, zu prüfungsrelevanten Themen, Absprache der Prüfungstermine, Vorstellung möglicher Masterarbeiten und weiterer Aspekte zum Bioelektromagnetismus"

Further links/literature:
This
http://www.sci.utah.edu/~wolters/LiteraturZurVorlesung/
is the basic link to our lecture.

Please find
http://www.sci.utah.edu/~wolters/LiteraturZurVorlesung/Vorlesungsskriptum/
the newest version of the lecture scriptum.

Please find
http://www.sci.utah.edu/~wolters/LiteraturZurVorlesung/Vorlesungen/
always the newest lecture-notes/slides and in
http://www.sci.utah.edu/~wolters/LiteraturZurVorlesung/Vorlesungen/Tutorial/
the CURRY (CURrent Reconstruction and Imaging) tutorial material.
Please find
http://www.sci.utah.edu/~wolters/LiteraturZurVorlesung/Literatur/
further interesting literature.