

Dear members of the MR Engineering Study Group,

Please join us for this year's MR Engineering Study Group meeting on Wednesday, June 3, 2015 (13:30 – 15:30 pm, room 105) during the 23rd Annual Meeting of the ISMRM in Toronto, Canada!

Overall, this year's study group meeting will be comprised of three parts:

- 1) Announcements and administration ("*house-keeping*", approx. 10 min)
- 2) Scientific focus session (five lectures, approx. 50 min)
- 3) Scientific poster session and awards (approx. 1 hour)

Please take a moment to review below specifics regarding this year's agenda.

HOUSE-KEEPING – STUDENT REPRESENTATIVE

In an effort to support junior scientists and to give non-voting members of our study group a voice, we are proposing to establish a student representative in addition to the current committee positions Secretary, Vice-Chair and Chair. This representative will be elected by trainees only starting with the 2016 membership year. He/she is encouraged to actively participate in committee meetings and to contribute the perspective of students and junior scientist. However, the student representative will have no vote. We plan to put the idea up for discussion at our meeting and will ask for a subsequent member vote as such change requires a modification of our statutes.

SCIENTIFIC FOCUS SESSION

There appears to be rapidly increasing interest within the MR community in the complimentary or alternative use of switched non-linear fields for both B_0 shimming and imaging. As the MR Engineering Study Group, our aim is to stay abreast of this evolving field of research and to stimulate scientific discussion and exchange. We are therefore happy to announce that the scientific focus of this year's meeting will be on "***Dynamic Non-Linear Fields in MR: Technology and Applications***".

Five leaders in the field have agreed to summarize the current state-of-the-art as well as ongoing developments:

- 1) *Dynamic Shim Updating with Spherical Harmonic Functions*
Klaas P. Pruessmann, PhD, ETH Zurich, Switzerland
- 2) *Dynamically Controlled Adaptive Current Network*
Blaine A. Chronik, PhD, University of Western Ontario, London/ON, Canada
- 3) *Dynamic Multi-Coil Technique (DYNAMITE)*
Robin A. de Graaf, PhD, Yale University, New Haven/CT, USA
- 4) *Parallel Imaging with Local Encoding Fields (PATLOC)*
Maxim Zaitsev, PhD, University of Freiburg, Germany
- 5) *Steering Resonance over the Object (STEREO)*
Michael Garwood, PhD, University of Minnesota, Minneapolis/MN, USA

POSTER AWARDS SESSION

We will have a poster session with both traditional and electronic posters along with poster awards similar to previous years. These are the selected posters of this year's competition:

Traditional posters:

- 1) #1505, Graham Norquay et al., *Approaching the theoretical limit for ^{129}Xe hyperpolarisation with continuous-flow spin-exchange optical pumping*
- 2) #1779, Mark Schuppert et al., *Determination of the optimal number of coil elements: A semi-theoretical approach*
- 3) #1780, Robin Etzel et al., *Design Optimization and Evaluation of a 64-Channel Cardiac Array Coil at 3T*
- 4) #1791, Jarek Wosik et al., *Cryogenic Receive-only 7 Tesla Coil for MRI of Hyperpolarized ^{13}C*
- 5) #1792, Balthazar Lechene et al., *Materials for printed MRI surface coils: towards better image quality and coil flexibility*
- 6) #1795, Hai Lu et al., *Parallel-Plate Waveguide for Subject-Insensitive RF Transmission*
- 7) #1816, Natalia Gudino et al., *An on-coil current-source amplifier with integrated real-time optical monitoring of B1 amplitude and phase*
- 8) #1821, Chunqi Qian et al., *An Integrated Negative Resistance Current Amplifier to Enhance the Sensitivity of a Weakly Coupled Local Detector*
- 9) #1822, Roland Müller et al., *The RTL-SDR USB Dongle: A Versatile Tool in the RF Lab*
- 10) #1824, David Waddington et al., *High Performance Probe for in vivo Overhauser MRI*
- 11) #1833, Christopher Ireland et al., *A novel acoustic quiet coil for neonatal MRI system*
- 12) #1844, Michael Twieg et al., *Optimizing the Current-Mode Class D (CMCD) Amplifier for Decoupling in pTX Arrays*

e-posters:

- 13) #3083, Ryan Topfer et al., *A 24-channel shim array for real-time shimming of the human spinal cord: Characterization and proof-of-concept experiment*
- 14) #3103, Christopher M. Collins et al., *Evaluation of Displacement Currents and Conduction Currents in a Close Fitting Head Array with High Permittivity Material*
- 15) #3114, Jennifer Taylor et al., *Non-metal electrodes for local field potential recordings in magnetic resonance scanners*
- 16) #3122, M. Arcan Erturk et al., *Comparison of 16-channel Stripline and 10-channel Fractionated Dipole Transceive Arrays for Body Imaging at 7T*
- 17) #3123, Pu-Yeh Wu et al., *A 24-channel quadrature surface coil array for high-resolution human temporal lobe fMRI at 3T*
- 18) #3234, Simone Angela Winkler et al., *Direct SAR Mapping by Thermoacoustic Imaging: Experimental Proof-of-Concept*

WORK-IN-PROGRESS POSTER SESSION - STILL SPOTS AVAILABLE

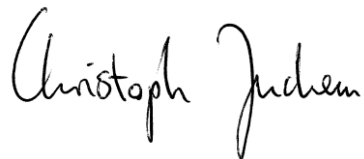
As a novelty this year, we will also have a work-in-progress (WIP) section as part of the poster session. This section is intended to allow students to showcase their ongoing work. More importantly, it is meant to provide them with an informal platform for feedback and help, and an opportunity for networking early in their careers.

Presenters will have to bring their WIP posters (e-posters only, 3 slides maximum) on a thumb drive directly to the study group meeting and will receive a total of 6 minutes for both presentation and discussion. While there is no review process on the WIP posters, authors are requested to register their name, their affiliation and a title with us for planning purposes. We will create an overview schedule of the posters and distribute it before the conference.

Please communicate to your students!

For questions, suggestions or requests of any kind, feel free to contact me directly at christoph.juchem@yale.edu

Best wishes,

A handwritten signature in black ink that reads "Christoph Juchem". The signature is written in a cursive, flowing style.

Chair, MR Engineering Study Group
on behalf of the MR Engineering Study Group committee