STUDY GROUP SESSION

MR Engineering

Day: Wednesday, 3 June 2015
Time: 13:30-15:30
Room: Constitution Hall 105
Study Group Committee:
Chair, Christoph Juchem, Ph.D.; Chair-Elect, Fraser J. L. Robb, Ph.D.; Secretary, Steven M. Wright, Ph.D.; Past Chair, Hiroyuki Fujita, Ph.D.

PROGRAM

13:30	Welcome & Business Meeting	Christoph Juchem, Ph.D. *Yale University School of Medicine, USA*
	Scientific Focus Session ***Dynamic Non-Linear Fields in MR: Technology & Applications***	
13:40	Dynamic Shim Updating with Spherical Harmonic Functions	Klaas P. Pruessmann, Ph.D. *University & ETH Zürich, Switzerland*
13:50	Dynamically Controlled Adaptive Current Network	Blaine A. Chronik, Ph.D. *University of Western Ontario, Canada*
14:00	Dynamic Multi-Coil Technique (DYNAMITE)	Robin A. de Graaf, Ph.D. *Yale University School of Medicine, USA*
14:10	Parallel Imaging with Local Encoding Fields (PATLOC)	Maxim Zaitsev, Ph.D. *University Medical Centre Freiburg, Germany*
14:20	Steering Resonance Over the Object (STEREO)	Michael Garwood, Ph.D. *University of Minnesota, USA*
	Poster Awards Session	
14:30	*Approaching the Theoretical Limit for ^{129}Xe Hyperpolarisation with Continuous-Flow Spin-Exchange Optical Pumping*	Graham Norquay, M.Sc. *University of Sheffield, United Kingdom*
	Determination of the Optimal Number of Coil Elements: A Semi-Theoretical Approach	Mark Schuppert, Dipl.-Ing. *Johannes Gutenberg University Mainz, Germany*
	Design Optimization & Evaluation of a 64-Channel Cardiac Array Coil at 3T	Robin Etzel, B.Sc. *Massachusetts General Hospital, USA*
	Cryogenic Receive-Only 7 Tesla Coil for MRI of Hyperpolarized ^{13}C	P. Balthazar Lechene, Ph.D. *University of California at Berkeley, USA*
	Parallel-Plate Waveguide for Subject-Insensitive RF Transmission	Shumin Wang, Ph.D. (*on behalf of Hai Lu)* *Auburn University, USA*
	An On-Coil Current-Source Amplifier with Integrated Real-Time Optical Monitoring of B_1 Amplitude & Phase	Natalia Gudino, Ph.D. *National Institutes of Health, USA*
	An Integrated Negative Resistance Current Amplifier to Enhance the Sensitivity of a Weakly Coupled Local Detector	Chunqi Qian, Ph.D. *Michigan State University, USA*
	The RTL-SDR USB Dongle: A Versatile Tool in the RF Lab	Roland Müller, Dipl.-Ing. *MPI for Human Cognitive & Brain Sciences, Germany*
	High Performance Probe for In Vivo *Overhauser MRI*	Mathieu Sarracanie, Ph.D. (*on behalf of David Waddington)* *MGH/A.A. Martinos Center for Biomedical Imaging , USA*
	A Novel Acoustic Quiet Coil for Neonatal MRI System	Christopher M. Ireland, M.Eng. *University of Cincinnati, USA*
	Optimizing the Current-Mode Class D (CMCD) Amplifier for Decoupling in pTX Arrays	Michael D. Twieg, M.Sc. *Case Western Reserve University, USA*
14:30	**Electronic Posters (Group 1)**	
Computer 1	*A 24-Channel Shim Array for Real-Time Shimming of the Human Spinal Cord: Characterization & Proof-of-Concept Experiment*	Ryan J. Topfer, B.Sc. *University of Alberta, Canada*

Computer 2	*Evaluation of Displacement Currents and Conduction Currents in a Close Fitting Head Array with High Permittivity Material*	Christopher M. Collins, Ph.D. *New York University School of Medicine, USA*
Computer 3	*Non-Metal Electrodes for Local Field Potential Recordings in Magnetic Resonance Scanners*	Jennifer M. Taylor, B.Sc. *University of Minnesota, USA*
14:55	**Electronic Posters (Group 2)**	
Computer 1	*Comparison of 16-channel Stripline & 10-channel Fractionated Dipole Transceive Arrays for Body Imaging at 7T*	M. Arcan Erturk, Ph.D. *University of Minnesota, USA*
Computer 2	*A 24-channel Quadrature Surface Coil Array for High-Resolution Human Temporal Lobe fMRI at 3T*	Pu-Yeh Wu, M.Sc. *National Taiwan University, Taiwan*
Computer 3	*Direct SAR Mapping by Thermoacoustic Imaging: Experimental Proof-of-Concept*	Simone A. Winkler, Ph.D. *Stanford University, USA*
	Work-In-Progress Poster Session	
14:30 ***Computer 4***	*Prediction of RF Preamplifier Noise Temperature Variations in a Magnetic Field*	Cameron M. Hough, B.Sc. *University of Alberta, Canada*
14:55 ***Computer 4***	*Field-Map-Free First-Order Dynamic Shimming*	Yuhang Shi, B.Sc. *Oxford University, Center for fMRI of Brain, United Kingdom*
15:20	Final Thoughts	Christoph Juchem, Ph.D. *Yale University School of Medicine, USA*
15:30	Adjournment	