— INTERNATIONAL SOCIETY FOR —
ISMRM
MAGNETIC RESONANCE IN MEDICINE

ONE COMMUNITY FOR CLINICIANS AND SCIENTISTS

ISMRM JOINT WORKSHOP OF THE

Ultra-High Field MR & Brain Function Study Groups

31 MARCH-02 APRIL 2025

Graduate by Hilton Annapolis
Annapolis, MD, USA

ORGANIZING COMMITTEE

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Trainee Observer:
Daniel E. P. Gomez, Ph.D.
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Charlestown, MA, USA

SPEAKER UPLOAD INFORMATION

- Monday, 31 March 2025 07:45-08:45
- Tuesday, 01 April 2025 08:30-09:00
- Wednesday, 02 April 2025 08:30-09:00

PROGRAM CREDIT DESIGNATION

The International Society for Magnetic Resonance in Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. This workshop does not offer CME credits.

The International Society for MR Radiographers & Technologists (ISMRT), a section of the ISMRM, is recognized by the American Registry of Radiologic Technologists (ARRT) as a Recognized Continuing Education Evaluation Mechanism (RCEEM). This workshop does not offer CE credits.

CERTIFICATE OF PARTICIPATION

To obtain your Certificate of Participation for this workshop, log into the ISMRM membership portal at www.ismrm.org, click the "Session Evaluations for Certificates" menu option, select "Begin Evaluation" next to the appropriate meeting name and follow the instructions provided.

Workshop Program

Day 1: Monday, 31 March 2025		
07:45	Registration & Speaker Upload Available	
Session 1: Opening Session *Regatta Ballroom A-C*		
Moderators: Wietzke van der Zwaag, Ph.D. & Peter van Zijl, Ph.D.		
08:45	Welcome by the Chairs	Marta Bianciardi, Ph.D., Patricia Figueiredo, D. Phil., Jun Hua, Ph.D., & Laurentius Huber, Ph.D.
09:00	***Keynote:*** *Overview of UHF-fMRI*	Seong-Gi Kim, Ph.D. Sungkyunkwan University Seoul, South Korea
Session 2: Challenges & Prospects in UHF-fMRI *Regatta Ballroom A-C*		
Moderators: Natalia Gudino, Ph.D. & T.B.A.		
10:00	*Hardware*	David Feinberg, M.D., Ph.D. University of California, Berkeley Berkeley, CA, USA
10:15	*Sequences*	Jonas Bause, Ph.D. Max Planck Institute for Biological Cybernetics Tuebingen, Germany
10:30	*Preprocessing Steps for Cortical Depth-Dependent fMRI: Addressing the Challenges of UHF Imaging*	Yulia Lazarova, Ph.D. University of Glasgow Glasgow, Scotland, UK
10:45	*SORDINO for Silent, Sensitive, Specific & Artifact-Resisting fMRI*	Yen-Yu Ian Shih, Ph.D. University of North Carolina at Chapel Hill Chapel Hill, NC, USA
11:00	Break & Speaker Upload Available Poster Viewing	
Session 3: SNR to Burn *Regatta Ballroom A-C*		
Moderators: Tyler Morgan, Ph.D. & Sina Straub, Ph.D.		
11:30	*High Spatial Resolution*	Luca Vizioli, Ph.D. University of Minnesota Minneapolis, MN, USA
11:50	*High Temporal Resolution*	Saskia Bollmann, Ph.D. University of Queensland St. Lucia, QLD, Australia
12:10	*Weak Non-BOLD Contrasts: Exploring Alternative Functional MRI Parameters*	Dimo Ivanov, Ph.D. Maastricht University Maastricht, The Netherlands
12:30	Lunch & Speaker Upload Available Poster Viewing	

Session 4: Applications *Regatta Ballroom A-C*		
Moderators: Amir Schmuel, Ph.D. & TBA		
14:00	*Cognitive/Clinical Neuroscience*	Rainer Goebel, Ph.D. Universitet Maastricht Maastricht, The Netherlands
14:15	*Translational*	Birte Forstmann, Ph.D. University of Amsterdam Amsterdam, The Netherlands
14:30	*Connectivity*	Anna Roe, Ph.D. New York University New York, NY, USA
14:45	*Ultra-High Field fMRI in Studying Human Intracortical Neurophysiology*	Kaisu Lankinen, Ph.D. Massachusetts General Hospital Harvard Medical School Charlestown, MA, USA
15:00	Break & Speaker Upload Available Poster Viewing	
Session 5: Vendor Presentations *Regatta Ballroom A-C*		
Moderators: Aneurin James Kennerley, Ph.D. & Yen-Yu Ian Shih, Ph.D.		
15:30	United Imaging	YongQuan Ye
15:45	GE HealthCare	Xiaoxuan He, PhD, Lead Scientist – Clinical Physics, GEHC Jaemin Shin, PhD, Lead Scientist – Neuro MR, GEHC
Session 6: Proffered Papers - Oral Session: Brain Function at UHF *Regatta Ballroom A-C*		
Moderators: TBA & Audrey Fan, Ph.D.		
16:00	*Changes in Choroid Plexus Sub-Compartments in Aging & Premanifest Synucleinopathy Using High-Resolution 7 Tesla Structural & Functional MRI*	Firdaus Fabrice Hannanu, Ph.D. Athinoula A. Martinos Center for Biomedical Imaging Charlestown, MA, USA
16:09	*Whole-Cerebrum Isotropic 1mm Pseudo-Continuous Arterial Spin Labeling Perfusion at 7T*	Chenyang Zhao, M.Sc. University of Southern California Los Angeles, CA, USA
16:18	*Odor Specific Activation Patterns in the Human Olfactory Bulb Detected by High Resolution Bold fMRI on 7T*	Xinyi Zhou, M.Sc. Johns Hopkins University Baltimore, MD, USA
16:27	*Characterization of Depth Dependent Sensorimotor Processing in the Developing Human Cortex at 7T*	Jucha Willers Moore, M.Sc. King's College London London, England, UK

Session 7: Joint Day Closing Session *Regatta Ballroom A-C*		
Moderators: Robin Heidermann, Ph.D & James Pekar, PhD.		
16:36	**Keynote:** *Future of fMRI at UHF*	Jonathan Polimeni, Ph.D. Massachusetts General Hospital Boston, MA, USA
17:36	Poster Session	
19:00	Adjourn	

Day 2: Tuesday, 01 April 2025

08:30	Registration & Speaker Upload Available

BRAIN FUNCTION

Session 8: fMRI Signal Mechanisms & Biophysics
Regatta Ballroom C

Moderators: Alexander Beckett, Ph.D. & TBA

09:00	*Neurovascular Coupling & Calibrated fMRI*
	Natalia Petridou, D.Sc. University Medical Center Utrecht Utrecht, The Netherlands
09:20	*The Eternal Fight for the Best Layer-fMRI Contrast*
	Nikos Priovoulous, Ph.D. Spinoza Centre for Neuroimaging Amsterdam, The Netherlands
09:40	*Leveraging the Phase in fMRI*
	Ravi Menon, Ph.D. Western University London, ON, Canada

Session 9: fMRI Beyond Neurovascular Coupling
Regatta Ballroom C

Moderators: Daniel Gomez, Ph.D. & Hanzhang Lu, Ph.D.

10:00	*CSF Flunctuations in fMRI*
	Laura Lewis, Ph.D. Massachusetts Institute of Technology, Massachusetts General Hospital Charlestown, MA, USA
10:30	*Physiological Signals in fMRI*
	Pinar Ozbay, Ph.D. Bogazici University Istanbul, Turkey
10:45	*To Infinity & Beyond Neurovascular Coupling*
	Aneurin James Kennerley, Ph.D. Manchester Metropolitan University Manchester, England, UK

Session 10: Proffered Papers - Oral Session: Brain Function I
Regatta Ballroom C

Moderators: TBA

11:30	*Resting-State fMRI Signals Associated with Eye Blinks Detected on Simultaneous EEG*
	Frederico Santiago, M.Sc. Institute for Systems & Robotics Lisbon, Portugal
11:42	*Mapping Curvature Domains in Human V4 Using CBV-Sensitive Layer-fMRI at 3T*
	Elisa Zamboni, Ph.D. University of Nottingham Nottingham, England, UK

ULTRA-HIGH FIELD

Session 8: Keynote
Regatta Ballroom AB

Moderators: Gulin Oz, Ph.D. & TBA

09:00	**Keynote:** *Quantifying & Capturing SNR Gains Towards High-Resolution Anatomical & Functional Imaging in the Human Brain at 10.5T*
	Kamil Ugurbil, Ph.D. University of Minnesota Minneapolis, MN, USA
09:30	**Keynote:** *Plenary on UHF MRI at MGH*
	Lawrence Wald, Ph.D. Athinoula A. Martinos Center for Biomedical Imaging Charlestown, MA, USA

Session 9: UHF MRI System Development
Regatta Ballroom AB

Moderators: Jo Hajnal, Ph.D. & Sydney Williams, Ph.D.

10:00	*Head Coil Design & Development*	
	Ozlem Ipek, Ph.D. King's College London London, England, UK	
10:15	*Hardware & Methods for BO Shimming & Flexible Spatial Encoding at UHF*	
	Jason Stockmann, Ph.D. Athinoula A. Martinos Center for Biomedical Imaging Boston, MA, USA	
10:30	*Slice-Selective pTx Pulse Design*	
	Minghao Zhang, M.Sc. University of Cambridge Cambridge, England, UK	
10:45	*Development of an UHF Body Coil*	Simone Winkler, Ph.D. Cornell Medicine New York, NY, USA

11:30	**Session 10:** Power Pitch Session: UHF *Regatta Ballroom AB*

Moderators: Jiaen Liu, Ph.D. & Dana Ramadan, M.Sc.

Spinal Cord Imaging with a 32-Channel pTx Body Array at 7T	Christoph Aigner, Ph.D. Max Planck Institute for Human Development Berlin, Germany
Quasi-Instantaneous, Subject-Specific, Slice-by-Slice pTx Pulse Design with Deep Learning	Joseph Bartlett, B. Sc. University of Melbourne Melbourne, VIC, Australia
Liberating pTx from Vendor Lock-in: Open-Source Cross-Vendor Parallel Transmit MRI Sequences by extending pTx-Pulseq to Siemens UHF Scanners	Dario Bosch, M.Sc. Max Planck Institute for Biological Cybernetics Tuebingen, Germany

BRAIN FUNCTION

11:54	*Precision Functional Mapping of Cerebrovascular Reactivity Networks*
	Sophia Forsberg Tibblin, M.Sc. Basque Center on Cognition, Brain & Language San Sebastian-Donostia, Spain
12:06	*Predicting Cerebral Blood Flow & Oxidative Metabolism From Rs-fMR Metrics*
	Xiaole Zhong, B.Sc. University of Toronto Toronto, ON, Canada
12:18	*fMRI & Real-Time PCMR Measure Different Components of CSF Flow Dynamics*
	Brice Williams, M.Sc. Emory University Atlanta, GA, USA
12:30	Lunch & Speaker Upload Available Poster Viewing
14:00	Poster Session

ULTRA-HIGH FIELD

Volumetric Navigators for Prospective Motion Correction of 0.16-mm Isotropic Time-of-Flight Angiography at 7T	Daniel Haenelt, Ph.D. Athinoula A. Martinos Center for Biomedical Imaging Charlestown, MA, USA
7T 3D T2 Mapping of the Medial Meniscus Before & After Repair of the Posterior Root Tear: A Pilot Study*	Abdul Wahen Kajabi, Ph.D. University of Minnesota Minneapolis, MN, USA
A Probabilistic Atlas of Brainstem Nuclei in Elderly Living Humans Using In-Vivo 7 Tesla Multi-Contrast MRI	Subhranil Koley, Ph.D. Athinoula A. Martinos Center for Biomedical Imaging Charlestown, MA, USA
Assessment of Endolymphatic Hydrops for Diagnosis of Menière's Disease with pTx Based 3D FLAIR Sequence at 7T: Proof of Feasibility	Claudius Mathy, M.D. Friedrich-Alexander-Universität Erlangen-Nürnberg Erlangen, Germany
High Resolution 7T Multi-Echo T2 Mapping Using a Probabilistic Bayesian Model for Motion Correction with Undersampled Data*	Yuguang Meng, Ph.D. Emory University Atlanta, GA, USA
3D Dynamic pTx Pulse Design for the SPACE Sequence Using Deep Learning	Sophia Nagelstraber, M.Sc. University Hospital Erlangen Erlangen, Germany
Linking the Cerebellar Morphology & Vascularization with Cytoarchitecture Using Motion-Corrected, RF-Shimmed, 7T MRI	Nikos Priovoulos, Ph.D. Wellcome Centre for Integrative Neuroimaging Oxford, England, UK
Parallel Transmit 7T MRI for Detection of Lesions in Patients with Drug-Resistant Focal Epilepsy	Christopher Rodgers, D.Phil. University of Cambridge Cambridge, England, UK
High-Resolution 7T Imaging of the Cerebellum in Multiple Sclerosis	Myrte Strik, Ph.D. Spinoza Centre for Neuroimaging Amsterdam, The Netherlands
Improved Flip-Angle Uniformity in 0.35-mm Slices Using Asymmetric pTx Spoke Pulses	Chia-Yin Wu, Ph.D. University of Glasgow Glasgow, Scotland, UK
High Resolution Imaging of Intravenous Gadolinium-Based Contrast Agent (GBCA) Distribution in the Dura & Subarachnoid Space (SAS) on 7T	Yinghao Li, B.Sc. Johns Hopkins University Baltimore, MD, USA
12:30	Lunch & Speaker Upload Available Poster Viewing
14:00	Poster Session

BRAIN FUNCTION

Session 11: Noise/Analysis *Regatta Ballroom C*	
Moderators: César Caballero Gaudes, Ph.D. & Prantik Kundu, Ph.D.	
15:00	*Visualize More of Your Data to Enhance Interpretation, Reduce Biases & Improve Reproducibility*
	Paul Taylor, Ph.D. National Institute of Mental Health Bethesda, MD, USA
15:20	*Physiological Signals in fMRI-Denoising*
	Stefano Moia, Ph.D. Maastricht University Maastricht, The Netherlands
15:40	*Multi-Echo fMRI in Clinics: Why Use It & What It Gives You*
	Charles Lynch, Ph.D. Weill Cornell Medicine New York, NY, USA
16:00	Break & Speaker Upload Available Poster Viewing
Session 12: We, the fMRI Field *Regatta Ballroom C*	
Moderator: Peter Bandettini, Ph.D.	
16:30	Round Table Discussion
	Rainer Wilhelm Goebel, Ph.D. Prantik Kundu, Ph.D. & Ravi Menon, Ph.D.
Session 13: fMRI Across Species *Regatta Ballroom C*	
Moderators: Aneurin Kennerley, Ph.D. & Yen-Yu Ian Shih, Ph.D.	
17:30	*What We Learn from Animals That We Cannot Learn from Humans*
	Jozien Goense, Ph.D. University of Illinois Urbana-Champaign Urbana, IL, USA
17:50	*Where do We Stand on fMRI in Awake Mice?*
	Francesca Mandino, Ph.D. Yale School of Medicine New Haven, CT, USA
18:15	Adjourn

ULTRA-HIGH FIELD

Session 11: Acquisition & Analysis at UHF *Regatta Ballroom AB*	
Moderators: TBA	
15:00	*MRS/X Nuclei*
	Anke Henning, Ph.D. University of Texas Southwestern Medical Center Dallas, TX, USA
15:15	*Recent Advances in Metabolic Imaging at Ultra-High Field*
	Ravinder Reddy, Ph.D. University of Pennsylvania Philadelphia, PA, USA
15:30	*High-Resolution QSM & Functional QSM at UHF*
	Sina Straub, Ph.D. University of Bern Bern, Switzerland
15:45	*Ultra-High Resolution Quantitative MRI Mapping of the Human Subcortex*
	Evgenyia Kirilina, Ph.D. Max Planck Institute for Human Cognitive & Brain Sciences Leipzig, Germany
16:00	Break & Speaker Upload Available Poster Viewing
Session 12: Safety at UHF *Regatta Ballroom AB*	
Moderators: Andrew Fagan, Ph.D. & Yan Li, Ph.D.	
16:30	*Pediatric Neuro*
	Jo Hajnal, Ph.D. King's College London London, England, UK
16:45	*Safe MRI of DBS Patients at UHF: Potentials, Challenges & Strategies*
	Alireza Sadeghi-Tarakameh, Ph.D. University of Minnesota Minneapolis, MN, USA
17:00	*SAR Modeling for RF Safety at UHF*
	Aurelien Destruel, Ph.D. Center of Magnetic Resonance in Biology & Medicine Marseille, France
17:15	*MR Thermometry for RF Safety at UHF*
	Caroline Le Ster, Ph.D. Neurospin, CEA Saclay Saclay, France
Session 13: Raising the Bar: Where To Next with UHF? *Regatta Ballroom AC*	
Moderators: Karin Markenroth Bloch, Ph.D. & Benedikt A. Poser, Ph.D.	
17:00	Round Table Discussion
	Jeff Duyn, Ph.D. Maxime Guye, M.D., Ph.D., Natalia Petridou, D.Sc., Christopher Rodgers, D. Phil. Sebastian Schmitter, Ph.D. & Danny Wang, Ph.D.
18:15	Adjourn

Day 3: Wednesday, 02 April 2025

08:30	Registration & Speaker Upload Available

BRAIN FUNCTION

Session 14: Hardware/Acquisition
Regatta Ballroom C

Moderators: Benedikt A. Poser, Ph.D. & Peng Zhang, Ph.D.

09:00	*fMRI in Infants at 7T: Challenges & Opportunities*
	Essa Yacoub Ph.D. University of Minnesota Minneapolis, MN, USA
09:20	*Recent Advancements of the Workhorse*
	Caroline Le Ster, Ph.D. Neurospin, CEA Saclay Saclay, France
09:40	*EPTI for fMRI*
	Fuyixue Wang, Ph.D. Athinoula A. Martinos Center for Biomedical Imaging Charlestown, MA, USA

Session 15: Deep Sampling & Precision Mapping
Regatta Ballroom C

Moderators: Daniel Abraham Handwerker, Ph.D. & Essa Yacoub, Ph.D.

10:00	*Precision Mapping*
	Evan Gordon, Ph.D. Washington University School of Medicine St. Louis, MO, USA
10:20	*Precision Mapping & Personalized fMRI: The ABCD Study*
	Carolina Makowski, M.D. University of California, San Diego San Diego, CA, USA
10:40	*Precision Mapping at High Spatiotemporal Resolutions*
	Anna Blazejewska, Ph.D. Athinoula A. Martinos Center for Biomedical Imaging Charlestown, MA, USA
11:00	Break & Speaker Upload Available

ULTRA-HIGH FIELD

Session 14: Keynote
Regatta Ballroom AB

Moderators: Deqiang Qiu, Ph.D. & Seth Smith, Ph.D.

09:00	**Keynote:** *Plenary on Body*
	Tom Scheenen Ph.D. Radboud University Medical Center Nijmegen, The Netherlands
09:30	**Keynote:** *Bringing UHF to Routine Clinical Use: Leveraging New Advances*
	Erik Middlebrooks, M.D. Mayo Clinic Rochester, MN, USA

Session 15: UHF MRI System Development
Regatta Ballroom C

Moderators: Sheeba Anteraper, Ph.D. & Maxime Guye, M.D., Ph.D.

10:00	*Clinical Applications of Ultra-High Field Vascular Imaging*
	Anja van der Kolk, M.D., Ph.D. Radboud University Medical Center Nijmegen, The Netherlands
10:15	*Clinical Applications of Ultra-High Field Metabolic Imaging*
	Daniel Paech, M.D., Ph.D. Mass General Brigham Boston, MA, USA
10:30	*Clinical Applications of Ultra-High Field Pediatric Imaging*
	Jon Cleary, Ph.D., MBBS, FRCR King's College London, Guy's & St. Thomas' NHS Foundation Trust London, England, UK
10:45	*Clinical Applications of Ultra-High Field Spinal Cord Imaging*
	Anna Combes University College London London, England, UK
11:00	Break & Speaker Upload Available

BRAIN FUNCTION

Session 16: Proffered Papers - Oral Session: Brain Function II at UHF *Regatta Ballroom C*	
Moderators: Rebecca Glarin, B.Appl.Sc. & Dimo Ivanov, Ph.D.	
11:30	*Mesoscale fMRI at Ultra-High Spatiotemporal Resolutions Using 3D Echo Planar Time & DYnamic-Resolved Imaging (TIDY)*
	Zijing Dong, Ph.D. Athinoula A. Martinos Center for Biomedical Imaging Charlestown, MA, USA
11:40	*Aging Effect on Cerebral Microvascular Volumetric Pulsatility Revealed by High-Resolution 4D CBV & ASL MRI at 7T*
	Fanhua Guo, Ph.D. University of Southern California Los Angeles, CA, USA
11:50	*7T Spin-Echo Columnar Functional MRI in the Human Motor Cortex Correlated with Motor Behaviors*
	SoHyun Han, Ph.D. Korea Basic Science Institute Daejon, South Korea
12:00	*Initial Experience with Spin Echo BOLD fMRI on Neonates at 7T*
	David Leitão, Ph.D. King's College London London, England, UK
12:10	*3D Spiral Readouts for BOLD fMRI at 9.4T*
	Alejandro Monreal-Madrigral, M.Sc. Maastricht University Maastricht, The Netherlands
12:20	*Cerebral Vascular Pulsatility Is Altered by Hypercapnia Stimuli: A BOLD fMRI Study*
	Hans Christian Rundfeldt, M.Sc. University Medical Center Utrecht Utrecht, The Netherlands
Session 17: Closing Keynote *Regatta Ballroom C*	
Moderators: Peter Bandettini, Ph.D. & Rainer Goebel, Ph.D.	
12:30	Introduction
	Peter Bandettini, Ph.D. National Institute of Mental Health Bethesda, MD, USA
12:35	**Keynote:** *From the Beginning: What I Saw & Learned in the Land of fMRI*
	Robert W. Cox, Ph.D. National Institute of Mental Health Bethesda, MD, USA

ULTRA-HIGH FIELD

Session 16: UHF Applications, Body *Regatta Ballroom AB*	
Moderators: Erik Middlebrooks, M.D. & Esther Steijvers, B.Sc.	
11:30	*Compartment-Based Reconstruction of 3D Acquisition-Weighted 31P Cardiac Magnetic Resonance Spectroscopic Imaging at 7T*
	Andrew Tyler, Ph.D. King's College London London, England, UK
11:45	*QSM for Epiphyseal Cartilage Vascularity & Short Echo Time Imaging for Bone Healing at High & Ultra-High Field MRI*
	Abdul Wahen Kajabi, Ph.D. University of Minnesota Minneapolis, MN, USA
12:00	*RF Hardware Development for Human Extremity Imaging at 7 Tesla*
	Xiaoliang Zhang, Ph.D. State University of New York at Buffalo Buffalo, NY, USA
12:15	*Quantitative Abdominal Sodium MRI at 7T in a Large Field of View*
	Anna Scheipers, M.Sc. German Cancer Research Center Heidelberg, Germany
Session 17: UHF MR Technology Development *Regatta Ballroom AB*	
Moderators: TBA & Xiaoliang Zhang, Ph.D.	
12:30	*7 Tesla pTX in the Human Body*
	Sebastian Schmitter, Ph.D. Physikalisch-Technische Bundesanstalt Berlin, Germany
12:45	*Ultra-High Field Whole Body MR Imaging at 5T*
	Chao Zou, Ph.D. Shenzhen Institute of Advanced Techology Shenzhen, China
13:00	*Perfusion MRI at 7 Tesla*
	Danny Wang, Ph.D. University of Southern California Los Angeles, CA, USA
13:15	*Recent Development of the 11.72 Tesla Human Scanner*
	Nicolas Boulant, Ph.D. Neurospin, CEA, University of Paris-Scalay Saclay, France

Session 18: Combined Closing & Awards *Regatta Ballroom AB*	
13:30	Combined Awards
13:40	Boxed Lunch & Adjourn

Posters

Brain Function at Ultra-High Field

POSTER	TITLE	AUTHOR
1	*Functional Imaging of Hippocampal Layers Using VASO on the Next Generation (NexGen) 7T*	Alexander Beckett, Ph.D. University of California, Berkeley Berkeley, CA, USA
2	*Simulating the Impact of Vascular Draining Effects on Layer-Specific MVPA Using GE-BOLD*	Jonas Karolis Degutis, Ph.D. Max Planck Institute for Biological Cybernetics Tuebingen, Germany
3	*Quantitative T2* Mapping of Brain & CSF Oscillations at Ultra-High Field*	Sara Pires Monteiro, M.Sc. Instituto Superior Técnico Lisboa Lisbon, Portugal
4	*Towards Mapping CSF Volume Change at High Resolutions at 7T*	Stephanie Swegle, B.Sc. National Institutes of Health Bethesda, MD, USA
5	*Neural Activity Induces Repeatable Subarachnoid CSF Flow Responses with Coherent Spatial Pathways: A Concurrent 4D CSF Flow & BOLD fMRI Study*	Fuyixue Wang, Ph.D. Athinoula A. Martinos Center for Biomedical Imaging Charlestown, MA, USA
6	*Fast Mesoscopic Vascular Imaging Utilizing a High-Performance Gradient & A Segmented 3D EPI Readout*	Saskia Bollmann, Ph.D. University of Queensland Brisbane, QLD, Australia
7	*Beyond Traditional Methods: Automatically Segment Cortical Structures at Ultra-High Resolution with FLEXseg*	Julius Steiglechner, M.Sc. Univerity Hospital of Tübingen Tuebingen, Germany
8	*A Fully Synthetic Three-Dimensional Human Cerebrovascular Model Based on Histological Characteristics to Investigate the Hemodynamic Fingerprint of the Layer-Dependent BOLD fMRI Signal Formation*	Mario Gilberto Báez-Yáñez, Ph.D. University of Utrecht Utrecht, The Netherlands
9	*Whole-Brain Human Cerebral Blood Flow at Sub-Millimetre Resolution Using ASL at 7T*	Sriranga Kashyap, Ph.D. Krembil Brain Institute Toronto, ON, Canada
10	*Sequential Brain Activity Unveiled by Temporal High-Resolution fMRI at 9.4 Tesla*	Nikolas P. Klein, M.Sc. Max Planck Institute for Biological Cybernetics Tuebingen, Germany
11	*Cylarim: A New Tool for Laminar-Specific fMRI Analysis*	Gabriele Lohmann, Ph.D. Max Planck Institute for Biological Cybernetics Tuebingen, Germany
12	*Amygdala Subnuclei & Emotional Face Processing Using 7T fMRI.*	Marieke Martens, D.Phil. University of Oxford Oxford, England, UK
13	*Enhanced Signal in High Resolution Rest & Task fMRI with SLIce Dithered Enhanced Resolution (SLIDER)*	Salvatore Torrisi, Ph.D. University of California, San Francisco San Francisco, CA, USA
14	*Using 7T MRI Within a Longitudinal Clinical Trial in Patients with Depression*	Jen Evans, Ph.D. National Institutes of Health Bethesda, MD, USA
15	*Development of a 3D GRASE Pulse Sequence with Larger Field of View for Mesoscale Functional MRI on the Next Generation (NexGen) 7T Scanner*	Alexander Beckett, Ph.D. University of California, Berkeley Berkeley, CA, USA
16	*Functional Connectivity of the Lateral Thalamic Nuclei During Sensorimotor Task-Based fMRI at 9.4 Tesla*	Edyta Charyasz, M.Sc. Max Planck Institute for Biological Cybernetics Tuebingen, Germany
17	*Depth-Connectome: Exploring Depth-Specific Functional Connectivity Across the Cortex at Rest & Visual Task*	Vinod Kumar Jangir, Ph.D. Max Planck Institute for Biological Cybernetics Tuebingen, Germany
18	*Characterization of Metabolic Profiles of Low & High Grade Gliomas by 1H FID MRSI at 7T*	Mahrshi Jani, M.Sc. University of Texas Southwestern Medical Center Dallas, TX, USA
19	*Precision Noise Modeling for Subject-Level Multi-Echo fMRI at 7 Tesla*	Prantik Kundu, Ph.D. Icahn School of Medicine at Mount Sinai New York, NY, USA
20	*Real-Time Tracking of Cardiac Cycle-Locked Rigid Head Motion Using Single-Slice Sagittal EPI at 7T*	Amelia Strom, B.Sc. Massachusettes Institute of Technology Cambridge, MA, USA

Brain Function at Ultra-High Field *(continued)*

POSTER	TITLE	AUTHOR
21	*Initial Results of Population Receptive Field Mapping with bSSFP at 9.4T*	Dana Ramadan, M.Sc. Max Planck Institute for Biological Cybernetics Tuebingen, Germany
22	*Investigating Physiological Hemodynamic Variability Effect on the Estimation of the Effective Temporal Resolution in a Task-Based fMRI: A Phantom Study*	Guy Baz, M.Sc. Weizmann Institute of Science Rehovot, Israel
23	*Precision Functional Mapping of the Frontoparietal Network at the Level of Cortical Layers*	Maria-Aradia Wilms, B.Sc. Max Planck Institute for Biological Cybernetics Tuebingen, Germany
24	*A Robust & Reproducible Awake Mouse ZTE fMRI Protocol Using Controlled Motion Demonstrates the Efficacy of Reinforcement Learning.*	Lauren Daley, B.Sc. Emory University Atlanta, GA, USA
25	*Localized B0 Shimming Enhances 1H MRSI Spectral Quality & Cerebellar Connectivity at 7T*	Mahrshi Jani, M.Sc. University of Texas Southwestern Medical Center Dallas, TX, USA
26	*Group Cohesive Parcellation Generates Optimal Parcel Parsimony for UHF rsfMRI*	Ajay Nemani, Ph.D. Cleveland Clinic Cleveland, OH, USA
27	*Ultra-High Field Multimodal Imaging of Pediatric Patients with Drug-Resistant Focal Epilepsy*	Jitong Xian, Undergraduate Johns Hopkins University Baltimore, MD, USA
28	*Contribution of Putative Inhibitory & Excitatory Cortical Neurons to Functional Connectivity*	Daniel Zaldivar, M.D., Ph.D. National Institute of Mental Health Bethesda, MD, USA
29	*Dynamic Contrast Imaging Using Golden Angle Dual-Echo FAST-Flexible Contrast PETALU Acquisition*	Uzay Emir, Ph.D. University of North Carolina Chapel Hill, NC, USA
30	*Comparison of Independent Component Analysis of Resting-State fMRI at 1.5T, 3T & 7T*	Pierfrancesco Ambrosi, Ph.D. IRCCS Stella Maris Pisa, Italy
31	*In Vivo Assessment of the Human Brain's Microvasculature*	Jonas Bause, Ph.D. Max Planck Institute for Biological Cybernetics Tuebingen, Germany
32	*Comparison of Multi-Echo fMRI Denoising Techniques for Resting-State Temporal Signal-to-Noise Ratio & Connectivity at 3T & 7T*	Avijit Chowdhury, Ph.D.I Icahn School of Medicine at Mount Sinai New York, NY, USA
33	*Using High-Resolution Laminar fMRI to Investigate Layer-Specific Repetition Suppression in Face Processing*	Dace Apsvalka, Ph.D. University of Cambridge Cambridge, England, UK
34	*Manipulating Affective Predictions: An Ongoing 7T fMRI Study*	Alexane Leclerc, M.Sc. National Institute of Health & Medical Research Paris, France
35	*Investigating Working Memory Updating Processes of the Human Subcortex Using 7T fMRI*	Anne Trutti, Ph.D. University of Amsterdam Amsterdam, The Netherlands
36	*Disruption of Brainstem Functional Connectivity in REM Sleep Behavior Disorder Using 7 Tesla Resting-State fMRI*	Lin Hua, Ph.D. Athinoula A. Martinos Center for Biomedical Imaging Charlestown, MA, USA
37	*Measuring Apparent Cortical Thickness Changes with T1234: A Dynamic EPI-Based Structural Scan Technique*	Chung Kan, Undergraduate National Institutes of Health Bethesda, MD, USA
38	*EPI Versus bSSFP in Visual Cortex Layer-fMRI at 9.4T*	Julius Steiglechner, M.Sc. Univerity Hospital of Tübingen Tuebingen, Germany
39	*Associations of Geometry & Hemodynamics of Lenticulostriate Arteries with Age, Vascular Risks & Cognitive Decline: A 7T MRI Study*	Jianing Tang, B.Sc. Northwestern University Evanston, IL, USA

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40	*Spinal Cord Imaging with a 32-Channel pTx Body Array at 7T*	Christoph Aigner, Ph.D. Max Planck Institute for Human Development Berlin, Germany
41	*Quasi-Instantaneous, Subject-Specific, Slice-by-Slice pTx Pulse Design with Deep Learning*	Joseph Bartlett, B.Sc. University of Melbourne Melbourne, VIC, Australia
42	*Liberating pTx from Vendor Lock-in: Open-Source Cross-Vendor Parallel Transmit MRI Sequences by extending pTx-Pulseq to Siemens UHF Scanners*	Dario Bosch, M.Sc. Max Planck Institute for Biological Cybernetics Tuebingen, Germany
43	*Volumetric Navigators for Prospective Motion Correction of 0.16-mm Isotropic Time-of-Flight Angiography at 7T*	Daniel Haenelt, Ph.D. Athinoula A. Martinos Center for Biomedical Imaging Charlestown, MA, USA
44	*7T 3D T2* Mapping of the Medial Meniscus Before & After Repair of the Posterior Root Tear: A Pilot Study*	Abdul Wahen Kajabi, Ph.D. University of Minnesota Minneapolis, MN, USA
45	*A Probabilistic Atlas of Brainstem Nuclei in Elderly Living Humans Using In Vivo 7 Tesla Multi-Contrast MRI*	Subhranil Koley, Ph.D. Athinoula A. Martinos Center for Biomedical Imaging Charlestown, MA, USA
46	*Assessment of Endolymphatic Hydrops for Diagnosis of Menière's Disease with pTx Based 3D FLAIR Sequence at 7T: Proof of Feasibility*	Claudius Mathy, M.D. Friedrich-Alexander-Universität Erlangen-Nürnberg Erlangen, Germany
47	*High Resolution 7T Multi-Echo T2* Mapping Using a Probabilistic Bayesian Model for Motion Correction with Undersampled Data*	Yuguang Meng, Ph.D. Emory University Atlanta, GA, USA
48	*3D Dynamic pTx Pulse Design for the SPACE Sequence Using Deep Learning*	Sophia Nagelstraber, M.Sc. University Hospital Erlangen Erlangen, Germany
49	*Linking the Cerebellar Morphology & Vascularization with Cytoarchitecture Using Motion-Corrected, RF-Shimmed, 7T MRI*	Nikos Priovoulos, Ph.D. Wellcome Centre for Integrative Neuroimaging Oxford, England, UK
50	*Parallel Transmit 7T MRI for Detection of Lesions in Patients with Drug-Resistant Focal Epilepsy*	Christopher Rodgers, D.Phil. University of Cambridge Cambridge, England, UK
51	*High-Resolution 7T Imaging of the Cerebellum in Multiple Sclerosis*	Myrte Strik, Ph.D. Spinoza Centre for Neuroimaging Amsterdam, The Netherlands
52	*Improved Flip-Angle Uniformity in 0.35-mm Slices Using Asymmetric pTx Spoke Pulses*	Chia-Yin Wu, Ph.D. University of Glasgow Glasgow, Scotland, UK
53	*High Resolution Imaging of Intravenous Gadolinium-Based Contrast Agent (GBCA) Distribution in the Dura & Subarachnoid Space (SAS) on 7T*	Yinghao Li, B.Sc. Johns Hopkins University Baltimore, MD, USA
54	*Evaluating for Endolymphatic Hydrops in Meniere's Disease Using In Vivo 7 Tesla Magnetic Resonance Imaging & Advanced Post-Processing Techniques*	Syed Ahmad, B.Sc. Johns Hopkins University School of Medicine Baltimore, MD, USA
55	*Liver & Renal T1 Relaxometry at 7T*	Petr Bulanov, M.Sc. German Cancer Research Center Heidelberg, Germany
56	*Echo Planar Imaging with Trailing Navigators at 7 Tesla*	Yulin Chang, Ph.D. Siemens Medical Solutions USA Inc. Malvern, PA, USA
57	*Spectrum of Findings in Children with Drug-Resistant Focal Epilepsy on Ultra-High Field MRI at a Tertiary Pediatric Center: A Case Series.*	Jon Cleary, Ph.D., MBBS, FRCR King's College London London, England, UK
58	*A Comparison of Eight pTx RF Body Coils for 7T Body Imaging with Regard to Their Rx Performance*	Johannes Grimm, M.Sc. German Cancer Research Center Heidelberg, Germany
59	*Predicting RF Shim from Quadrature B1+ Maps at Ultrahigh Fields Using Deep Neural Networks*	Xiaoxuan He, Ph.D. GE HealthCare Waukesha, WI, USA
60	*Initial Results of Accelerated 3D Neuroimaging at 7T with SONIC DL & Parallel Transmission*	Xiaoxuan He, Ph.D. GE HealthCare Waukesha, WI, USA

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61	*Quantifying the Inversion Efficiency in the Body at 7T & 10.5T Using Magnetic Resonance Fingerprinting*	Niklas Himburg, M.Sc. Physikalisch-Technische Bundesanstalt Berlin, Germany
62	*High-Resolution 7-Tesla Magnetic Resonance Imaging & Post-Processing for 3-Dimensional Reconstruction of the Membranous Labyrinth in Healthy Adults*	Joon Soo Kim, B.Sc. Johns Hopkins University School of Medicine Baltimore, MD, USA
63	Withdrawn	
64	*Depiction of the Locus Coeruleus 3D-Structures Using a 3D-CUBE Sequence at 7T*	Kazuiki Kunieda, Ph.D. RIKEN Center for Brain Science Wako, Japan
65	*Performance Parameter Testing of Ultra-High Field MR Imaging Console*	Kaisheng Lin, B.Sc. Peking University Beijing, China
66	*7T Knee Quantitative MRI in Hypermobility Patients & Healthy Controls: A Pilot Study*	Carly Lockard, M.Sc. Carle Health Urbana, IL, USA
67	*A New Compact Hexagonally-Structured Artificial Dielectric for Enhancing B1+ at 7T Especially for TIAMO-Like Acquisition*	Santosh K. Maurya, Ph.D. Weizmann Institute of Science Rehovot, Israel
68	*A 16-Channel Transmit, 64-Channel Receive RF Coil With Integrated Field Probes for High Resolution Functional & Quantitative MRI*	Kerrin Pine, Ph.D. Max Planck Institute for Human Cognitive & Brain Sciences Leipzig, Germany
69	*Interactive Bloch-McConnell Simulator with Applications in gluCEST at 7T*	Mara Quach, B.Sc. University of Melbourne Melbourne, VIC, Australia
70	*Acoustic Spectrum & Ghosting in EPI: Timing is Everything (& It Is Not Just Echo Spacing)*	Amir Seginer, Ph.D. Weizmann Institute of Science Rehovot, Israel
71	Withdrawn	
72	*Subpopulation Universal Pulses: Practical Online Implementation*	Igor Tyshchenko, M.Sc. University of Melbourne Melbourne, VIC, Australia
73	*Time of Flight Magnetic Resonance Angiography at 7T: A Comparison with 3T*	Sergio Valencia, M.D. Masschusettes General Hospital Boston, MA, USA
74	*Achieving a Greater SNR Enhancement of 7T by Integrating High Permitivity Ceramic Helmet with RF Head Array Coil*	Qing X. Yang, Ph.D. Penn State College of Medicine Hershey, PA, USA
75	*Boosting SNR of Deuterium MRI Acquired Using CSI*	Muhammad Anjum, Ph.D. Mayo Clinic Rochester, MN, USA
76	*High-Resolution Visualization of the Trigeminal Nerve Using 7-Tesla Magnetic Resonance Imaging*	Xihang Wang, B.Sc. Johns Hopkins University School of Medicine Baltimore, MD, USA

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77	*Relationship Between Cerebral Blood Flow & Resting-State Functional Connectivity: Cross-Validation in Two Different Datasets*	Catarina Domingos, M.Sc. Instituto Superior Técnico Lisbon, Portugal
78	*Within-Subject Dynamics of Temporal Correlations Between fMRI Resting-State Networks & Concurrent EEG Spectral Power*	Aviya Blumenfeld, M.Sc. Lisbon University Lisbon, Portugal
79	*Data-Driven Cerebrovascular Reactivity & Vascular Lag Mapping in Gliomas with Multi-Echo BOLD fMRI*	Cristina Comella-Luengo, M.Sc. Basque Center on Cognition, Brain & Language San Sebastian-Donostia, Spain
80	*Hemodynamic Delays in Grey & White Matter Are Correlated: Measurements Using BOLD & CBF fMRI*	Nayana Menon, B.Sc. University of Toronto Toronto, ON, Canada
81	*Cerebrovascular Reactivity Amplitude & Delay in Young & Older Adults: Measurement Without CO2 Recordings*	Nuwan Nanyakkara, Ph.D. Baycrest Academy for Research & Education Toronto, ON, Canada
82	*Investigating the Effects of Prospective Motion Correction on Resting-State fMRI*	Beatriz Vale, M.Sc. Instituto Superior Técnico Lisbon, Portugal
83	Bridging Neurovascular Coupling Models	Linqing Li, Ph.D. National Institutes of Health Bethesda, MD, USA
84	*Ethical & Societal Implications of Neurotechnology: Navigating the Future of Brain Research*	Saman Sargolzaei, Ph.D. University of Tennessee Knoxville, TN, USA
85	*Normalized Cerebrovascular Reactivity Mapping Using Hypercapnia & Hyperoxia Challenges*	Peiying Liu, Ph.D. University of Maryland School of Medicine Baltimore, MD, USA
86	*Accurate Assessment of 11.7 T Head Coil Energy Deposition Using Field-Drift Tolerant Proton Resonance Frequency-Based MR Thermometry*	Jacco de Zwart, Ph.D. National Institutes of Health Bethesda, MD, USA
87	*Susceptibility-Weighted MRI with Optimized Phase Mask for Central Vein Sign Detection in the Spinal Cord at 7T*	Aurelien Destruel, Ph.D. Center for Magnetic Resonance in Biology & Medicine Marseille, France
88	*Mapping Downfield Resonances in the Human Brain at 3 & 7 Tesla*	Ipek Özdemir, Ph.D. Johns Hopkins University Baltimore, MD, USA
89	*Relaxation-Exchange MRI (REXI): A Non-Invasive Imaging Method for Evaluating Trans-Barrier Water Exchange in the Choroid Plexus*	Xuetao Wu, B.Sc. Chinese Academy of Sciences Beijing, China
90	*Dual-Tune 16-Channel 2H High Impedance Coil Array Integrated with 16-Channel 1H Dual-Row Transceiver Array for Deuterium Metabolic Imaging at 7 Tesla*	Bei Zhang, Ph.D. University of Texas Southwestern Medical Center Dallas, TX, USA
91	*Whole-Brain CMRO2 Mapping with a Novel Dual Acquisition pCASL & Multiecho BOLD Calibrated Functional MRI Sequence*	Inés Chavarría, M.Sc. Basque Center on Cognition, Brain & Language Donostia, Spain

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