ISMRM Workshop on **WHATEVER**:
WHite Matter, **A**nalysis, **T**ranslation,
Experimental **V**alidation, **E**valuation & **R**eproducibility

18-20 September 2023
Vanderbilt University, Nashville, TN, USA

ORGANIZING COMMITTEE

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Nikola A. Stikov, Ph.D.
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OVERVIEW

Quantitative MRI (qMRI) methods hold the promise of improved diagnosis and monitoring of white matter disorders. Despite great advances in the development of sophisticated qMRI methods, their translation into clinical is still in its infancy. This workshop will review state-of-the-art qMRI methods, technical aspects and clinical applications, and focus on bridging the gap between research and clinical implementation.

This in-person workshop offers a unique opportunity for one-on-one discussions, informal networking, and interaction between trainees and established researchers, M.D.s, and Ph.D.s. A panel of experts will lead a discussion on reproducibility in white matter: remaining barriers and how to break them down. The scientific program focuses on qMRI methods to study white matter from different angles: macrostructure (relaxation), microstructure (diffusion, susceptibility), and metabolism (CEST, spectroscopy and X-nuclei). In each session, a physicist/engineer and physician will provide an overview of state-of-the-art methods, highlight promising avenues and interesting clinical applications. Poster presentations are an integral part of the program and will be advertised in power pitch presentations.

Reproducible research facilitates clinical translation and will be promoted throughout this workshop, which is organized by the White Matter Study Group with strong input from the Reproducible Research Study Group.

The workshop has been carefully structured to be interdisciplinary, to bring together brain researchers and clinicians, and offers CME credits.

TARGET AUDIENCE

This workshop is designed for researchers (including Ph.D. students and postdocs); clinicians (e.g., neurologists, radiologists, neurosurgeons); trainees; MR technologists; government regulatory experts; nonprofit and academic groups interested in quantitative and reproducible MRI methods of white matter; and members of the White Matter Study Group. It will also be of particular interest to members of the Reproducible Research Study Group.

EDUCATIONAL OBJECTIVES

Upon completion of this activity, participants should be able to:

- Review the fundamentals of qMRI methods in white matter: acquisition, analysis and applications;
- Recognize the current limitations in qMRI methods in white matter, both from the standpoint of physical limits and obstacles to clinical translation;
- Explore both the established and the more recent developments in qMRI methods of white matter for use in the clinical applications; and
- Develop their own view on the common vision for the future of qMRI methods and its translation to everyday clinical practice.

SPEAKER UPLOAD INFORMATION (Audiovisual Preview)

Uploading presentations is available on a first-come, first-served basis. Hours are:

- Monday, 18 September: 15:00-18:00
- Tuesday, 19 September & Wednesday, 20 September: 08:00-09:00

Please see program for additional times (breaks & lunch).

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. The International Society for Magnetic Resonance in Medicine designates this live activity for a preliminary maximum of 8.50* *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The American Medical Association has an agreement of mutual recognition of Continuing Medical Education (CME) credits with the European Union of Medical Specialists (UEMS), the accreditation body for European countries. Physicians interested in converting *AMA PRA Category 1 Credit™* to UEMS-European Accreditation Council for Continuing Medical Education CME credits (ECMECs) should contact the UEMS at mutualrecognition@uems.eu.

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*preliminary credit designation; subject to change

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.

CLAIMING CREDIT

To obtain your credit for the workshop, log in to the ISMRM membership portal at www.ismrm.org, click the "My Meeting Evaluations" menu option, and follow the instructions provided.

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.

DECLARATION OF FINANCIAL RELATIONSHIPS

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Pre-Registration: SUNDAY, 17 SEPTEMBER 2023

15:00	Pre-Registration & Speaker Upload Available
18:00	Opening Reception

Day 1: MONDAY, 18 SEPTEMBER 2023: MACROSCOPY *(3.50 CME Available)*

08:00	Registration & Speaker Upload Available	
	Session 1: Opening Plenaries Highlighting the Need for Reproducible Quantitative WM Metrics in Clinic & Research	
	Moderators: Samantha By, Ph.D., Roland Henry, Ph.D., Nikola Stikov, Ph.D. & Anthony Traboulsee, M.D.	
09:00	*Reproducible White Matter Quantification in Clinic*	Peter Calabresi, M.D. Johns Hopkins Medicine Baltimore, MD, USA
09:30	*Reproducible White Matter Quantification in Research*	Kathryn Keenan, Ph.D. National Institute of Standards & Technology Gaithersburg, MD, USA
10:00	Discussion	Samantha By, Ph.D. Peter Calabresi, M.D. Roland Henry, Ph.D. Kathryn Keenan, Ph.D. Nikola Stikov, Ph.D. Anthony Traboulsee, M.D.
10:30	Break with Coffee & Speaker Upload Available	
	Session 2: Relaxation	
	Moderators: Mustapha Bouhrara, Ph.D., Agah Karakuzu, Ph.D. & Hagen Kitzler, M.D.	
11:00	*The Excitement of Relaxation*	Irene Vavasour, Ph.D. University of British Columbia Vancouver, BC, Canada
11:30	*Are We Ready To Relax Clinically?*	Timothy M. Shepherd, M.D., Ph.D. New York University Langone Medical Center New York, NY, USA
12:00	Discussion	Mustapha Bouhrara, Ph.D. Agah Karakuzu, Ph.D. Hagen Kitzler, M.D. Timothy M. Shepherd, M.D., Ph.D. Irene Vavasour, Ph.D.
12:30	Lunch & Speaker Upload Available	
	Session 3: Mag Transfer	
	Moderators: Jakob Assländer, Ph.D., Megan Poorman, Ph.D. & Greg Stanisz, Ph.D.	
14:00	*Transferring Magnetization Knowledge from Bench to Bedside*	Jiwon Oh, M.D., Ph.D. University of Toronto Toronto, ON, Canada

14:30	*Is the Magnetization Transfer World Saturated?*	Rebecca S. Samson, Ph.D. University College London Institute of Neurology London, England, UK
15:00	Discussion	Jakob Assländer, Ph.D. Jiwon Oh, M.D., Ph.D. Megan Poorman, Ph.D. Rebecca S. Samson, Ph.D. & Greg Stanisz, Ph.D.
15:30	Break & Speaker Upload Available	

Session 4: Power Pitch & Poster Sessions
Moderators: Mary Faulkner, B.Sc., Julio Villalon Reina, M.D., Ph.D., & Neale Wiley B.Sc.

16:00	Power Pitch Session *(No CME Available)*	
	Axonal Microgeometry from Diffusion MRI Perspective	Ali Abdollahzadeh, Ph.D. New York University School of Medicine New York, NY, USA
	Estimating Diffusion Microstructure Parameters Using Model-Based Deep Learning	Hesam Abdolmotalleby, Ph.D. University of Iowa Iowa City, IA, USA
	Diffusion Time-Dependent Radial Diffusivity & Myelin qMRI in Ex Vivo Ferret Spinal Cord	Hannah Alderson, B.Sc. Vanderbilt University Nashville, TN, USA
	Identification of Interpretable & Discriminative Features in Alzheimer's Disease from Multisubject fMRI Data Using a New Mathematical Fusion Method	Mohammad Abu Baker Siddique Akhonda, Ph.D. National Institutes of Health Bethesda, MD, USA
	MUTANT: A New Image Filtering Paradigm for Improved Parameters Determination, Application to Myelin Water Fraction Mapping & Sodium Concentrations Imaging	Jean-Marie Bonny, Ph.D. Institut National de la Recherche Agronomique Paris, France
	Saturation Transfer MRI for Differentiating Tumour Progression from Radiation Necrosis in Brain Metastases	Rachel Chan, Ph.D. Sunnybrook Research Institute Toronto, ON, Canada
	Higher-Order Diffusion MRI Acquired in Clinical Setting: White Matter Microstructure Mapping Across the Lifespan	Jenny Chen, M.Sc. New York University Grossman School of Medicine New York, NY, USA
	All Diffusion Rotational Invariants in One Abstract	Santiago Coelho, Ph.D. New York University School of Medicine New York, NY, USA
	Revealing Signatures of Demyelination & Axonal Loss in White Matter Extra-Axonal Space Using Time-Dependent Diffusion	Ricardo Coronado-Leija, Ph.D. New York University Grossman School of Medicine New York, NY, USA
	Using 31P-1H Cross-Polarization as a New Avenue of Studying Myelin in White Matter	Alex Ensworth, M.Sc. University of British Columbia Vancouver, BC, Canada
	Disrupting Oligodendrogenesis During Development Impacts Myelin & Axons	Lisa Gazdzinski, Ph.D. Hospital for Sick Children Toronto, ON, Canada

Individual-Specific Tract-Based Spatial Statistics (iTBSS): A Normative Modeling Approach for Evaluating White Matter Microstructure of Individuals	Jose Guerrero-Gonzalez, Ph.D. University of Wisconsin-Madison Madison, WI, USA
White Matter Identification in Regions of Edema Surrounding Meningioma Brain Tumor Using Dti & Noddi: A Comparative Study	Sasha Hakhu, M.Sc. Arizona State University Tempe, AZ, USA
In-Vivo Delineation of Diamagnetic Myelin & Paramagnetic Iron Using Deep Learning-Powered X-Separation	Sooyeon Ji, Ph.D. Seoul National University Seoul, South Korea
Short-Term Increases in Brain Myelin Damage Predicts Long-Term Cognitive Decline in Progressive MS: Preliminary Findings	Olivia Kalau, B.Sc. University of British Columbia Vancouver, BC, Canada
Saturation Transfer (CEST & MT) MRI for Characterization of the Rat Brain in the Presence of Glioma	Wilfred Lam, D.Phil. Sunnybrook Research Institute Toronto, ON, Canada
MR Fingerprinting-Based Myelin Water Fraction Maps in Healthy Human Brain: A Multi-Site Reproducibility Study	Marta Lancione, Ph.D. IRCCS Fondazione Stella Maris Pisa, Italy
Diffusion MRI of Post-Mortem Human Cervical Spinal Cord Injury Demonstrates Axonal Swelling & Degeneration	Nikolai Lesack, M.Sc. University of British Columbia Vancouver, BC, Canada
Quantitative Susceptibility Source Separation Improves the Performance in Identification of Chronic Active Multiple Sclerosis Lesions Using Deep Learning-Based Method	Ha Manh Luu, Ph.D. Weill Cornell Medicine New York, NY, USA
Unbiased Neural Networks for qMRI Parameter Estimation	Andrew Mao, M.S.E. New York University Grossman School of Medicine New York, NY, USA
Characterizing Tissue Relaxation in Fresh & Fixed White Matter Tissue Samples	Amaya Murguia, M.Sc. University of Michigan-Ann Arbor Ann Arbor, MI, USA
Evaluating Tissue Microstructure & Function with MRI of the Lumbar Spinal Cord in Multiple Sclerosis	Lipika Narisetti, Undergraduate Vanderbilt University Nashville, TN, USA
Unsupervised Brain Image Segmentation Using Myelin Water Imaging & Tensor Valued Diffusion Encoding MRI Metrics	Marek Obajtek, Undergraduate University of British Columbia Vancouver, BC, Canada
Modelling the Pathophysiological Progression of White Matter Hyperintensities Using Microstructural MRI	Olivier Parent, B.Sc. McGill University Montral, QC, Canada
Physiological Fluctuations in White Matter from Rs-fMRI Are Increased in Patients with Neurofibromatosis Type 1	Daniel Sare, M.Sc. Hospital for Sick Children Toronto, ON, Canada
Microstructure Informed Susceptibility Source Separation (MI-SSS) in Multiple Sclerosis Using 3-Pool Modeling of Multi Gradient Echo	Mert Sisman, M.Sc. Weill Cornell Medicine New York, NY, USA
Linking Disability & White Matter Integrity in Multiple Sclerosis	Valentin Stepanov, M.D. New York University Grossman School of Medicine New York, NY, USA

	Frequency-Selective Inversion Ultra-Short Echo Time (Fsi-Ute) MRI for Direct Detection of Lipids of the Myelin Bilayer	Anshuman Swain, B.Sc. University of Pennsylvania Philadelphia, PA, USA
	Geometric Mean T2 of the Intra/Extracellular Water Can Help Identify Diffusely Abnormal White Matter in Multiple Sclerosis	Irene Vavasour, Ph.D. University of British Columbia Vancouver, BC, Canada
16:30	Poster Viewing Session	
18:00	Adjourn	

Day 2: TUESDAY, 19 SEPTEMBER 2023: MICROSCOPY *(3.0 CME Available)*

08:00	Registration & Speaker Upload Available	
	Session 5: Diffusion	
	Moderators: Emilie T. McKinnon, M.D., Ph.D., Michael Pridmore, Ph.D. & Kurt Schilling, Ph.D.	
09:00	*Quantifying WM Microstructure with Diffusion: Clinical Needs & Challenges*	Kouhei Kamyia, M.D. Toho University Tokyo, Japan
09:30	*Quantifying WM Microstructure with Diffusion: What Can We Really Probe & How Do We Know?*	Dmitry S. Novikov, Ph.D. New York University School of Medicine New York, NY, USA
10:00	Discussion	Kouhei Kamiya, M.D. Emilie T. McKinnon, M.D., Ph.D. Dmitry S. Novikov, Ph.D. Michael Pridmore, Ph.D. Kurt Schilling, Ph.D.
10:30	Break & Speaker Upload Available	
	Session 6: Susceptibility	
	Moderators: Jongho Lee, Ph.D, Kristin O' Grady, Ph.D. & Alan Wilman, Ph.D.	
11:00	*Biomarkers & Quantification Using Susceptibility-Based Imaging: Advancements in the Context of Multiple Sclerosis*	Susan Gauthier, D.O., M.P.H. Weill Cornell Medicine New York, NY, USA
11:30	*QSM in White Matter: Are We There Yet?*	Dmitry A. Yablonskiy, Ph.D. Washington University at St. Louis St. Louis, MO, USA
12:00	Discussion	Susan Gauthier, D.O., M.P.H. Jongho Lee, Ph.D, Kristin O' Grady, Ph.D. Alan Wilman, Ph.D. Dmitriy A. Yablonskiy, Ph.D.
12:30	Lunch & Speaker Upload Available	
	Session 7: Fast Multicontrast Methods in the Clinic	
	Moderators: Laura R. Barlow, R.T.(MR)(R), Mark Does, Ph.D. & Cristina Granziera, M.D., Ph.D.	
14:00	*Robust Multimodal Imaging*	Berkin Bilgic, Ph.D. Athinoula A. Martinos Center for Biomedical Engineering Boston, MA, USA

14:30	*Fast Multimodal Imaging Imaging in Pediatrics*	Douglas C. Dean III, Ph.D. University of Wisconsin-Madison Madison, WI, USA
15:00	Discussion	Laura R. Barlow, R.T.(MR)(R) Berkin Bilgic, Ph.D. Douglas C. Dean III, Ph.D. Mark Does, Ph.D. Cristina Granziera, M.D., Ph.D.
15:30	Break & Speaker Upload Available	

Session 8: Power Pitch & Poster Sessions
Moderators: Jenny Chen, M.Sc.

16:00	Power Pitch Session *(No CME Available)*	
	Aaxonal Water Fraction from Diffusion MRI of White Matter in a Model of Demyelination & Recovery	Ali Abdollahzadeh, Ph.D. New York University School of Medicine New York, NY, USA
	Direct Visualization of Small Anisotropic Brain Structures Using High-Resolution, Multi-Shell Diffusion MRI	Benjamin Ades-Aron, Ph.D. New York University Grossman School of Medicine New York, NY, USA
	Towards Myelin Bilayer Mapping In Vivo: Noise Propagation & Reconstruction Considerations	Emily Louise Baadsvik, M.Sc. ETH Zürich Zürich, Switzerland
	Magnetization Transfer Imaging Using Non-Balanced SSFP at Ultra-Low Field	Sharada Balaji, B.Sc. University of British Columbia Vancouver, BC, Canada
	White Matter Matters in Cognitive & Motor Functioning	Mustapha Bouhrara, Ph.D. National Institute of Aging Baltimore, MD, USA
	Predicting Progression in Low-Grade Glioma Using Saturation Transfer MRI	Rachel Chan, Ph.D. Sunnybrook Research Institute Toronto, ON, Canada
	Zero-Shell Diffusion MRI: Focus on Tissue Microstructure by Decoupling Fiber Orientations	Santiago Coelho, Ph.D. New York University School of Medicine New York, NY, USA
	3D Electron Microscopy in Injured Rat Brain Validates White Matter Microstructure Metrics from Diffusion MRI	Ricardo Coronado-Leija, Ph.D. New York University Grossman School of Medicine New York, NY, USA
	Reproducibility of Chemical Exchange Saturation Transfer (CEST) Contrasts in the Healthy Brain	Alicia Cronin, B.Sc. Western University London, ON, Canada
	Sedentarism Is Associated with Lower Myelin Content in Cognitively Unimpaired Adults	Mary Faulkner, B.Sc. National Institute of Aging Baltimore, MD, USA
	NN-REUSED: A Neural Network-Based Approach for Efficient Myelin Water Fraction Mapping from Extremely Under-Sampled Steady-State MRI Data	Zhaoyuan Gong, Ph.D. National Institute on Aging Baltimore, MD, USA
	Validating "P-Scores": Assessing Individual Deviations in Skewed Distributions of Diffusion MRI Data from the Human Connectome Project	Rakibul Hafiz, Ph.D. NIBIB, NIH Bethesda, MD, USA

Comparison of X-Separation & X-Separation: A Clinical Feasibility Study*	Jinhee Jang, Ph.D.
	      Seoul St. Mary's Hospital
	      Seoul, South Korea

Myelin Water Imaging & Diffusion Tensor Imaging Comparison in Perilesional White Matter & in the Normal-Appearing White Matter	Poljanka Johnson, M.Sc.
	      University of British Columbia
	      Vancouver, BC, Canada

Vendor-Neutrality & Upgrade Immunity: Post-Upgrade Assessment of Vendor-Neutral qMRI from Two Perspectives	Agah Karakuzu, Ph.D.
	      Polytechnique Montréal
	      Montreal, QC, Canada

Myelin Water Fraction Mapping Using Magnetic Resonance Fingerprinting in Typical Neurodevelopment & Leukodystrophies	Marta Lancione, Ph.D.
	      IRCCS Fondazione Stella Maris
	      Pisa, Italy

Upper-Cervical Spinal Cord Atrophy & Tissue Microstructural Abnormality & Their Relationships to Clinical Outcome Measures Across the Spectrum of Multiple Sclerosis	Lisa Eunyoung Lee, M.Sc.
	      University of Toronto
	      Toronto, ON, Canada

Protocol Optimization & Reproducibility Assessment of White Matter Compartmental Diffusion-Relaxation Modeling	Ying Liao, M.Sc.
	      New York University
	      New York, NY, USA

Can Diffusion MRI Provide Adequate Biomarkers of Traumatic Brain Injury?	Guido Guberman, M.D., Ph.D.
	      McGill University
	      Montreal, QC, Canada

Serum 24-Hydroxycholesterol Is Weakly Correlated with Lesion Water Content in Multiple Sclerosis	Noah Marini, B.Sc.N.
	      University of British Columbia -
	      Okanagan Campus
	      Kelowna, BC, Canada

Repeatability of White Matter Measures on QSM & Separated Paramagnetic & Diamagnetic Maps	Nashwan Naji, Ph.D.
	      University of Alberta
	      Edmonton, AB, Canada

Multiparametric Quantitative MRI for Brain White Matter Imaging at 7T Terra.X Using BEAT Sequence	Seyedeh Nasim Adnani, M.Sc.
	      Auburn University
	      Auburn, AL, USA

Derive an Anisotropic R2 Relaxation Profile from DTI in White Matter	Yuxi Pang, Ph.D.
	      St. Jude Children's Research Hospital
	      Memphis, TN, USA

Cognition in Multiple Sclerosis (Coms) Dataset: A Multidimensional Resource for Studies of Brain Mechanisms of Impairment	Ashley Pike, Ph.D.
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	      Little Rock, AK, USA

Enlarging T2 Lesions Are Not a Surrogate for Slowly Expanding Lesions in Multiple Sclerosis	Aman Sharma, B.Sc.
	      University of British Columbia
	      Vancouver, BC, Canada

Cortical Cholinergic Pathway Integrity & Cognition in Parkinson's Disease	Nicola Slater, B.Sc.
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	      Christchurch, New Zealand

Probabilistic Mouse Brain Myelin Atlas from Two MRI Myelin Measurement Techniques	Nicholas Storti, Undergraduate
	      Vanderbilt University
	      Nashville, TN, USA

Reproducibility of Advanced MR Measures Across Different Scanner Vendors	Irene Vavasour, Ph.D.
	      University of British Columbia
	      Vancouver, BC, Canada

Global White Matter Microstructure of Children with Sensory Over-Responsivity Is Associated with Affective Behavior	Jamie Wren-Jarvis, M.Sc.
	      University of California, San Francisco
	      San Francisco, CA, USA

16:30	Poster Viewing Session
18:00	Adjourn

Day 3: WEDNESDAY, 20 SEPTEMBER 2023: METABOLISM *(2.0 CME Available)*

08:00	Registration & Speaker Upload Available	
	Session 9: CEST	
	Moderators: Alicia Cronin, B.Sc., Seth A. Smith, Ph.D. & Nirbhay N. Yadav, Ph.D.	
09:00	*The Unique Potential of CEST for White Matter Pathologies*	Daniel Paech, M.D., Ph.D. German Cancer Research Center Heidelberg, Germany
09:30	*CEST: Where Are We & What Do We Need To Go Further: From CEST-Weighted to Quantitative CEST*	Phillip Zhe Sun, Ph.D. Emory University School of Medicine Atlanta, GA, USA
10:00	Discussion	Alicia Cronin, B.Sc. Daniel Paech, M.D., Ph.D. Seth A. Smith, Ph.D. Phillip Zhe Sun, Ph.D. Nirbhay N. Yadav, Ph.D.
10:30	Break & Speaker Upload Available	
	Session 10: Spectroscopy/X-Nuclei	
	Moderators: Christian Beaulieu, Ph.D. & Cornelia Laule, Ph.D	
11:00	*Quantitative Direct Sodium (23Na) MRI in the Pediatric Brain*	Aashim Bhatia, M.D., M.S. Children's Hospital of Philadelphia Wynnewood, PA, USA
11:00	*What Is the Unique Information That Proton MR Spectroscopy Including X-Nuclei MRS Can Bring to Clinicians?*	Eva-Maria Ratai, Ph.D. Massachusetts General Hospital Charlestown, MA, USA
12:00	Discussion	Christian Beaulieu, Ph.D. Aashim Bhatia, M.D., M.S. Cornelia Laule, Ph.D Eva-Maria Ratai, Ph.D.
12:30	Lunch & Speaker Upload Available	
	Session 11: Whatever Else?	
	Moderators: Els Fieremans, Ph.D. & Shannon Kolind, Ph.D.	
14:00	Trainee Award Presentations	
14:45	*Whatever Else? Revisiting Reproducible White Matter Quantification in Clinic & Research, Unmet Needs & Future Directions*	Francesca Bagnato, M.D., Ph.D. Els Fieremans, Ph.D. Cristina Granziera, M.D., Ph.D. Hagen Kitzler, M.D. Shannon Kolind, Ph.D. Kristin O'Grady, Ph.D. Michael Pridmore, Ph.D. Seth A. Smith, Ph.D. Nikola Stikov, Ph.D. Anthony Traboulsee, Ph.D.
15:30	Farewell & Adjournment	

Take the 5-minute on-site survey!

See the registration desk for questions.

This survey is not for CME credits.

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Hesam Abdolmotalleby, Ph.D.	Alex Ensworth, M.Sc.	Noah Marini, B.Sc.N.
Benjamin Ades-Aron, Ph.D.	Jose Guerrero-Gonzalez, Ph.D.	Lipika Narisetti, Undergraduate
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Ricardo Coronado-Leija, Ph.D.	Nikolai Lesack, M.Sc.	Jamie Wren-Jarvis, M.Sc.

Posters

POSTER	TITLE	AUTHOR
1	*Axonal Microgeometry from Diffusion MRI Perspective*	Ali Abdollahzadeh, Ph.D. New York University School of Medicine New York, NY, USA
2	*Aaxonal Water Fraction from Diffusion MRI of White Matter in a Model of Demyelination & Recovery*	Ali Abdollahzadeh, Ph.D. New York University School of Medicine New York, NY, USA
3	*Estimating Diffusion Microstructure Parameters Using Model-Based Deep Learning*	Hesam Abdolmotalleby, Ph.D. University of Iowa Iowa City, IA, USA
4	*Direct Visualization of Small Anisotropic Brain Structures Using High Resolution, Multi-Shell Diffusion MRI*	Benjamin Ades-Aron, Ph.D. New York University Grossman School of Medicine New York, NY, USA
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8	*Magnetization Transfer Imaging Using Non-Balanced SSFP at Ultra-Low Field*	Sharada Balaji, B.Sc. University of British Columbia Vancouver, BC, Canada
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12	*Predicting Progression in Low-Grade Glioma Using Saturation Transfer MRI*	Rachel Chan, Ph.D. Sunnybrook Research Institute Toronto, ON, Canada
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14	*Zero-Shell Diffusion MRI: Focus on Tissue Microstructure by Decoupling Fiber Orientations*	Santiago Coelho, Ph.D. New York University School of Medicine New York, NY, USA
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17	*Revealing Signatures of Demyelination & Axonal Loss in White Matter Extra-Axonal Space Using Time-Dependent Diffusion*	Ricardo Coronado-Leija, Ph.D. New York University Grossman School of Medicine New York, NY, USA
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		    IRCCS Fondazione Stella Maris
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		    IRCCS Fondazione Stella Maris
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		    University of Toronto
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		    University of British Columbia
		    Vancouver, BC, Canada

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		    New York University
		    New York, NY, USA

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		    Weill Cornell Medicine
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		    McGill University
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		    New York University Grossman School of Medicine
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		    University of British Columbia -
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		    Kelowna, BC, Canada

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		    University of Michigan-Ann Arbor
		    Ann Arbor, MI, USA

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		    University of Alberta
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		    Auburn University
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		    University of British Columbia
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		    St. Jude Children's Research Hospital
		    Memphis, TN, USA

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		    McGill University
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