Georgia Magnetic Resonance Symposium

Hosted by:

Emory University
December 13, 2024

Organizers:

David Reiter, Emory, Radiology and Imaging Sciences (Chair)

John Oshinski, Emory, Radiology and Imaging Sciences

Hui Mao, Emory, Radiology and Imaging Sciences

Shella Keilholz, Emory and Georgia Institute of Technology, Biomedical Engineering

David Lynn, Emory, Chemistry

Kurt Warncke, Emory, Physics

Jon Lewin, Emory, Radiology and Imaging Sciences

Johannes Leisen, Georgia Institute of Technology, Chemistry

Jenny Yang, Georgia State University, Chemistry

Venue:

Health Sciences Research Buildings I & II

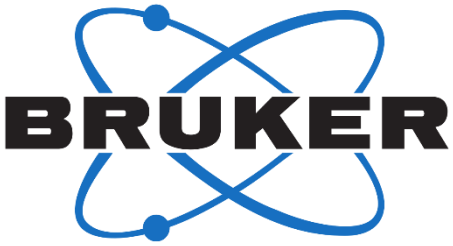
Emory University

1760 Haygood Drive NE

Atlanta, GA 30322

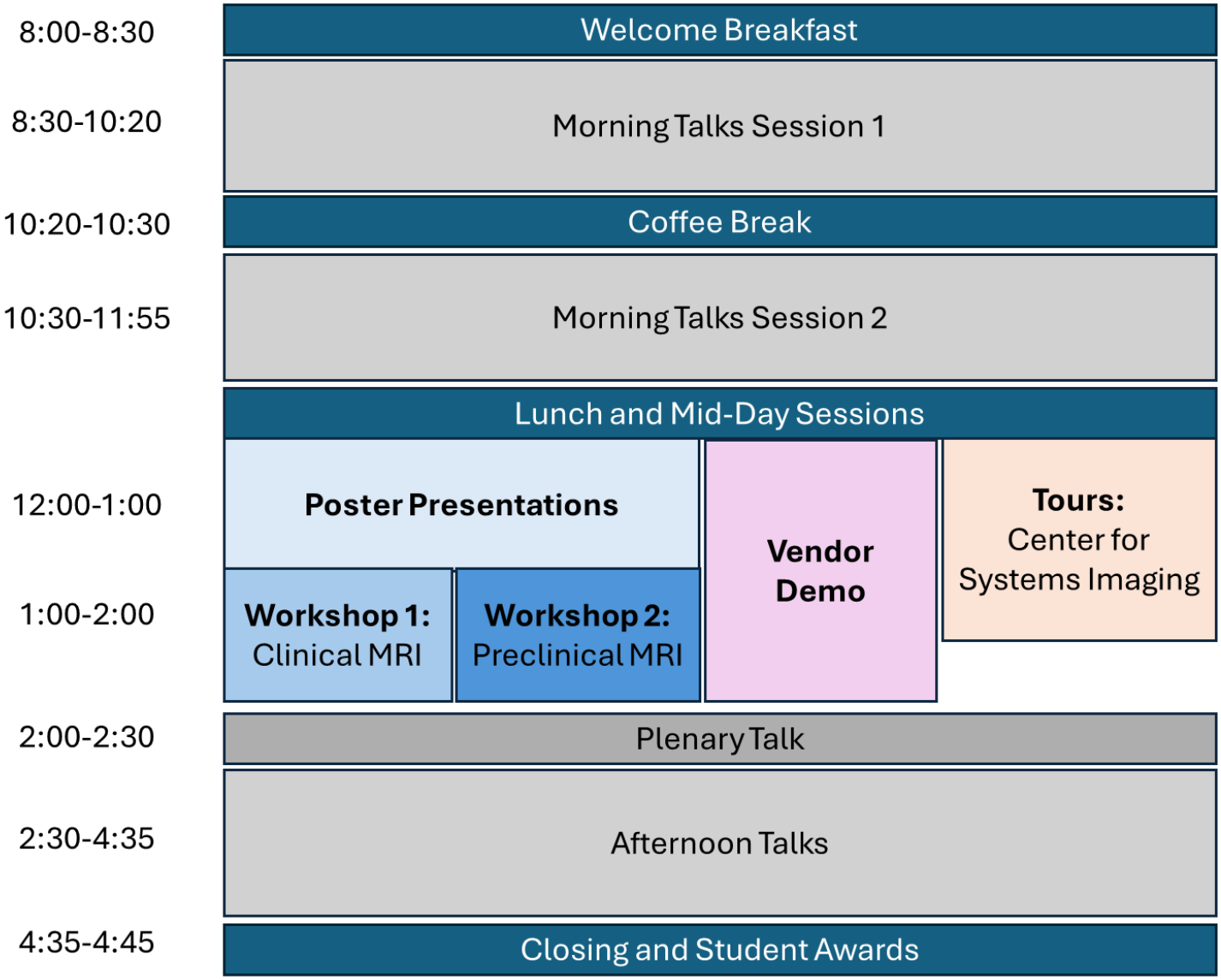
Georgia Magnetic Resonance Symposium

Sponsors:



Georgia Magnetic Resonance Symposium

Program at a Glance



Georgia Magnetic Resonance Symposium

Invited Speaker Schedule

Health Sciences Research Building I
Rollins Auditorium

Emory University
December 13, 2024

Start	End	Speaker	Talk Title
8:30 AM	8:35 AM	**Organizers**	**WELCOME**
Moring Oral Session 1 *Moderated by Candace Fleischer and Anant Paravstu*			
8:35 AM	8:50 AM	Saumya Gurbani	MR Spectroscopy: Brain Tumors and Beyond
8:50 AM	9:05 AM	FNU Vidya	Ordered Versus Disordered Regions in Proteusin Peptides Guided Post-Translation Modification by Different Maturases Enzyme
9:05 AM	9:20 AM	Liana Hatoum	Bone Marrow Transplant Protects Mice from Sickle Cell-Mediated Large Artery Remodeling: An MRA Study
9:20 AM	9:35 AM	Miriam Simma	Structural Characterization of De Novo Designed Fold Switching Proteins by Solution NMR
9:35 AM	9:50 AM	Sophia Bamishaye	Early Detection of Chronic Diseases Using a Collagen-Targeted Protein MRI Contrast Agent
9:50 AM	10:05 AM	Hanna Cebull	Hemodynamics of Aortic Dissections with 4D Flow MRI
10:05 AM	10:20 AM	Elijah Dunn	Myocilin Linker Domain Structure and Interactions by NMR Spectroscopy
10:20 AM	10:30 AM	**BREAK**	**COFFEE**
Moring Oral Session 2 *Moderated by Andrew McShan and Chuan Huang*			
10:30 AM	10:45 AM	Katie Witcomb	Dynamics of the Intrinsically Disordered Protein, α-Synuclein, Under Controlled Confinement
10:45 AM	11:00 AM	Daniel Dinakarapandian	The Distinction between Amyloid Fibril and Oligomer Assembly Pathway for Alzheimer's Amyloid-Beta Peptides
11:00 AM	11:15 AM	Jia Ying	Long COVID's Impact on the Brain
11:15 AM	11:30 AM	Hang Xu	Occurrence of Rare Earth Mineral in Georgia Kaolin: Molecular-scale Insights for Sustainable Extraction
11:30 AM	11:55 AM	**Kurt Warncke**	Physical and Mechanical Properties of Monomeric Alpha-Synuclein Provide Leads to Molecular Function
12:00 PM	2:00 PM	**LUNCH, Poster session, Tours & Vendor Demo**	
1:00 PM	2:00 PM	**Workshops:** *located in HSRB II, rooms N357 and N657*	
Afternoon Oral Session *Moderated by John Oshinski, Hui Mau, and Jenny Yang*			
2:00 PM	2:30 PM	**Roderic Pettigrew**	**Plenary Talk (TBD)**
2:30 PM	2:55 PM	**Matthew Allen**	Europium-Based Contrast Agents for Magnetic Resonance Imaging
2:55 PM	3:20 PM	**John Glushka**	High-Field NMR at the CCRC: 1.1 GHz and Glycans
3:20 PM	3:45 PM	**Deborah Barany**	fMRI Activity Patterns Underlying the Neural Control of Visually-Guided Reaching
3:45 PM	4:10 PM	**Thomas Leeper**	Inhibiting the Inhibitor: NMR Methods to Obtain Molecules that Promote Native Endolytic Activity in Pseudomonas A/eruginosa
4:10 PM	4:35 PM	**Jian-Xiong Wang**	Hyperpolarized Media& Metabolic MRI
4:35 PM	4:40 PM	**Organizers**	**STUDENT AWARDS AND CLOSING**

* Invited faculty listed in **bold**

Georgia Magnetic Resonance Symposium

Poster Schedule

Health Sciences Research Building I
Outside the Rollins Auditorium

Emory University

Noon - 2:00 p.m., December 13, 2024

Poster #	Title
1	De Novo Design of Protein Antagonists of Bacterial Pathogen Type III Secretion System Needle Assembly. **Rouqing Jia**
2	Protein-Coupled Solvent Dynamics in Fibrillar Amyloid-β (1-42) under Controlled Confinement Revealed by Using EPR Spectroscopy. **Hana Alsheikh**
3	Precision Noninvasive Early Detection of Small Liver Cancer and Premalignant Nodules by Collagen-Targeted Protein MRI Contrast Agent. **Xiu Chen**
4	Towards Translation of a Novel Molecular Biomarker Targeted MRI Contrast Agent for Early Diagnosis of Cancer. **Negin Ezati**
5	Optimized Purification of hProCA32.collagen1 for Early Diagnosis of CLDs (Chronic Liver Diseases). **Yushan Zhang**
6	Contrast Agency Designing Targeting the Calcium-Sensing Receptor (CaSR) in Cancer Progression and Therapeutic Potential. **Qiuyun Yan**
7	Exploring the Relative Contribution of Drivers of CSF Movement during Breathing Tasks. **Brice Williams**
8	Improving 5D Free-Running CMR Imaging Reconstruction with Variable Projection Augmented Lagrangian Method. **Yitong Yang**
. 9	Blood-Oxygenation Level Dependent Imaging as a Biomarker for Microvascular Reactivity in Diabetic Foot Ulcers. **Scott Edwards**
10	Sex Differences between the Hamsters Using Functional Magnetic Resonance Techniques. **Susan Lee**
11	Is Motion During an fMRI Assessment with Young Children Linked to Screen Time? **Lauren Holley**
12	Development of Protein-Based Contrast Agent (hProCA32) for Magnetic Resonance Imaging of Chronic Diseases. **Francis Akinlotan**
13	Insights into the Pathogenesis of Yellow Fever Virus Infection Using a Lethal BSL-2 Mouse Model. **Chinonye Dim**
14	Reproducibility of Magnetic Resonance Spectroscopy Data Acquired Using Hybrid PET/MRI Compared to a Standalone MRI. **Aditya Bhattacharya**
15	MVA-Vectored Multi-Antigen COVID-19 Vaccine Maintains Potent Cross-Reactivity against SARS-CoV-2 B.1 and XBB.1.5 in Preclinical Mouse Model. **Amany Elsharkawy**
16	Awake and Anesthetized Mice fMRI to Explore Neural Correlates of Arousal. **Lauren Daley**
17	Preclinical MRI at Georgia State University. **Khan Hekmatyar**
18	Rodent fMRI. **Wenju Pan**
19	Differences in Neurochemistry and Neurocognition as a Function of Age and Sex in Healthy Adolescents. **Anjali Balaganesh**
20	OPTIMUS Coil Combination Algorithm Increases SNR of In Vivo MR Spectra. **Eva Martinez Luque**
21	Impact of Neighborhood Socioeconomic Status on Acuity in Brain MRI Findings. **Ishita Raghuvanshi**
22	Improved Spectral Fitting and Repeatability of Glutamine Quantification in the Human Brain at 7T. **Rachel Goldberg**

23 Structural and Biophysical Characterization of Zinc-a2-glycoprotein with Small Molecules and ERK2. **Elizabeth Corbin**

24 In Vivo Quantification of the Mean Microstructural Deformation of the Myocardium using DENSE MRI. **Tawfik Hussein**

25 Development of Protein MRI Contrast Agent for Precision Imaging Lung Fibrosis. **Sophia Bamishaye**

26 Development and Characterization of hProCA32.Collagen1: A Novel Protein-Based MRI Contrast Agent for Enhanced Lung Disease Diagnosis. **Anita Dorabadizare**