

CONFERENCE SCHEDULE

Friday, November 13, 2026

5:00 PM Registration, Poster Setup & Viewing

Session 1 – Welcome & Opening Session

6:30 PM	Welcome Remarks	Brad S. Pierce, Ph.D. *University of Alabama*
6:35 PM	**Keynote 1**: *Pulse EPR Insights into Metallocofactor Structure and Dynamics*	Alexey Silakov, Ph.D. *Pennsylvania State University*
7:15 PM	*Quantitative Oxygen Mapping Using Single Point Imaging with Time Domain Averaging*	*Boris Epel, Ph.D.* *O2M Technologies* *The University of Chicago*
7:35 PM	*A structural basis for T cell co-stimulation by the CD7 receptor and stimulatory ligand K12*	Andrew C. McShan, Ph.D. *Georgia Institute of Technology*
8:00 PM	***Poster Presentations and Reception***	
10:00 PM	*End day*	

54th Southeastern Magnetic Resonance Conference

Hosted by the The University of Alabama • November 13-15 • Tuscaloosa, AL

Saturday, November 14, 2026

Session 2 – Magnetic Resonance Imaging

Chair: Jenny Yang, Ph.D.
Georgia State University

8:30 AM	Opening Remarks	
8:35 AM	*Regional T1w/T2w Signal and Cognition: Contributions of Brain Volume in Aging and Alzheimer's Disease*	Sharlene Newman, Ph.D. *The University of Alabama*
8:55 AM	*Precision Detection and Staging of Chronic Disease Using MRI with a Collagen-Targeted Protein Contrast Agent*	Oluwabukola Sophia Bamishaye *University of Alabama at Birmingham*
9:10 AM	*Xenon-129 MRI and Cognitive Impairment: The Potential of Hyperpolarized Xenon-129 MRI to Assess Cognitive Impairment in COPD*	Alyssa Harmon *University of Alabama at Birmingham*
9:30 AM	*Ultrahigh-Field Multimodal MRI Reveals Early Therapeutic Effects of Intranasal Mesenchymal Stem Cell Aggregate–Derived Extracellular Vesicles in Experimental Ischemic Stroke*	Arshia Arbabian *National High Magnetic Field Laboratory and Florida State University*
9:45 AM	*Precision Molecular MRI of Collagen Enables Early Detection of Fibrosis in Fatty Liver Disease*	Francis Akinlotan *Georgia State University*
10:05 AM	***Coffee Break***	

Session 3 – Lowell Kispert Memorial EPR Session 1

Chair: Alex Smirnov, Ph.D.
North Carolina State University

10:35 AM	*In Memoriam: Lowell D. Kispert (1940–2026)*	Alexandrina L. Focsan, Ph.D. *Valdosta State University*
10:55 AM	*Site-specific detection and modulation of alpha-synuclein structure and dynamics revealed by a dual EPR spin probe-spin label strategy*	*Shadi Fouad* *Emory University*
11:10 AM	*Substrate Binding in HrmJ Homologues by Combination of Mims ENDOR and Computational Chemistry*	Joshua R. Helms *The University of Alabama*
11:30 AM	*Narrow Bandgap Conjugated Polymers with Strong Correlations and Open-Shell Electronic Structures*	Jason D. Azoulay, Ph.D. *Georgia Institute of Technology*
11:45 AM	*Dual EPR spin probe and label approach resolves origins of protein and coupled solvent dynamics and confinement-induced folding in fibrillar amyloid-β(1-42)*	Hana Alsheikh *Emory University*
12:05 PM	***Lunch***	

Session 4 – DNP

Chair: TBD

1:20 PM	Introduction of a new initiative (10 minutes)	Amrit Venkatesh & Tomas Orlando
1:30 PM	*High-Field Liquid-State Overhauser DNP: From Sub-Picosecond Dynamics to High-Resolution Spectroscopy*	Tomas Orlando, Ph.D. *National High Magnetic Field Laboratory and Florida State University*
1:50 PM	*High-Field Liquid-State ^{19}F Overhauser DNP NMR*	Sungsool Wi, Ph.D. *National High Magnetic Field Laboratory and Florida State University*
2:05 PM	Understanding toxic tau conformations by sensitivity enhanced solid state NMR	Rupam Ghosh, Ph.D. *UT Southwestern Medical Center*

2:25 PM	*Expanding the Polarizing Agent Toolbox for Liquid-State Dynamic Nuclear Polarization: Stability and Performance at 14.1 T*	Daphne Broerman *National High Magnetic Field Laboratory and Florida State University*
2:40 PM	***Coffee Break***	

Session 5 – NMR Session 1 — Chair: Bo Chen, Ph.D., *University of Central Florida*

3:10 PM	**Keynote 2**: *Structural and Dynamic Studies of DNA-Protein Complexes by Solid-State NMR*	Christopher Jaroniec, Ph.D. *Ohio State University*
3:50 PM	Structure and Dynamics of Lipid-Stabilized Amyloid Beta Aβ1–42 Oligomers	*Bo Chen, Ph.D.* *University of Central Florida*
4:05 PM	Structure-Inspired Control of Amyloid-β Oligomer Formation Pathways	Anant K. Paravastu *Georgia Institute of Technology*
4:25 PM	*TBD*	
4:40 PM	*^{13}C NMR methods for characterizing complex polysaccharides*	Stephanann Costello *University of Georgia*
5:00 PM	***Break***	

Session 6 – Lightning Presentations by Graduate Students & Postdocs — Chair: Marzieh Kavand, Ph.D., *The University of Alabama*

5:30 PM	*XY-16 Inspired Waveforms for SABRE Hyperpolarization*	Lucas M. Everhart *Duke University*
	In Vivo Metabolic Characterization of the qa-X Mutant in Neurospora crassa by HRMAS NMR	Alexis Molina *University of Georgia*
	Capturing High Energy Metabolites and Diffusion with Microwave Fixed Tissue	Megan Ison *University of Florida*
	TBD	
	DFT-Guided Characterization of Vanadyl Porphyrins as Molecular Spin Qubits	Chloe McCarver *Samford University*
6:30 PM	***Dinner***	
7:30 PM	***Poster Viewing***	
9:30 PM	*End day*	

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Sunday, November 15, 2026

Session 7 – EPR Session 2

Chair: Kurt Warncke, Ph.D.
Emory University

8:30 AM	*It is not just the lipids: how bilayer nanoscale curvature affects its structure, dynamics, surface electrostatics, and water penetration*	*Alex Smirnov, Ph.D.* *North Carolina State University*
8:50 AM	*Polymer Corona-Free Monoolein Nanoparticles: The Lipid Interface as Both Reporter and Function*	*Gail E. Fanucci, Ph.D.* *University of Florida*
9:05 AM	*EPR spectroscopic analysis of magnetic coupling in trinuclear metal complexes*	Aruzhan Abdikaiym *The University of Alabama*
9:25 AM	*Spin Relaxation Dynamics of Cr(III) Centers in the Flexible MIL-53 Metal–Organic Framework*	Kavipriya Thangavel, Ph.D. *National High Magnetic Field Laboratory and Florida State University*
9:40 AM	*Mechanoactivated Metal-Oxide Nanoparticles and Their Role in Radical-Driven Oil Lubricant Degradation*	Eliza Shertzer *North Carolina State University*
10:00 AM	***Coffee Break***	

Session 8 – NMR Session 2

Chair: Joanna Long, Ph.D.
University of Florida

10:30 AM	*Characterization of Confined Molecular and Isolated Metal Sites in Zeolites using Solid-State NMR and EPR Spectroscopy*	*Amrit Venkatesh* *University of Virginia*
10:50 AM	*Sneak Peek into the Extracellular Matrix in E coli Biofilm in vivo by Solid-State NMR*	Pu Duan *Louisiana State University*
11:05 AM	*ORCO: A Goldilocks Approach to Amino-Acid Ambiguity in NMR*	Owen E. Raymond *University of Central Florida*
11:25 AM	*Cryogen-free magnets for solid-state MAS NMR at multiple magnetic fields*	Shashwata Moitra *Cryogenic US LLC, USA*
11:40 AM	*Solid-state NMR framework for quantitative and molecular-scale characterization of biomolecular adsorption interfaces*	Jaekyun Jeon *Institute for Bioscience and Biotechnology Research*
12:00 PM	*Probing Lipid Organization and Drug-Modulated GPCR Dynamics in Lipid Nanodiscs by ^{19}F NMR Spectroscopy and MD Simulations*	Anuradha Wijesekara *University of Florida*
12:15 PM	*Quantitative ^{1}H–^{13}C BRAIN Multiple-CP Solid-State NMR*	Sungsool Wi *National High Magnetic Field Laboratory*
12:35 PM	***Conference Highlights & Closing Remarks***	Brad S. Pierce, Ph.D. *University of Alabama*
	Adjourn (Box Lunch)	

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