**CONFERENCE SCHEDULE**

**Friday, October 27**

5:00 – 10:00 PM  
Registration

5:00 – 6:30 PM  
Poster Set Up and Viewing

**Session A**  
**Chair: Timothy A. Cross, NHMFL & Florida State University**

6:30 – 6:40 PM  
Welcome Remarks

6:40 – 7:20 PM  
**Keynote 1: Kent R. Thurber, National Institutes of Health**  
*Dynamic Nuclear Polarization (DNP) for Low-Temperature Solid-State MAS NMR*

7:20 – 7:40 PM  
(C1) Zhehong Gan, NHMFL & Florida State University  
*1.5 GHz NMR Using 35.2 T Series-Connected-Hybrid Magnet at NHMFL*

7:40 – 8:00 PM  
(C2) Peter L. Gor’kov, NHMFL & Florida State University  
*Solid State NMR Probes for 1.5 GHz Spectrometer*

8:00 – 10:00 PM  
Poster Set Up and Viewing

8:00 – 10:00 PM  
Welcome Reception and Buffet Dinner

**Saturday, October 28**

**Session B – Exotica**  
**Chair: Stephen Hill, NHMFL & Florida State University**

8:10 – 8:15 AM  
Announcements

8:15 – 8:55 AM  
**Keynote 2: Eric J. L. McInnes, University of Manchester**  
*Pulsed EPR Studies of Actinides*

8:55 – 9:15 AM  
(C3) Alexey Silakov, The Pennsylvania State University  
*Understanding Functional Diversity of Fe/2OG Oxygenases*

9:15 – 9:30 AM  
(O1) Bibek Thapa, University of Puerto Rico, Río Piedras Campus  
*Magnetic Resonance (T₁- and T₂-Weighted) Dual Contrast Enhancement by Single Core Iron Oxide Nanoparticles*

9:30 – 9:45 AM  
(O2) Samuel M. Greer, NHMFL & Florida State University  
*Electron Paramagnetic Resonance Investigation of Bonding Between First Row Transition Metals*
9:45 – 10:00 AM  (O3) Robert V. Williams, University of Georgia
Resonance Assignment and Interdomain Orientation from Paramagnetic Effects in Robo1-Ig1-2

10:00 – 10:25 AM  Invited 1: Samuel C. Grant, NHMFL & Florida State University
High Resolution Non-Proton Imaging: Biomedical & Materials Applications

10:25 – 10:45 AM  Coffee Break

Session C - Diseases
Chair: Frederic Mentink-Vigier, NHMFL & Florida State University

10:45 – 11:10 AM  Invited 2: Kendra K. Frederick, UT Southwestern
Less is More: Segmental Isotopic Labeling for Biological DNP NMR

11:10 – 11:30 AM  (C4) Anant K. Paravastu, Georgia Institute of Technology
Solid-State NMR Structural Evaluations of Complementary Co-Assembling Designer Peptides

11:30 – 11:45 AM  (O4) David Hike, NHMFL & FSU-FAMU College of Engineering
DTI-Based Network Analysis of APP/PS1 Mouse Brains With Age & Sex

11:45 – 12:00 PM  (O5) Benjamen Nforneh, Emory University
Electron Spin-Labeling at Residue βC37 of the EutC Subunit in B12-Dependent Ethanolamine Ammonia-Lyase Reveals a Two-State Conformational Equilibrium & Low-Temperature Dynamics in the N-Terminal Domain

12:00 – 12:15 PM  (O6) Cristian A. Escobar, NHMFL & Florida State University
Conformation Plasticity of the N-Terminal Intrinsically Disordered Region Of ChiZ Membrane Protein

12:15 – 12:35 PM  (C5) Kwang Hun Lim, East Carolina University
Mechanistic Studies of Transthyretin Misfolding with a Combined Use of Solution and Solid-state NMR

12:35 – 1:45 PM  Lunch

Session D – Integrated Magnetic Resonance
Chair: Joanna Long, University of Florida

1:45 – 2:25 PM  Keynote 3: Song-I Han, University of California - Santa Barbara
Integrated Electron and Nuclear Magnetic Resonance to Advance DNP Studies
2:25 – 2:45 PM  (C6) Frederic Mentink-Vigier, NHMFL & Florida State University  
*One Step Closer Towards in Silico Biradical Design*

2:45 – 3:00 PM  (O7) Maciej Witwicki, Wroclaw University  
*Application of Experimental and Computational EPR Spectroscopy to Radical Systems*

3:00 – 3:15 PM  (O8) Thierry Dubroca, NHMFL & Florida State University  
*Overhauser Dynamic Nuclear Polarization in Liquids at 14.1 T*

3:15 – 3:30 PM  (O9) Zahra Hayati, NHMFL & Florida State University  
*Interaction of HIV gp41 with the Viral Membrane Studied by EPR*

3:30 – 3:55 PM  Invited 3: Alex A. Nevzorov, North Carolina State University  
*A Resonator Approach for Room-Temperature DNP*

3:55 – 4:15 PM  Coffee Break

**Session E – From Metals and Methods**  
**Chair: Hans van Tol, NHMFL & Florida State University**

4:15 – 4:40 PM  Invited 4: Jens Niklas, Argonne National Laboratory  
*Multi-Frequency EPR of Transition Metal Catalysts in Bio-Hybrid Systems for Hydrogen Production*

4:40 – 5:00 PM  (C7) Joshua Telser, Roosevelt University  
*Reinvestigation of Tetrahedral Cobalt(II) Diphosphine Complexes: What Really is the Zero-Field Splitting?*

5:00 – 5:15 PM  (O10) Joscha Nehrkorn, NHMFL & Florida State University  
*Direct Determination of Zero-Field Splitting of Co\textsuperscript{II} Single-Ion Magnets with Frequency-Domain EPR at Very High Frequencies*

5:15 – 5:30 PM  (O11) Bibhuti B. Das, Doty Scientific  
*The Utility of High-Power Pulsed Field Gradients in Solid State NMR*

5:30 – 5:45 PM  (O12) Randy K. Dumas, Quantum Design, Inc.  
*Broadband Ferromagnetic Resonance (FMR) Spectroscopy*

5:45 – 6:05 PM  (C8) Alex I. Smirnov, North Carolina State University  
*Photonic Band-Gap Resonators for High-Field EPR of Microliter-Volume Liquid Aqueous Samples*

6:05 – 8:00 PM  Poster Session

8:00 – 10:30 PM  Banquet Dinner
Sunday, October 29

Session F – Contrast
Chair: Jens Rosenberg, NHMFL & Florida State University

8:15 – 8:55 AM  Keynote 4: Elena Vinogradov, UT Southwestern
*Advanced Saturation Methods to Create Molecular and Microstructural Contrast in Human MRI*

8:55 – 9:15 AM  (C9) Clifford R. Bowers, University of Florida
*Parahydrogen Induced Polarization by Heterogeneous Catalysis*

9:15 – 9:30 AM  (O13) Alex Eletsky, University of Georgia
*PRE Restraints from DOSY NMR – Docking an Extended Ligand to a Glycoprotein*

9:30 – 9:45 AM  (O14) Jin Zheng, NHMFL & Florida State University
*Insight into Fast Ion Conductors from Solid-State NMR/MRI*

9:45 – 10:00 AM  (O15) Ghoncheh Amouzandeh, NHMFL & Florida State University
*Electrical Conductivity Mapping Using MRI at 21.1 T*

10:00 – 10:20 AM  (C10) Thomas H. Mareci, University of Florida
*Brain White Matter Fiber Configuration Analysis with Spherical Harmonic (CASH) Expansion of Diffusion Displacement Probability*

10:20 – 10:40 AM  Coffee Break

Session G – Enzymes and Catalysts
Chair: Likai Song, NHMFL & Florida State University

10:40 – 11:05 AM  Invited 5: Kurt Warncke, Emory University
*Contributions of Protein Configurations and Fluctuations, and Coupled Solvent Dynamics, to the Chemical Steps in B12-Dependent Ethanolamine Ammonia-Lyase*

11:05 – 11:25 AM  (C11) Tatyana I. Smirnova, North Carolina State University
*Electrostatics at Lipid Interfaces and Effect of Solid Support*

11:25 – 11:40 AM  (O16) Evan Wenbo Zhao, University of Florida
*Atomic Structure of Mesoporous Silica-Encapsulated Metal Nanoparticles Revealed by Dynamic Nuclear Polarization-Enhanced Silicon-29 NMR Spectroscopy*
11:40 – 11:55 AM  (O17) Morteza Jafarabadi, North Carolina State University
*AAO Nanopores Reveal Lipid-Induced Conformational Changes of Membrane Proteins by Oriented Sample Solid-State NMR*

11:55 – 12:20 PM  Invited 6: Leah B. Casabianca, Clemson University
*Examining Binding of Small Molecules to Nanoparticle Surfaces Using Saturation Transfer Difference NMR*

12:20 – 1:00 PM  Boxed Lunch and Adjournment

12:30 – 2:00 PM  Optional visit to the National High Magnetic Field Laboratory for those interested