EPR SYMPOSIUM ORAL SESSIONS AGENDA

SUNDAY, AUGUST 3, 2025

Pre-Conference Activities	
6:00 PM – 9:30 PM	**Bruker EPR Users' Meeting & Reception**

MONDAY, AUGUST 4, 2025

Imaging I		**Mrignayani Kotecha, Chair**
8:00 AM	100	**EPR Oxygen Imaging: Methodology, Instrumentation and Applications.** Boris Epel, University of Chicago
8:30 AM	101	**Advanced in EPR Imaging: Instrumentation, Algorithms and Applications.** Mark Tseytlin, West Virginia University
8:50 AM	102	**OxyTrack: a Novel Needle Sensor for *in situ* Oximetry.** Ryan O'Connell, Dartmouth College
9:10 AM	103	**EPR and Computational Study on the Radiation-induced Transformations in the Nuclear Fuel Cycle.** Ilya Sosulin, University of Notre Dame, Radiation Laboratory
9:30 AM		*Break*
Methods I		**Stephen Hill, Chair**
10:00 AM	104	**Continuous-flow Electron Spin Resonance Microfluidics Device with Sub-nanoliter Sample Volume.** Aharon Blank, Technion - Israel Institute of Technology
10:30 AM	105	**Time-resolved Distance Distributions after 450 nm Excitation of a Photoresponsive Protein Domain at Room Temperature in Solution.** Mark Sherwin, University of California at Santa Barbara
10:50 AM	106	**DEER Spectroscopy With Swept Observer Pulses.** Eric R. Lowe, University of Maryland, Baltimore County
11:10 AM	107	**High-Power 263 GHz Pulsed-EPR Spectrometer for the Elucidation of Transition Metals in Protein Systems.** Zikri Hasanbasri, University of California - Davis
11:30 AM		*Lunch (included with registration)*
Radical Pairs I		**Christoph Boehme, Chair**
1:00 PM	108	**Photoinduced Polarons on Donor and Acceptor Molecules for Organic Photovoltaics Studied by Multifrequency Pulse EPR.** Claudia Tait, University of Oxford
1:30 PM	109	**EPR Study of Charge Transfer Co-crystals Structure/Function Relationship.** Raanan Carmielli, Weizmann Institute of Science
1:50 PM	110	**Spin Dynamics of SCRPs in ZnO Quantum Dot – Organic Molecule Conjugates.** Mandefro Teferi, Argonne National Laboratory
2:10 PM	111	**Spin Dynamics in Singlet Fission Oligomers and Polymers with Tetracene Pendants.** Jens Niklas, Argonne National Laboratory
2:30 PM	112	**Organic Molecules as Spin-optical Interfaces: From Magnetic Sensing to Photoredox Catalysis.** Joel Yuen-Zhou, UC San Diego
3:00 PM		*Break*
Organic Spins		**Tatyana Smirnova, Chair**
3:30 PM	113	**Heisenberg and Dipolar Spin Exchange Among Paramagnetic Probes in a Percolation Network.** David E. Budil, Northeastern University
3:50 PM	114	**EPR Spectroscopy of Chiral Polyacetylene Thin Films.** Prashanna Poudel, University of Utah
4:10 PM	115	**Insights into Triplet Vinylidenes: Electronic Structure and Stability Using Imidazopyridine Scaffolds.** Sergius Boschmann, TU Dortmund University

4:30 PM	116	**Probing the Electrical Properties of Twisted Tetrathiafulvalene Thin-Films Using cwEPR.** Matthew Ross, New York University
5:30-7:00 PM	Conference Reception (included with registration)	
Posters		
7:00-9:00 PM	Authors Present for Posters Labeled A	

TUESDAY, AUGUST 5, 2025

Spin Relaxation		**Hans van Tol, Chair**
8:00 AM	**117**	**Electron Spin Relaxation and Pulse Turning Angles of Lanthanide Complexes.** Gareth R. Eaton, University of Denver
8:30 AM	**118**	**What Governs Spin Decoherence in Condensed Matter?** Toshikazu Nakamura, Institute for Molecular Science
8:50 AM	**119**	**EPR Characterization of Molten Salt Synthesized Erbium(III) Doped Yttria Nanoparticles.** William Bittner, University of Washington
9:10 AM	**120**	**Manipulation of Spins in Pulse EPR.** Michael K. Bowman, University of Alabama
9:30 AM		*Break*
Biomolecules		**Alexey Silakov, Chair**
10:00 AM	**121**	**Structure and Dynamics of Monoclonal Antibodies using Spins, Scattering, and Simulations.** Veronika A. Szalai, National Institute of Standards & Technology
10:30 AM	**122**	**Nanotemplate Approach to Stabilize Macroscopically Aligned Lipid Bilayers and Membranes Proteins under a Broad Range of Temperatures and Hydration Levels.** Alex I. Smirnov, North Carolina State University
10:50 AM	**123**	**Structural Identification of the Building Blocks of a Small Heterogenous Amyloid Oligomer by ESR.** Tufa E. Assafa, Cornell University
11:10 AM	**124**	**Tuning Sidechain Protonation at the Membrane Interface: Implications for T-Cell Receptor Assembly.** Tatyana I. Smirnova, North Carolina State University
11:30 AM		*Lunch (included with registration)*
Spin Labeling		**Peter Qin, Chair**
1:00 PM	**125**	**Development of EPR Technologies to Elucidate Signaling Selectivity in GPCRs.** Michael T. Lerch, Medical College of Wisconsin
1:30 PM	**126**	**In-cell Cu(II)-NTA Labeling for EPR Distance Measurements.** Hannah Hunter, University of Pittsburgh
1:50 PM	**127**	**Rigid Cu(II) Spin Label Sensitive to DNA Conformational Flexibility in Protein-DNA Complexes.** Shramana Palit, University of Pittsburgh
2:10 PM	**128**	**Photochemical and Mechanical Activation of Metal Oxide Additives Drives Radical Formation in Lubricating Oils: an EPR Spin-Trapping Study.** Julie Matheny, North Carolina State University
2:30 PM	**129**	**Flavoproteins as Native and Genetically Encoded Spin Probes for in Cell ESR Spectroscopy.** Timothée Chauviré, Cornell University
3:00 PM		*Break*
Metals		**Veronika Szalai, Chair**
3:30 PM	**130**	**EPR and FIRMS Characterization of the Magnetic Anisotropy in a Set of Metalorganic Mn^{III}[R-$sal_2$323]$^+$ Spin-Crossover Complexes.** Brittany Grimm, NHMFL
3:50 PM	**131**	**Electronic Wavefunction Delocalization Beyond the Metallic Core of Palladium Dodecanethiolate Nanoparticles: Revealed through Pulse ESR.** Kristen M. Aviles, Pennsylvania State University

4:10 PM	**132**	**Lessons from Preclinical EPR pO2 Oxygen Images.** Howard Halpern, University of Chicago
4:30 PM	**133**	**ACERT: A Service Resource for ESR Researchers.** Jack H. Freed, Cornell University
Posters		
7:00-9:00 PM		Authors Present for Posters Labeled B

WEDNESDAY, AUGUST 6, 2025

Color Centers	**Claudia Avalos, Chair**	
8:00 AM	**134**	**Shallow Donors in Hexagonal Silicon Carbide: A Qubit Candidate Investigated by Pulsed EPR and Pulsed ENDOR at High Field.** Johan van Tol, Florida State University
8:30 AM	**135**	**Optical Detection of Carbon-13 NMR in Diamond for Rotation Sensing.** Maxwell D. Aiello, University of New Mexico
8:50 AM	**136**	**Optically Detected Coherent Spin Control of Organic Molecular Color Center Qubits.** Sebastian M. Kopp, Northwestern University
9:10 AM	**137**	**Anisotropies of Electrically Detected Multiphoton EPR Transitions in the Nonperturbative Resonant Drive Regime.** Chanhyun Pak, University of Utah
9:30 AM		*Break*
Methods II		**Mark Sherwin, Chair**
10:00 AM	**138**	**Dielectric Resonator Optimization for EPR Spectroscopy and Solid-state MASERs.** Christopher W. M. Kay, Saarland University
10:30 AM	**139**	**A Free-electron-laser-powered Agile Pulsed Electron Spin Resonance (FEL AESR) Spectrometer.** Alex Giovannone, University of California, Santa Barbara
10:50 AM	**140**	**Multi-Extreme THz ESR: Past and Future.** Hitoshi Ohta, Kobe University
11:10 AM	**141**	**Non-Uniform Sampling for Pulsed Dipolar Electron Spin Resonance Spectroscopy.** Nimesh Srivastava, EZ Diagnostics Inc.
11:30 AM		*Lunch (included with registration)*
DEER/PELDOR		**Christopher Kay, Chair**
1:00 PM	**142**	**Following Conformational Changes in LbuCas13a from Apo to the Ternary Complex with PELDOR.** Olav Schiemann, University of Bonn
1:30 PM	**143**	**Breaking the Cycle: How Enzymes Control Oxygen Rebound for Versatile Biocatalysis.** Alexey Silakov, Pennsylvania State University
1:50 PM	**144**	**Complete Expressions for Accurate Simulations of Strong and Weak-Pulse DQC and DEER Experiments.** Aritro Sinha Roy, Cornell University
2:10 PM	**145**	**Q-band Double Quantum Coherence ESR for Sensitive Nitroxide-based Distance Measurements.** Alysia Mandato, University of Pittsburgh
2:30 PM	**146**	**Structural Integrity and Side-Chain Interaction at the Loop Region of the Bridge Helix Modulate Cas9 Substrate Discrimination.** Peter Z Qin, University of Southern California
3:00 PM		*Break*
Imaging II		**Mark Tseytlin, Chair**

3:30 PM	**147**	**50 Years of EPR Oximetry from Capillary to Clinic.** Periannan Kuppusamy, Dartmouth College
4:00 PM	**148**	**Tumor Tissue EPR Oxygen Imaging for Optimizing Interstitial Photodynamic Therapy.** Mrignayani Kotecha, O2M Technologies, LLC
4:20 PM	**149**	**L-band EPR Spectrometer and Resonators for Rapid Scan.** Tanden A. Hovey, University of Denver
4:40 PM	**150**	**Trityl OXO71 Distribution Following Intravenous Injection in Rhesus Macaques.** Christopher D. Kroenke, Oregon Health & Science University
7:00-9:00 PM	**Conference Banquet & Awards Ceremony**	
(Enjoy an evening of comradeship, fine food and recognition of peers. Pre-registration required.) - Speaker John McCracken		

THURSDAY, AUGUST 7, 2025

Hyperploarization		**Alex Smirnov, Chair**
8:00 AM	**151**	**Liquid-State DNP at 263 GHz: Advanced Instrumentation to Boost High-Resolution NMR Spectroscopy.** Igor Tkach, Max Planck Institute for Multidisciplinary Sciences
8:30 AM	**152**	**Pump-induced Dipolar Order to Evaluate Electron Spin Connectivity and Many-body Effects.** Joshua S. Straub, Northwestern University
8:50 AM	**153**	**Coherent Control Over Nuclear Hyperpolarization for Storage Using an Optically Initializable Chromophore-radical System.** Hoang Le, Northwestern University
9:10 AM	**154**	**Detecting the Effects of Chirality-Induced Spin Selectivity on Electron Donor–Acceptor Molecules.** Matthew D. Krzyaniak, Northwestern University
9:30 AM		*Break*
Radical Pairs II		**Claudia Tate, Chair**
10:00 AM	**155**	**Photogenerated Spin-Correlated Radical Pairs in Biological, Organic, and Organic-Inorganic Donor-Acceptor Systems.** Oleg G. Poluektov, Argonne National Laboratory
10:30 AM	**156**	**Observation of Multi-mode Spin-Rabi Oscillation of Strongly EPR Driven Polaron Pairs In a Pi-Conjugated Polymer.** Bonaventure A. Odeke, University of Utah
10:50 AM	**157**	**Quintet-to-Radical Spin Polarization Transfer in Pentacene–Radical Hybrid Polymers.** Jasleen Bindra, Argonne National Laboratory
11:10 AM	**158**	**Structural Contributions to Spin-Exchange Interactions and Spin Polarization in Pentacene-Radical Dyads.** Claudia E. Avalos, New York University