

1st International EPR-on-a- chip Workshop

March 2nd – March 4th 2020

– Program –

University of Stuttgart
Campus Vaihingen

EPR  C

Monday 02. March 2020

08:00	Registration
09:00	Klaus Lips, HZB <i>Introduction to BMBF EPRoC network</i>
09:30	EPR Hardware (Chairman: Bernhard Blümich.) 10 min Introduction
09:40	Jens Anders, University of Stuttgart <i>Magnetic Resonance To Go</i>
10:30	Dieter Suter, Universität Dortmund <i>Microresonators for EPR: basic principles and examples</i>
10:50	Coffee break
11:10	Graham Smith, University of St. Andrews <i>Deadtime free EPR</i>
11:30	Giovanni Boero, EPFL Single-chip detectors for EPR/NMR spectroscopy on nanoliter and subnanoliter samples
11 50	Panel Discussion Questions and Answers
12:30	Lunch
13:30	Jörg Wrachtrup, University of Stuttgart The fun of Spin
14:15	Magnets (Chairman: Rainer Pietig) 10 min Introduction
14:25	Bernhard Blümich, RWTH Aachen <i>From big to super small magnets</i>
15:05	Coffee break
15.20	Dimitris Sakellariou, KU Leuven <i>Shaping the Field of Permanent Magnets for Magnetic Resonance Applications</i>
15:40	Katja Höflich, HZB <i>Direct nanofabrication of magnets using focused electrons and ions</i>
16:00	Panel discussion Questions and Answers
16:45	Poster session
18:00	Dinner (self-organized)

Tuesday 03. March 2020

09:00	Applications I (Chairman: Klaus-Peter Dinse.) 10min Introduction
9:10	Alexander Schnegg, MPI-CEC <i>Dedicated EPR methods for catalysis research</i>
9:50	Peter Höfer (Bruker Bio Spin) <i>EPR as an analytical tool for industrial research and quality control</i>
10:10	Bruno Fink, Noxygen <i>EPR in medicine</i>
10:30	Coffee break
10:50	Aharon Blank, Technion <i>Clinical applications of miniaturized ESR technology</i>
11:10	Marcel Utz, University of Southampton <i>DNP on the microscale</i>
11:30	Michal Leskes (Weizman Institute) <i>Development and application of MAS-DNP approaches for probing battery materials</i>
11:50	Thomas Prisner, Universität Frankfurt <i>DNP at high fields</i>
12:10	Panel Discussion Questions and Answers
13:00	Lunch
14:00	Application II (Chairman: Peter Höfer) 10 min Introduction
14:10	Klaus Scheffler, MPI Tübingen <i>DNP-enhanced Magnetic Resonance Imaging</i>
14:50	Jakob Barz, Fraunhofer IGB <i>EPR in plasma applications</i>
15:10	Thoralf Niendorf (MDC) <i>In Vivo Electrolyte Mapping – How MRI and EPRoC Can Contribute?</i>
15:30	Yi-Qiao Song, Harvard University and Schlumberger <i>EPR in the oil industry</i>
15:50	Peter Radermacher, Universitätsklinik Ulm <i>EPR in the clinical and preclinical context</i>
16:10	Coffee break

16:30	Robert Bittl, FU Berlin <i>Pulsed EPRoC in solution: towards single cell spectroscopy</i>
16:50	Peter Fischer, Fraunhofer ICT <i>EPR on Vanadium Batteries</i>
17:10	Panel discussion Questions and Answers
18:00	Workshop Dinner at Stuttgart TV tower

Wednesday 04. March 2020

09:00	Application III (Chairman: Boris Naydenov) 10 min Introduction
9:10	Jan Korvink, KIT <i>Microsystems for EPR and DNP</i>
9:50	Thomas Risse, Freie Universität Berlin <i>EPR Spectroscopy of Heterogeneous Model Catalysts</i>
10:10	Angelika Brückner, LIKAT <i>Operando EPR – A Teamplayer in transition metal catalysis</i>
10:30	Pepe Vidal, CSIC <i>Radical Dendrimers: Biomedical applications and others.</i>
10:50	Coffee Break
11:20	Etienne Goovaerts, University of Antwerp <i>Pros and cons of EPR on a Chip for EDMR on semiconductor devices</i>
11:40	Björn Corzilius, University of Rostock <i>DNP in solids: Towards DNP-on-a-chip</i>
12:00	Stephan Appelt, FZ Jülich <i>The RASER, when spins enslave springs</i>
12:20	Final Discussion Round (Chairman: Klaus Lips)
12:50	Wrap-up (Chairman: Jens Anders.)
13:20	End of Workshop