

„Program Kryo 2014“

21.-23. September 2014

Hotel Müggelsee Berlin

Sunday 21.9.

- 14:00 – 19:00 Check-in & Registration
- 15:30 – 17:00 Tutorial 1
Novel biomedical diagnostic techniques using SQUIDs
- Dietmar Drung, PTB Berlin
SQUID basics
- Rainer Körber, Magnicon GmbH
Low-field NMR
- Frank Wiekhorst, PTB Berlin
Biomedical applications of magnetic nanoparticles
- 17:00 – 17:30 Coffee break
- 17:30 – 18:15 Tutorial 2
Alexander Kirste, PTB Berlin
Thermometry at low temperature
- 19:00 Dinner

Monday 22.9.

- 9:00 – 9:15 Thomas Schurig, PTB Berlin
Welcome

Session1: SQUID I

- 9:15 – 9:45 Maria Jose Martinez Perez, Universität Tübingen
YBCO and Nb nanoSQUIDs applied to the investigation of small spin systems
- 9:45 – 10:15 Alexander Guillaume, TU Braunschweig
Dipole sensitive, homogeneous-field compensated high-Tc dc SQUID
- 10:15 – 11:00 **Coffee break**

Session 2: SQUID II

- 11:00 – 11:30 Michael Schneider, Technische Universität Ilmenau
Comparison of inversion algorithms for dipole-like anomalies acquired by a SQUID gradiometer based magnetic geo-prospection system
- 11:30 – 12:00 Sebastian Kempf, Universität Heidelberg
Low-Tc current sensing SQUIDs for the readout of metallic magnetic calorimeters
- 12:00 – 14:00 **Lunch break**

Session 3: Superconducting resonators

- 14:00 – 14:30 Friedrich Wulchner, Walther Meißner Institut München
Tunable coupling between two superconducting Resonators
- 14:30 – 15:00 Daniel Bothner, Universität Tübingen
Developing coplanar microwave resonators for superconductor/cold atom hybrid devices
- 15:00 – 17:00 **Coffee break & poster session**

Session 4: Detectors

- 17:00 - 17:20 Ekkehart Schmidt, Karlsruher Institut für Technologie
NbN SNSPDs on GaAs for integrated photonic circuits
- 17:20 – 17:40 Artem Kuzmin , Karlsruher Institut für Technologie
Superconducting hot-electron microbolometer with microwave bias and readout
- 17:40 – 18:00 Stefan Wunsch, Karlsruher Institut für Technologie
Novel Detection Scheme for Cryogenic Bolometers with High Sensitivity and Scalability at 4.2 K
- 18:00 **Get together dinner**
- 20:00 **Meeting: Scientific Committee**

Tuesday 23.9.

Session 5: Junctions

- 9:15 – 9:45 Paul Seidel, Friedrich-Schiller Universität Jena
Josephson junctions with iron based superconductors
- 9:45 – 10:15 Fabian Rudau, Universität Tübingen
Coherent terahertz emission from $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8$ intrinsic Josephson junction stacks
- 10:15 – 10:45 **Coffee break**

Session 6: Other devices

- 10:45 – 11:10 Oliver Kieler, PTB Braunschweig
Josephson arbitrary waveform synthesizer towards output voltage of 1 V
- 11:10 – 11:35 Edward Goldobin, Universität Tübingen
Power rectification in a deterministic ratchet based on a ϕ Josephson junction
- 11:35 – 12:00 Gabriel Zieger, IPHT Jena
Development and optimization of radiation sensors for a passive terahertz video camera for security applications
- 12:00 – 12:10 Closing
- 12:10 – 13:15 Lunch break**
- 13:15 **Departure to PTB Campus Adlershof**
- 14:00 - 16:30 **Lab visit at PTB Metrology Light Source**