

Low Temperature Physics Division Fachverband Tiefe Temperaturen (TT)

Rudolf Gross
Walther-Meissner Institut
Bayerische Akademie der Wissenschaften
Walther-Meissner Str. 8
85748 Garching
Rudolf.Gross@wmi.badw-muenchen.de

Overview of Invited Talks and Sessions (lecture rooms H18, H19, H20, and H21; poster A and D1)

Symposia co-organized by TT:

SYEL Energy Landscapes: Statistical Physics of (Spin-)Glasses, Biomolecules, Clusters and Optimization Problems

Organisation: Michael Kastner (Stellenbosch), Andreas Heuer (Universität Münster), Martin Weigel (Universität Mainz), Alexander Hartmann (Universität Oldenburg).

Joint symposium of the divisions DY, CPP, DF, TT — see SYEL for the full program of the Symposium

SYEL 1.1	Mon	10:00–10:30	H1	Energy Landscapes of clusters, glasses, and biomolecules — ●DAVID WALES
SYEL 1.2	Mon	10:30–11:00	H1	Order parameters and energy landscapes for protein folding and misfolding — ●STEVEN PLOTKIN
SYEL 1.3	Mon	11:00–11:30	H1	Nuclear Spins Reveal the Microscopic Nature of Tunneling Systems in Glasses — ●CHRISTIAN ENSS
SYEL 1.4	Mon	11:30–12:00	H1	Energy landscapes and phase transitions — ●LAPO CASETTI
SYEL 1.5	Mon	12:00–12:30	H1	Phase transitions in spin glasses — ●PETER YOUNG
SYEL 1.6	Mon	12:30–13:00	H1	Statistical physics of inverse problems — ●RICCARDO ZECCHINA

SYGN Spin-Orbit Coupling and Spin Relaxation in Graphene and Carbon Nanotubes

Organization: Milena Grifoni (Universität Regensburg), Markus Morgenstern (RWTH Aachen), Jürgen Smet (MPI-FKF, Stuttgart).

Joint symposium of the divisions TT, MA, HL, DS, MM — see SYNG for the full program of the Symposium

SYGN 1.1	Mon	14:00–14:35	H1	Models for spin-orbit coupling in graphene — ●FRANCISCO GUINEA
SYGN 1.2	Mon	14:35–15:10	H1	Spin-orbit coupling and spin relaxation in carbon nanotube quantum dots — ●FERDINAND KUEMMETH
SYGN 1.3	Mon	15:10–15:45	H1	Spin-orbit interaction in carbon nanotubes probed in pulsed magnetic fields — ●SUNGHO JHANG
SYGN 1.4	Mon	16:00–16:35	H1	Wigner molecules and spin-orbit coupling in carbon-nanotube quantum dots — ●MASSIMO RONTANI
SYGN 1.5	Mon	16:35–17:10	H1	Spin relaxation and decoherence in graphene quantum dots — ●GUIDO BURKARD
SYGN 1.6	Mon	17:10–17:45	H1	Spin transport in graphene field effect transistors — ●BART VAN WEES

Focused Sessions:**TT 13 Topological Defects in Electronic Systems (Joint Session with MA)**

Organisation: Roderich Moessner (MPI-PKS Dresden)

TT 13.1	Tue	9:30–10:00	H20	Skyrmions in Chiral Magnets — ●ULRICH K. RÖSSLER
TT 13.2	Tue	10:00–10:30	H20	Dirac Strings and Magnetic Monopoles in the Spin Ice, $\text{Dy}_2\text{Ti}_2\text{O}_7$ — ●DAVID JONATHAN PRYCE MORRIS
TT 13.3	Tue	10:30–11:00	H20	Manifestations of monopole physics in spin ice materials — ●CLAUDIO CASTELNOVO
TT 13.4	Tue	11:00–11:30	H20	Skyrmion Lattices in Pure Metals and Strongly Doped Semiconductors — ●CHRISTIAN PFLEIDERER
TT 13.5	Tue	11:45–12:15	H20	Skyrmion lattice in MnSi — ●ACHIM ROSCH
TT 13.6	Tue	12:15–12:45	H20	Topological Insulators in Applied Fields: Magnetoelectric Effects and Exciton Condensation — ●JOEL MOORE
TT 13.7	Tue	12:45–13:15	H20	Probing non-Abelian statistics with quasiparticle interferometry — ●KIRILL SHTENGEL
TT 13.8	Tue	13:15–13:45	H20	Spin Hall effects in HgTe Quantum Well Structures — ●LAURENS W. MOLENKAMP

TT 21 Quantum Criticality in Strongly Correlated Metals

Organisation: Frank Steglich (MPI-CPIs, Dresden)

TT 21.1	Wed	9:30–10:10	H20	Quantum Criticality, Kondo Breakdown, and Fermi Surfaces — ●QIMIAO SI
TT 21.2	Wed	10:10–10:50	H20	Tuning magnetic quantum phase transitions — ●HILBERT V. LÖHNEYSSEN
TT 21.3	Wed	10:50–11:30	H20	Orbital-selective Mott transitions: Heavy Fermions and beyond — ●MATTHIAS VOJTA
TT 21.4	Wed	11:40–12:20	H20	Interaction of the magnetic instability and the Fermi surface reconstruction in YbRh_2Si_2 — ●SVEN FRIEDEMANN
TT 21.5	Wed	12:20–13:00	H20	Novel electronic states near discontinuous quantum phase transitions — ●PHILIPP GEGENWART

TT 25 Iron-Based Superconductors

Organisation: Rüdiger Klingeler (IFW Dresden), Carsten Honerkamp (Universität Würzburg)

TT 25.1	Wed	14:00–14:30	H20	Fermiology of Fe-Pnictide Superconductors Revealed by Quantum Oscillations — ●JAMES ANALYTIS
TT 25.2	Wed	14:30–15:00	H20	Magnetic degeneracy and hidden metallicity of the spin density wave state in Fe-based superconductors — ●ILYA EREMIN
TT 25.3	Wed	15:00–15:30	H20	Muon spin relaxation and Moessbauer studies of iron pnictide superconductors — ●HANS-HENNING KLAUSS
TT 25.4	Wed	15:45–16:15	H20	Interplay among lattice, orbital and spin degrees of freedom in iron pnictides — ●ROSER VALENTI
TT 25.5	Wed	16:15–16:45	H20	Lattice dynamics and magnetism in layered iron based superconductors — ●THOMAS BRÜCKEL
TT 25.6	Wed	17:00–17:15	H20	ARPES studies on FeAs-based superconductors and their parent compounds — ●JÖRG FINK
TT 25.7	Wed	17:15–17:30	H20	Energy and temperature dependence of spin fluctuations in electron-doped iron arsenide superconductors — ●DMYTRO INOSOV
TT 25.8	Wed	17:30–17:45	H20	Doping evolution of the electronic density of states and the gap symmetry in Co-doped 122 iron pnictides — ●FRÉDÉRIC HARDY
TT 25.9	Wed	17:45–18:00	H20	Mössbauer high pressure and magnetic field studies of the superconductor FeSe — ●CLAUDIA FELSER

TT 28 Time-Resolved Spectroscopy in Correlated Electron Systems: Experiment and Theory

Organisation: Marcus Kollar (Universität Augsburg), Dirk Manske (MPI-FKF, Stuttgart), Martin Wolf (FHI Berlin)

TT 28.1	Thu	9:30–10:00	H18	Angle- and time-resolved photoelectron spectroscopy of charge density wave materials — ●UWE BOVENSIEPEN
TT 28.2	Thu	10:00–10:30	H18	Many Body Theory for Time-Resolved Pump/Probe Photoemission and its Solution via Nonequilibrium Dynamical Mean-Field Theory — ●JAMES FREERICKS
TT 28.3	Thu	10:30–10:45	H18	Electron-phonon interaction in 122-iron pnictides investigated by femtosecond time-resolved ARPES. — ●ROCÍO CORTÉS
TT 28.4	Thu	10:45–11:15	H18	Time resolved photoemission and THz spectroscopy of high temperature superconductors — ●LUCA PERFETTI
TT 28.5	Thu	11:30–12:00	H18	Relaxation of strongly correlated electron systems: Insights from nonequilibrium dynamical mean-field theory — ●MARTIN ECKSTEIN
TT 28.6	Thu	12:00–12:15	H18	Quantum interference between photo-excited states in a solid-state Mott insulator — ●SIMON WALL
TT 28.7	Thu	12:15–12:45	H18	Two-Component Dynamics of the Order Parameter of High Temperature $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ Superconductors Revealed by Time-Resolved Raman Scattering — ●MICHAEL ALEXANDER RÜBHAUSEN
TT 28.8	Thu	12:45–13:00	H18	Ultrafast non-equilibrium dynamics in conventional and unconventional superconductors — ●ANDREAS SCHNYDER

Further Invited Talks:

TT 5.1	Mon	14:00–14:30	H18	Field-Induced Berezinskii-Kosterlitz-Thouless Transition in a 2d Spin-Dimer System — ●MICHAEL LANG
TT 7.8	Mon	16:00–16:30	H20	Polar Kerr Effect of Unconventional Superconductors — ●AHARON KAPITULNIK
TT 15.4	Tue	14:45–15:15	H18	Superconductivity vs. Superinsulation in TiN Thin Films — ●CHRISTOPH STRUNK
TT 17.6	Tue	15:30–16:00	H20	Nature of Pairing in the FeAs Superconductors — ●SIEGFRIED GRASER
TT 19.8	Wed	11:15–11:45	H18	Spectroscopy on Strongly Correlated Electron Materials — ●LIU HAO TJENG
TT 23.4	Wed	14:45–15:15	H18	Superconducting Flux Qubits in Circuit QED and Detection of Weak Microwave Signals — ●ACHIM MARX
TT 24.6	Wed	15:30–16:00	H19	Fermi Surface Evolution in an Electron-Doped Cuprate Superconductor Revealed by High-Field Magnetotransport — ●MARK KARTSOVNIK
TT 32.4	Thu	14:45–15:15	H18	Dispersion of the Excitations of Fractional Quantum Hall States — ●JURGEN SMET
TT 40.1	Fri	10:15–10:45	H20	Heating, Heat Conduction and Cooling in Molecular Junctions — ●ABRAHAM NITZAN
TT 38.4	Fri	11:00–11:30	H18	Neutron Scattering Studies of Spin-Ladders — ●BELLA LAKE

Sessions:CE: Correlated Electrons
SC: SuperconductivityFS: Focused Session
TR: TransportNE: Nanoelectronics
MLT: Matter at Low Temperature

TT 1.1–1.10	Mon	10:15–13:00	H18	TR: Graphene 1
TT 2.1–2.8	Mon	10:15–12:30	H19	SC: Applications and Measuring Devices
TT 3.1–3.6	Mon	10:15–11:45	H20	TR: Fluctuations and Noise
TT 4.1–4.9	Mon	10:15–12:45	H21	CE: Quantum Impurities, Kondo Physics
TT 5.1–5.12	Mon	14:00–17:30	H18	CE: Low-dimensional Systems - Materials 1
TT 6.1–6.16	Mon	14:00–18:15	H19	TR: Nanoelectronics II: Spintronics and Magnetotransport
TT 7.1–7.14	Mon	14:00–18:00	H20	SC: Heterostructures, Andreev Scattering, Proximity Effect, Coexistence
TT 8.1–8.14	Mon	14:00–17:45	H21	CE: (General) Theory
TT 9.1–9.60	Mon	14:00–18:00	Poster A	SC: Poster Session
TT 10.1–10.7	Mon	14:00–18:00	Poster A	Measuring Devices, Cryotechnique: Poster Session
TT 11.1–11.12	Tue	9:30–12:45	H18	CE: Low-dimensional Systems - Materials 2
TT 12.1–12.13	Tue	9:30–13:00	H19	CE: Metal-Insulator Transition 1
TT 13.1–13.8	Tue	9:30–13:45	H20	FS: Topological Defects in Electronic Systems
TT 14.1–14.12	Tue	9:30–12:45	H21	TR: Graphene 2
TT 15.1–15.8	Tue	14:00–16:15	H18	MLT: Quantum Liquids, Bose-Einstein Condensates, Ultra-cold Atoms, ... 1
TT 16.1–16.9	Tue	14:00–16:15	H19	CE: Quantum-Critical Phenomena 1
TT 17.1–17.7	Tue	14:00–16:15	H20	SC: Iron-Based Superconductors - Theoretical Approaches
TT 18.1–18.8	Tue	14:00–16:15	H21	TR: Quantum Coherence and Quantum Information Systems 1
TT 19.1–19.12	Wed	9:30–13:00	H18	CE: Metal-Insulator Transition 2
TT 20.1–20.13	Wed	9:30–13:00	H19	SC: Fabrication and Characterization of Iron-Based and Other Superconductors
TT 21.1–21.5	Wed	9:30–13:00	H20	FS: Quantum Criticality in Strongly Correlated Metals
TT 22.1–22.14	Wed	9:30–13:15	H21	CE: Spin Systems and Itinerant Magnets
TT 23.1–23.10	Wed	14:00–17:00	H18	TR: Quantum Coherence and Quantum Information Systems 2
TT 24.1–24.16	Wed	14:00–18:45	H19	SC: Properties, Electronic Structure, Mechanisms
TT 25.1–25.9	Wed	14:00–18:00	H20	FS: Iron-Based Superconductors
TT 26.1–26.17	Wed	14:00–18:45	H21	CE: Heavy Fermions
TT 27.1–27.84	Wed	14:00–18:00	Poster D1	CE: Poster Session
TT 28.1–28.8	Thu	9:30–13:00	H18	FS: Time-Resolved Spectroscopy in Correlated Electron Systems: Experiment and Theory
TT 29.1–29.13	Thu	9:30–13:00	H19	TR: Nanoelectronics I: Quantum Dots, Wires, Point Contacts 1
TT 30.1–30.13	Thu	9:30–13:00	H20	CE: Low-dimensional Systems - Models 1
TT 31.1–31.13	Thu	9:30–13:00	H21	SC: Tunnelling, Josephson Junctions
TT 32.1–32.14	Thu	14:00–18:00	H18	MLT: Quantum Liquids, Bose-Einstein Condensates, Ultra-cold Atoms, ... 2
TT 33.1–33.15	Thu	14:00–18:00	H19	TR: Nanoelectronics I: Quantum Dots, Wires, Point Contacts 2
TT 34.1–34.13	Thu	14:00–17:30	H20	SC: Iron-Based Superconductors - 122
TT 35.1–35.14	Thu	14:00–17:45	H21	TR: Nanoelectronics III: Molecular Electronics 1
TT 36.1–36.34	Thu	14:00–18:00	Poster A	TR: Poster Session
TT 37.1–37.31	Thu	14:00–18:00	Poster A	MLT: Poster Session
TT 38.1–38.8	Fri	10:15–12:45	H18	CE: Quantum-Critical Phenomena 2
TT 39.1–39.9	Fri	10:15–12:45	H19	SC: Iron-Based Superconductors - 1111
TT 40.1–40.9	Fri	10:15–13:45	H20	TR: Nanoelectronics III: Molecular Electronics 2
TT 41.1–41.8	Fri	10:15–12:30	H21	CE: Low-dimensional Systems - Models 2

Annual General Meeting of the Low Temperature Physics Division

Thursday 18:30-20:00 H19