

Low Temperature Physics Division Fachverband Tiefe Temperaturen (TT)

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Overview of Invited Talks and Sessions

(Lecture Rooms H2, H6, H9, H17, H18, H19, H20, H21, H24, and H41; Poster D)

Invited and Topical Talks except for Focused Sessions

TT 17.7	Mon	16:45–17:15	H19	Magnetic Frustration in a Quantum Spin Chain: The Case of Linarite $\text{PbCuSO}_4(\text{OH})_2$ — ●ANJA U.B. WOLTER
TT 25.7	Tue	11:15–11:45	H9	One-dimensional fermion systems beyond the Luttinger Liquid paradigm — ●THOMAS L. SCHMIDT
TT 27.1	Tue	9:30–10:00	H18	Hydrostatic-Pressure Tuning of Magnetic, Nonmagnetic and Superconducting States in Annealed $\text{Ca}(\text{Fe}_{1-x}\text{Co}_x)_2\text{As}_2$ — ●ELENA GATI
TT 29.5	Tue	10:30–11:00	H20	Nano-Conductors as Measurement Devices and Driving Sources — ●SIGMUND KOHLER
TT 42.8	Wed	17:00–17:30	H18	Orbitronics in Silicon — ●GABRIEL AEPPLI
TT 48.1	Wed	16:45–17:15	H19	Transport as a sensitive indicator for quantum criticality — ●GERNOT SCHALLER
TT 59.7	Thu	16:45–17:15	H6	Electron Spin Resonance (ESR) close to a Quantum Phase Transition: Probing YbRh_2Si_2 at mK Temperatures — ●MARC SCHEFFLER
TT 61.1	Thu	15:00–15:30	H18	Correlation Effects in Quantum Spin Hall Insulators — ●MARTIN HOHENADLER
TT 62.5	Thu	16:00–16:30	H19	Condensation Energy of CeCu_2Si_2 and Theoretical Implications — ●STEFAN KIRCHNER

Tutorial “Topological Insulators and Majorana-Fermion Physics”

TT 1.1	Sun	16:00–16:45	H20	Topological Insulators and Superconductors — ●ANDREAS SCHNYDER
TT 1.2	Sun	16:50–17:35	H20	Proximity Induced Superconductivity in Topological Insulators — ●HARTMUT BUHMANN
TT 1.3	Sun	17:40–18:25	H20	Majorana Fermions in Hybrid Nanosystems — ●MICHAEL WIMMER

Invited and Topical Talks of the Focused Session “Correlations in Topological Bands”

TT 18.1	Mon	15:00–15:30	H20	Designer Dirac Fermions, Topological Phases, and Gauge Fields in Molecular Graphene — ●HARI C. MANOHARAN
TT 18.2	Mon	15:30–16:00	H20	Fractional Topological Insulators — ●CLAUDIO CHAMON
TT 18.3	Mon	16:00–16:30	H20	Hierarchy of Fractional Chern Insulators and Competing Compressible States — ●ANDREAS LÄUCHLI
TT 18.4	Mon	16:45–17:15	H20	Designing Topological Bands for Ultracold Atomic Gases — ●NIGEL COOPER
TT 18.5	Mon	17:15–17:45	H20	Probing Topological Bloch Bands Using Ultracold Quantum Gases — ●IMMANUEL BLOCH

Invited and Topical Talks of the Focused Session “Majorana Fermions in Condensed Matter”

TT 44.1	Wed	15:00–15:30	H20	Subgap States in Majorana Wires — ●PIET BROUWER
TT 44.2	Wed	15:30–16:00	H20	New Measurements on Nanowire Majorana Systems — ●CHARLES MARCUS
TT 44.3	Wed	16:00–16:30	H20	Adaptive Tuning of Majorana Fermions in a Quantum Dot Chain — ●ANTON AKHMEROV
TT 44.4	Wed	16:45–17:15	H20	Majorana Fermions in Disordered Quantum Wires — ●ALEXANDER ALT-LAND
TT 44.5	Wed	17:15–17:45	H20	Parity Effects and Crossed Andreev Noise in Transport through Majorana Wires — ●BERND ROSENOW

Invited and Topical Talks of the Focused Session “Magnetism and Superconductivity in Fe-based Pnictides and Chalcogenides”

TT 54.1	Thu	9:30–10:00	H20	Fermiology and Order Parameter of Iron-based Superconductors from ARPES — ●SERGEY BORISENKO
TT 54.2	Thu	10:00–10:30	H20	Electron Correlations in Solids from the Dynamical Mean Field Perspective and the Origin Anomalous State of Matter in Iron Chalcogenides — ●KRISTJAN HAULE
TT 54.3	Thu	10:30–11:00	H20	A Light Scattering Study of the Evolution of Pairing in Fe-based Superconductors — ●RUDI HACKL
TT 54.4	Thu	11:15–11:45	H20	Theory of Magnetism and Superconductivity for Iron-Chalcogenides — ●JIANGPING HU
TT 54.5	Thu	11:45–12:15	H20	Charge Dynamics in 122 Iron Pnictides — ●ALIAKSEI CHARNUKHA

Invited and Topical Talks of the Focused Session “Dynamical Mean-Field Approach to Correlated Electron Materials”

TT 63.1	Thu	15:00–15:30	H20	How Bad Metals Turn Good: Spectroscopic Signatures of Resilient Quasiparticles — ●ANTOINE GEORGES
TT 63.2	Thu	15:30–16:00	H20	Correlation Effects in Organic Superconductors — ●ROSER VALENTI
TT 63.3	Thu	16:00–16:30	H20	Photoemission Study of Correlated Oxides at High Temperatures — ●HAO TJENG
TT 63.4	Thu	16:45–17:15	H20	Dynamical Mean Field Theory of Collective Excitations — ●ALEXANDER LICHTENSTEIN
TT 63.5	Thu	17:15–17:45	H20	Electronic Correlations beyond Dynamical Mean Field Theory — ●KARSTEN HELD

Invited Talks of the Joint Symposium SYSC

(jointly organized by DY, HL, MA, TT; coordination: TT)

SYSC 1.1	Tue	9:30–10:00	H1	Exploring the Physics of Superconducting Qubits Strongly Coupled to Microwave Frequency Photons — ●ANDREAS WALLRAFF
SYSC 1.2	Tue	10:00–10:30	H1	Hybrid Quantum Circuit with a Superconducting Qubit Coupled to an Electron Spin Ensemble — ●YUIMARU KUBO
SYSC 1.3	Tue	10:30–11:00	H1	Hybrid Quantum Systems with Rare-Earth Ion Spin Ensemble — ●PAVEL BUSHEV
SYSC 1.4	Tue	11:00–11:30	H1	Quantum Coherent Coupling between a Mechanical Oscillator and an Optical Mode — ●TOBIAS KIPPENBERG
SYSC 1.5	Tue	11:30–12:00	H1	Exploring Quantum Light-Matter Interactions of Quantum Dots in Photonic Crystal Nanostructures — ●JONATHAN FINLEY

Invited Talks of the Joint Symposium SYTS

(jointly organized by DF, DS, HL, MA, MI, MM, TT; coordination: DF)

SYTS 1.1	Wed	9:30–10:00	H1	Transport in Old and New Thermoelectric Materials — ●DAVID SINGH
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SYTS 1.2	Wed	10:00–10:30	H1	Binary oxide structures as model systems for thermoelectric transport — ●PETER J. KLAR
SYTS 1.3	Wed	10:30–11:00	H1	Functional oxides films: from single crystals to polycrystalline substrates — ●WILFRID PRELLIER
SYTS 1.4	Wed	11:00–11:30	H1	The Planar Nernst Effect and the Search for Thermal Spin Currents in Ferromagnetic Metals — ●BARRY ZINK
SYTS 1.5	Wed	11:30–12:00	H1	Tunneling magneto thermopower in magnetic tunnel junction nanopillars — ●HANS WERNER SCHUMACHER

Invited Talks of the Joint Symposium SYQP

(jointly organized by HL, O, TT; coordination: HL)

SYQP 1.1	Wed	15:00–15:30	H1	Quantum plasmonics and applications in light harvesting — ●PETER NORDLANDER
SYQP 1.2	Wed	15:30–16:00	H1	Deterministic quantum plasmonics with single nanodiamonds — ●SERGE HUANT
SYQP 1.3	Wed	16:00–16:30	H1	Optically-active hybrid nanostructures: Exciton-plasmon interaction, Fano effect, and plasmonic chirality — ●ALEXANDER GOVOROV
SYQP 1.4	Wed	17:00–17:30	H1	Quantum nano-optics: Interaction of metallic nano-particles with quantum emitters — ●SALVATORE SAVASTA
SYQP 1.5	Wed	17:30–18:00	H1	Non-dipolar & magnetic interactions with optical antennas — ●NIEK VAN HULST

Invited Talks of the Joint Symposium SYES

(jointly organized by O, DS, HL, MA, MM, TT; coordination: O)

SYES 1.1	Fri	9:30–10:00	H1	Molecular dynamics simulation of nucleation and growth of crystals from solution — ●MICHELE PARRINELLO
SYES 1.2	Fri	10:00–10:30	H1	Describing, understanding, and discovering hybrid materials from first principles — ●CLAUDIA DRAXL
SYES 1.3	Fri	10:30–11:00	H1	Mapping the Electronic Structure Landscape for Materials Discovery — ●KRISHNA RAJAN
SYES 1.4	Fri	11:00–11:30	H1	New ferroelectrics and antiferroelectrics by design — ●KARIN RABE
SYES 1.5	Fri	11:30–12:00	H1	The Materials Project: The design of materials using high-throughput ab initio computations — ●GERBRAND CEDER

Sessions

TT 1.1–1.3	Sun	16:00–18:25	H20	Tutorial: Topological Insulators and Majorana-Fermion Physics
TT 2.1–2.10	Mon	9:30–12:00	H3	Multiferroics 1 (jointly with DF, DS, KR, and MA)
TT 3.1–3.13	Mon	9:30–13:00	H9	Correlated Electrons: Low-Dimensional Systems - Models 1
TT 4.1–4.4	Mon	9:30–10:45	H10	Topological Insulators 1 (jointly with DS, HL, MA, and O)
TT 5.1–5.7	Mon	9:30–11:15	H17	Graphene - Magnetic Fields (jointly with DS, HL, MA, O)
TT 6.1–6.13	Mon	9:30–13:00	H18	Superconductivity: Tunnelling & Josephson Junctions
TT 7.1–7.13	Mon	9:30–13:00	H19	Correlated Electrons: Spin Systems, Itinerant Magnets 1
TT 8.1–8.13	Mon	9:30–13:00	H20	Transport: Quantum Dots, Wires, Point Contacts 1 (jointly with HL and O)
TT 9.1–9.13	Mon	9:30–13:00	H21	Quantum Liquids, Miscellaneous 1
TT 10.1–10.10	Mon	10:30–13:15	H36	Focused Session: Frontiers of Electronic Structure Theory 1 (jointly with HL and O)
TT 11.1–11.9	Mon	11:30–13:45	H17	Graphene -Spin-Orbit Interaction (jointly with DS,HL,MA,O)
TT 12.1–12.57	Mon	15:00–19:00	Poster D	Poster Session Superconductivity
TT 13.1–13.13	Mon	15:00–18:30	H3	Multiferroics 2 (jointly with DF, DS, KR, and MA)
TT 14.1–14.13	Mon	15:00–18:30	H9	Correlated Electrons: Low-Dimensional Systems - Models 2
TT 15.1–15.10	Mon	15:00–18:00	H10	Topological Insulators 2 (jointly with DS, HL, O, and MA)
TT 16.1–16.9	Mon	15:00–17:30	H18	Transport: Quantum Dots, Wires, Point Contacts 2 (jointly with HL)

TT 17.1–17.9	Mon	15:00–17:45	H19	Correlated Electrons: Spin Systems, Itinerant Magnets 2
TT 18.1–18.5	Mon	15:00–17:45	H20	Focused Session: Correlations in Topological Bands (jointly with DS, HL, MA, and O)
TT 19.1–19.6	Mon	15:00–16:30	H21	Quantum Liquids, Miscellaneous 2
TT 20.1–20.14	Mon	15:00–18:45	H22	Transport: Spincaloric Transport (jointly with MA)
TT 21.1–21.12	Mon	16:00–19:00	H17	Graphene - Electronic Properties and Transport 1 (jointly with DS, HL, MA, and O)
TT 22.1–22.13	Mon	16:00–19:15	H36	Focused Session: Frontiers of Electronic Structure Theory 2 (jointly with HL and O)
TT 23.1–23.4	Mon	16:45–17:45	H21	Superconductivity: Fe-based Superconductors - 1111
TT 24.1–24.5	Tue	9:30–12:15	H2	Focused Session: Dirac Fermions in Solid-State Systems (jointly with HL)
TT 25.1–25.13	Tue	9:30–13:15	H9	Correlated Electrons: Low-Dimensional Systems - Models 3
TT 26.1–26.12	Tue	9:30–12:45	H17	Graphene - Electronic Properties and Transport 2 (jointly with DS, HL, MA, and O)
TT 27.1–27.13	Tue	9:30–13:15	H18	Superconductivity: Fe-based Superconductors - 122
TT 28.1–28.12	Tue	9:30–12:45	H19	Correlated Electrons: Spin Systems, Itinerant Magnets 3
TT 29.1–29.10	Tue	9:30–12:30	H20	Transport: Quantum Dots, Wires, Point Contacts 3 (jointly with HL)
TT 30.1–30.13	Tue	9:30–13:00	H21	Correlated Electrons: Quantum Impurities, Kondo Physics
TT 31.1–31.10	Tue	9:30–12:15	H41	Correlated Electrons: Low-Dimensional Systems -Materials 1
TT 32.1–32.10	Tue	10:30–13:15	H36	Focused Session: Frontiers of Electronic Structure Theory 3 (jointly with HL and O)
TT 33.1–33.14	Wed	9:15–13:00	H16	Topological Insulators 3 (jointly with HL, MA, and O)
TT 34.1–34.12	Wed	9:30–12:45	H2	Transport: Molecular Electronics (jointly with CPP, HL, MA)
TT 35.1–35.13	Wed	9:30–13:00	H17	Graphene - Characterization and Devices (jointly with DS, HL, MA, and O)
TT 36.1–36.13	Wed	9:30–13:00	H18	Superconductivity: Fe-based Superconductors - Fe(Se,Te), LiFeAs, and other Materials
TT 37.1–37.14	Wed	9:30–13:15	H19	Quantum Coherence, Quantum Information Systems 1
TT 38.1–38.14	Wed	9:30–13:15	H20	Correlated Electrons: Metal-Insulator Transition 1
TT 39.1–39.11	Wed	10:30–13:30	H36	Focused Session: Frontiers of Electronic Structure Theory 4 (jointly with HL and O)
TT 40.1–40.89	Wed	15:00–19:00	Poster D	Poster Session Correlated Electrons
TT 41.1–41.14	Wed	15:00–18:45	H2	Spintronics / Quantum Information: Materials and Methods (jointly with HL)
TT 42.1–42.14	Wed	15:00–19:15	H18	Quantum Coherence, Quantum Information Systems 2
TT 43.1–43.6	Wed	15:00–16:30	H19	Correlated Electrons: Metal-Insulator Transition 2
TT 44.1–44.6	Wed	15:00–18:00	H20	Focused Session: Majorana Fermions in Condensed Matter (jointly with DS, HL, MA, and O)
TT 45.1–45.7	Wed	15:00–16:45	H21	Superconductivity: (General) Theory
TT 46.1–46.13	Wed	16:00–19:15	H17	Graphene - SiC Substrates and Intercalation (jointly with DS, HL, MA, and O)
TT 47.1–47.13	Wed	16:00–19:30	H36	Focused Session: Frontiers of Electronic Structure Theory 5 (jointly with HL and O)
TT 48.1–48.7	Wed	16:45–18:45	H19	Correlated Electrons: Quantum-Critical Phenomena - Theory
TT 49.1–49.8	Wed	17:00–19:00	H21	Superconductivity: SQUIDS & Cryodetectors
TT 50.1–50.10	Thu	9:30–12:15	H2	Exciton Polaritons and their Condensates (jointly with HL)
TT 51.1–51.11	Thu	9:30–12:30	H6	Correlated Electrons: General Theory 1
TT 52.1–52.13	Thu	9:30–13:00	H18	Transport: Spintronics, Magnetotransport 1 (jointly with HL and MA)
TT 53.1–53.13	Thu	9:30–13:00	H19	Correlated Electrons: Heavy Fermions
TT 54.1–54.7	Thu	9:30–12:45	H20	Focused Session: Magnetism & Superconductivity in Fe-based Pnictides and Chalcogenides (jointly with MA)
TT 55.1–55.13	Thu	9:30–13:00	H21	Correlated Electrons: Low-Dimensional Systems -Materials 2
TT 56.1–56.11	Thu	10:30–13:15	H17	Graphene - Preparation and Characterization 1 (jointly with DS, HL, MA, and O)
TT 57.1–57.10	Thu	10:30–13:15	H36	Focused Session: Frontiers of Electronic Structure Theory 6 (jointly with HL and O)
TT 58.1–58.51	Thu	15:00–19:00	Poster D	Poster Session Transport & Matter at Low Temperature

TT 59.1–59.12	Thu	15:00–18:30	H6	Correlated Electrons: Quantum-Critical Phenomena - Experiments
TT 60.1–60.9	Thu	15:00–17:30	H17	Graphene - Theory (jointly with DS, HL, MA, and O)
TT 61.1–61.10	Thu	15:00–18:00	H18	Topological Insulators 4 (jointly with DS, HL, MA, and O)
TT 62.1–62.11	Thu	15:00–18:15	H19	Superconductivity: Properties, Electronic Structure, Order Parameter
TT 63.1–63.5	Thu	15:00–17:45	H20	Focused Session: Dynamical Mean-Field Approach to Correlated Electron Materials (jointly with MA)
TT 64.1–64.12	Thu	15:00–18:15	H21	Superconductivity: Heterostructures, Andreev Scattering, Vortex Physics
TT 65.1–65.12	Thu	16:00–19:00	H36	Focused Session: Frontiers of Electronic Structure Theory 7 (jointly with HL and O)
TT 66.1–66.12	Fri	9:30–12:45	H14	Spintronics / Quantum Information: Vacancies in Diamond and SiC (jointly with HL)
TT 67.1–67.13	Fri	9:30–13:00	H18	Topological Insulators 5 (jointly with DS, HL, MA, and O)
TT 68.1–68.4	Fri	9:30–10:30	H20	Transport: Spintronics, Magnetotransport 2 (jointly with HL and MA)
TT 69.1–69.10	Fri	9:30–12:15	H21	Superconductivity: Fe-based Superconductors - Theory
TT 70.1–70.6	Fri	9:30–11:00	H24	Correlated Electrons: General Theory 2
TT 71.1–71.10	Fri	10:30–13:00	H17	Graphene - Preparation and Characterization 2 (jointly with DS, HL, MA, and O)
TT 72.1–72.4	Fri	10:45–11:45	H20	Nanomechanics (jointly with BP, DF, and DY)
TT 73.1–73.3	Fri	11:45–12:30	H20	Fluctuations and Noise

Annual General Meeting of the Low Temperature Physics Division

Thu 18:30 H19