Low Temperature Physics Division
Fachverband Tiefe Temperaturen (TT)

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Overview of Invited Talks and Sessions

(Lecture rooms: HSZ 01, HSZ 03, HSZ 201, HSZ 204, HSZ 304, BEY 81 and WIL C107; Posters: P2)

Invited and Topical Talks except for Focus Sessions

TT 7.8	Mon	11:30–12:00	HSZ 03	**Probing Decoherence in Atomic-Sized Defects Using a Superconducting Qubit** — •Jürgen Lisenfeld
TT 34.1	Tue	11:15–11:45	HSZ 201	**Giant Thermopower in the Emerging Field of Super-Spintronics** — •Matthias Eschrig
TT 37.1	Tue	9:30–10:00	HSZ 304	**Superfluidity and Collective Pairing in Polariton Microcavities** — •Francesca Maria Marchetti
TT 37.10	Tue	12:15–12:45	HSZ 304	**Mesoscopic Transport of Heat in Trapped-Ion Crystals** — •Martin Bruderer
TT 42.1	Tue	9:30–10:00	WIL C107	**A First-Principles Perspective on Two-Dimensional Transition-Metal Dichalcogenides** — •Udo Schwingenschlögl
TT 57.7	Wed	11:15–11:45	HSZ 304	**Quantum Transport at Molecular Scales** — •Ferdinand Evers
TT 68.1	Wed	15:00–15:30	HSZ 201	**Novel Effects of Disorder in Multiband Unconventional Superconductors** — •Peter J Hirschfeld
TT 71.6	Wed	16:30–17:00	HSZ 03	**Majorana Fermions in Chains of Magnetic Atoms on the Surface of a Superconductor** — •Ali Yazdani
TT 82.8	Thu	11:30–12:00	HSZ 204	**Density Matrix Renormalization Group: Probing the Topology of Quantum States** — •Frank Pollmann
TT 83.1	Thu	9:30–10:00	HSZ 03	**Kinetic Theory for the Relaxation of Quantum Many-Body Systems** — •Marcus Kollar
TT 98.6	Thu	16:30–17:00	BEY 81	**Real-Space Tailoring of the Electron-Phonon Coupling in Ultra-Clean Nanotube Mechanical Resonators** — •Shahal Ilani

Tutorial "Thermoelectricity - The Quest for a High Figure of Merit"

TT 1.1	Sun	16:00–16:45	HSZ 304	**Thermoelectric Effects: Basic Aspects, Boltzmann Theory, Onsager Relations** — •Arthur Ernst
TT 1.2	Sun	16:50–17:35	HSZ 304	**Thermal Transport Measurements at the Nanoscale** — •Saskia F. Fischer
TT 1.3	Sun	17:40–18:25	HSZ 304	**High Temperature Thermoelectric Power Generators: Materials and Devices** — •Anke Weidenkaff

Tutorial "Advanced Algorithms for Correlated Quantum Matter"

TT 2.1	Sun	16:00–16:45	HSZ 04	**DMRG and Entanglement Scaling** — •Fabian Heidrich-Meisner
TT 2.2	Sun	16:50–17:35	HSZ 04	**Introduction to Tensor Networks** — •Roman Orus
TT 2.3	Sun	17:40–18:25	HSZ 04	**Quantum Monte Carlo Methods** — •Stefan Wessel

Invited and Topical Talks of the Focus Session "Dynamics, Topology, and Fractionalisation"

TT 16.1	Mon	15:00–15:30	HSZ 01	**Dynamics in Heisenberg Chains: From Fractional Excitations to New Out-of-Equilibrium States of Matter** — •Jean-Sébastien Caux
TT 16.2	Mon	15:30–16:00	HSZ 01	**Inelastic Neutron Scattering on Candidate Kitaev Compounds** — •Radu Coldea
TT 16.3	Mon	16:00–16:30	HSZ 01	**Dynamics of Majorana Fermions in a Quantum Spin Liquid** — •John Chalker
TT 16.4	Mon	16:45–17:15	HSZ 01	**Molecular Quantum Magnetism in $LiZn_2Mo_3O_8$** — •Collin Broholm
TT 16.5	Mon	17:15–17:45	HSZ 01	**Unwinding a Skyrmion Lattice: Emergent Monopoles in Chiral Magnets** — •Achim Rosch

Invited and Topical Talks of the Focus Session "Advanced Algorithms for Strongly Correlated Quantum Matter"

TT 36.1	Tue	9:30–10:00	HSZ 03	**Quantum Computing and Strongly Correlated Materials** — •Matthias Troyer
TT 36.2	Tue	10:00–10:30	HSZ 03	**Quantum Monte Carlo Simulations of Deconfined Quantum-Criticality** — •Anders Sandvik
TT 36.3	Tue	10:30–11:00	HSZ 03	**Characterizing Entanglement Entropy with Quantum Monte Carlo** — •Roger Melko
TT 36.4	Tue	11:15–11:45	HSZ 03	**Field-Induced Superfluids and Bose Liquids in Projected Entangled Pair States** — •Didier Poilblanc
TT 36.5	Tue	11:45–12:15	HSZ 03	**Nature of the Spin Liquid Ground State of the Kagome Model** — •Uli Schollwoeck

Invited and Topical Talks of the Focus Session "Electronic Properties of Spin-Orbit Driven Oxides"

TT 56.1	Wed	9:30–10:00	HSZ 03	**Exotic Magnetism of J_{eff}=1/2 Iso-Spins in Complex Ir Oxides** — •Hidenori Takagi
TT 56.2	Wed	10:00–10:30	HSZ 03	**Isospin Dynamics in Sr_2IrO_4 Revealed by Resonant Inelastic X-Ray Scattering** — •Jungho Kim
TT 56.3	Wed	10:30–11:00	HSZ 03	**Honeycomb Lattice Iridates** — •Philipp Gegenwart
TT 56.4	Wed	11:15–11:45	HSZ 03	**Novel Magnetic States in Spin-Orbit Coupled Mott Insulators** — •Giniyat Khaliullin
TT 56.5	Wed	11:45–12:15	HSZ 03	**Electronic Structure of Honeycomb Iridates and Rhodates from a Density Functional Theory Perspective** — •Harald O. Jeschke

Invited and Topical Talks of the Focus Session "Theoretical Advances in Interacting Topological Phases"

TT 95.1	Thu	15:00–15:30	HSZ 03	**Fractional Topological Insulators** — •Andrei Bernevig
TT 95.2	Thu	15:30–16:00	HSZ 03	**Non-Fermi Liquid, Quantum Critical, and Topological States in Iridates** — •Leon Balents
TT 95.3	Thu	16:00–16:30	HSZ 03	**Collective Spin-Orbit Physics in $j = 1/2$ Mott Insulators** — •Simon Trebst
TT 95.4	Thu	16:45–17:15	HSZ 03	**Topological Kondo Insulators: An Example of Correlated Quantum Spin Hall States** — •Fakher Assaad
TT 95.5	Thu	17:15–17:45	HSZ 03	**Fractional Chern Insulators in Strongly Correlated Multiorbital Systems** — •Maria Daghofer

Invited talks of the joint symposium SYMO

See SYMO for the full program of the symposium.

SYMO 1.1	Mon	9:30–10:00	HSZ 02	**Molecular quantum spintronics with single-molecule magnets** — •Wolfgang Wernsdorfer
SYMO 1.2	Mon	10:00–10:30	HSZ 02	**EPR Studies of Rare-Earth Molecular Nanomagnets** — •Stephen Hill
SYMO 1.3	Mon	10:45–11:15	HSZ 02	**On-surface magnetochemistry of spin-bearing metalorganic molecules** — •Peter M. Oppeneer
SYMO 1.4	Mon	11:15–11:45	HSZ 02	**Interfacing single-molecule magnets with metals** — •Andrea Cornia
SYMO 1.5	Mon	11:45–12:15	HSZ 02	**Linking magnetic molecules to themselves, to others and to surfaces** — •Richard Winpenny

Invited talks of the joint symposium SYSG

See SYSG for the full program of the symposium.

SYSG 1.1	Tue	9:30–10:00	HSZ 02	**Intrinsic magnetism in graphene** — •Irina Grigorieva
SYSG 1.2	Tue	10:00–10:30	HSZ 02	**Defect Induced Magnetic Moments in Graphene** — •Roland Kawakami
SYSG 1.3	Tue	10:30–11:00	HSZ 02	**Role of MgO barriers for spin and charge transport in Co/MgO/graphene spin-valve devices** — •Bernd Beschoten
SYSG 1.4	Tue	11:15–11:45	HSZ 02	**Defect-Mediated Spin Relaxation and Dephasing in Graphene** — •Joshua Folk
SYSG 1.5	Tue	11:45–12:15	HSZ 02	**Electron spin relaxation in graphene: resonant scattering off local magnetic moments** — •Jaroslav Fabian

Invited talks of the joint symposium SYOM

See SYOM for the full program of the symposium.

SYOM 1.1	Fri	9:30–10:10	HSZ 02	**Atomic-scale dopant wires for quantum computer architectures** — •Michelle Y Simmons
SYOM 1.2	Fri	10:10–10:50	HSZ 02	**$1+\delta$: Tuning the Dimensionality of Organic Conductors** — •Martin Dressel
SYOM 1.3	Fri	11:10–11:50	HSZ 02	**Spectral and transport properties of one-dimensional correlated electrons** — •Volker Meden
SYOM 1.4	Fri	11:50–12:30	HSZ 02	**Atomic nanowires on surfaces: Spectroscopic reality versus theoretical fiction** — •Ralph Claessen

Sessions

TT 1.1–1.3	Sun	16:00–18:25	HSZ 304	**Tutorial: Thermoelectricity - The Quest for a High Figure of Merit**
TT 2.1–2.3	Sun	16:00–18:25	HSZ 04	**Tutorial: Advanced Algorithms for Correlated Quantum Matter**
TT 3.1–3.5	Mon	9:30–12:15	HSZ 02	**Magnetic/Organic Interfaces and Molecular Magnetism (organized by MA; with CPP, DS, HL, O, TT)**
TT 4.1–4.13	Mon	9:30–13:00	HSZ 201	**Low-Dimensional Systems: 1D - Theory**
TT 5.1–5.5	Mon	9:30–10:45	HSZ 204	**Transport: Quantum Coherence and Quantum Information Systems - Experiment**
TT 6.1–6.8	Mon	11:00–13:00	HSZ 204	**Transport: Quantum Coherence and Quantum Information Systems - Theory I**
TT 7.1–7.12	Mon	9:30–13:00	HSZ 03	**Superconductivity: Cryodetectors**
TT 8.1–8.13	Mon	9:30–13:00	HSZ 304	**Correlated Electrons: Spin Systems and Itinerant Magnets - Frustrated Magnets I**
TT 9.1–9.14	Mon	9:30–13:15	BEY 81	**Transport: Quantum Dots, Quantum Wires, Point Contacts I (organized by TT)**
TT 10.1–10.10	Mon	9:30–12:00	BEY 118	**Magnetic Heuslers, Half-Metals and Oxides I (organized by MA)**

TT 11.1–11.1	Mon	9:30–10:15	GER 37	**Invited Talk - Martin Fally (organized by DF; with CPP, KR, TT)**
TT 12.1–12.8	Mon	9:30–12:00	HÜL 186	**Quantum Dynamics, Decoherence and Quantum Information (organized by DY)**
TT 13.1–13.11	Mon	9:30–12:30	POT 051	**Topological Insulators: Mostly Structure and Electronic Structure (organized by HL)**
TT 14.1–14.4	Mon	9:30–11:30	POT 151	**Focus Session: Physics of Quantum Rings (organized by HL)**
TT 15.1–15.8	Mon	10:30–13:15	TRE Ma	**Focus Session: Frontiers of Electronic Structure Theory - Non-Equilibrium Phenomena at the Nano-Scale (organized by O)**
TT 16.1–16.5	Mon	15:00–17:45	HSZ 01	**Focus Session: Dynamics, Topology, and Fractionalisation**
TT 17.1–17.13	Mon	15:00–18:30	HSZ 201	**Superconductivity: Tunnelling, Josephson Junctions, SQUIDs**
TT 18.1–18.4	Mon	15:00–16:00	HSZ 204	**Transport: Fluctuations and Noise**
TT 19.1–19.9	Mon	16:00–18:30	HSZ 204	**Transport: Quantum Dots, Quantum Wires, Point Contacts II (organized by TT)**
TT 20.1–20.11	Mon	15:00–18:00	HSZ 304	**Correlated Electrons: Spin Systems and Itinerant Magnets - Frustrated Magnets II**
TT 21.1–21.5	Mon	15:00–17:30	HSZ 04	**Focus Session: New Trends in Molecular Magnetism (organized by MA)**
TT 22.1–22.6	Mon	15:00–16:30	BEY 81	**Low-Dimensional Systems: Charge Order**
TT 23.1–23.7	Mon	16:45–18:30	BEY 81	**Low-Dimensional Systems: Other Materials**
TT 24.1–24.12	Mon	15:00–18:45	BEY 118	**Magnetic Heuslers, Half-Metals and Oxides II (organized by MA)**
TT 25.1–25.11	Mon	15:00–18:45	POT 051	**Focus Session: Electron Spin Qubits in Semiconductor Quantum Dots (organized by HL)**
TT 26.1–26.7	Mon	16:00–17:45	POT 006	**Quantum Wires: Transport Properties (organized by HL)**
TT 27.1–27.8	Mon	15:45–17:45	POT 081	**Topological Insulators: Mostly Interaction with Magnetic Fields (organized by HL)**
TT 28.1–28.10	Mon	16:00–18:45	TRE Ma	**Focussed Session: Frontiers of Electronic Structure Theory - Non-Equilibrium Phenomena at the Nano-Scale II (organized by O)**
TT 29.1–29.12	Mon	16:00–19:00	WIL C107	**Graphene: Structural Properties (organized by O)**
TT 30.1–30.70	Mon	15:00–19:00	P2	**Superconductivity - Poster Session**
TT 31.1–31.5	Tue	9:30–12:15	HSZ 02	**Spin Properties of Graphene (organized by HL; with DS, MA, O, TT)**
TT 32.1–32.1	Tue	9:30– 9:45	HSZ 201	**Cryotechnique**
TT 33.1–33.5	Tue	9:45–11:00	HSZ 201	**Superconductivity: Vortex Physics**
TT 34.1–34.6	Tue	11:15–13:00	HSZ 201	**Superconductivity: Heterostructures**
TT 35.1–35.13	Tue	9:30–13:00	HSZ 204	**Correlated Electrons: Quantum-Critical Phenomena - Experiment I**
TT 36.1–36.5	Tue	9:30–12:15	HSZ 03	**Focus Session: Advanced Algorithms for Strongly Correlated Quantum Matter**
TT 37.1–37.10	Tue	9:30–12:45	HSZ 304	**Cold Atomic Gases**
TT 38.1–38.4	Tue	9:30–10:30	BEY 81	**Transport: Spintronics and Magnetotransport (organized by TT)**
TT 39.1–39.9	Tue	10:45–13:00	BEY 81	**Transport: Quantum Coherence and Quantum Information Systems - Theory II**
TT 40.1–40.12	Tue	9:30–12:45	BEY 118	**Multiferroics I (organized by MA)**
TT 41.1–41.5	Tue	9:30–11:15	POT 251	**Focus Session: Quantum Light Sources Based on Solid State Systems: Status and Visions I (organized by HL)**
TT 42.1–42.13	Tue	9:30–13:15	WIL C107	**Transport: Graphene (organized by TT)**
TT 43.1–43.11	Tue	10:30–13:15	GER 38	**Topological Insulators (organized by O)**
TT 44.1–44.9	Tue	10:30–13:15	TRE Ma	**Focus Session: Frontiers of Electronic Structure Theory - Non-Equilibrium Phenomena at the Nano-Scale III (organized by O)**
TT 45.1–45.8	Tue	14:00–16:00	HSZ 201	**Superconductivity: Fe-based Superconductors - 1111,111, FeSe**
TT 46.1–46.8	Tue	14:00–16:00	HSZ 204	**Low-Dimensional Systems: Molecular Conductors**

TT 47.1–47.8	Tue	14:00–16:00	HSZ 03	**Correlated Electrons: Spin Systems and Itinerant Magnets - Frustrated Magnets III**
TT 48.1–48.8	Tue	14:00–16:00	HSZ 304	**Transport: Topological Insulators I (organized by TT)**
TT 49.1–49.9	Tue	13:45–16:00	HSZ 401	**Spintronics (organized by MA)**
TT 50.1–50.8	Tue	14:00–16:00	BEY 81	**Correlated Electrons: Quantum-Critical Phenomena - Theory**
TT 51.1–51.7	Tue	14:30–16:15	POT 112	**Quantum Wires: Optical Properties (organized by HL)**
TT 52.1–52.6	Tue	14:00–15:45	POT 251	**Focus Session: Quantum Light Sources Based on Solid State Systems: Status and Visions II (organized by HL)**
TT 53.1–53.14	Wed	9:30–13:15	HSZ 201	**Superconductivity: Fe-based Superconductors - 122**
TT 54.1–54.6	Wed	9:30–11:00	HSZ 204	**Correlated Electrons: Heavy Fermions**
TT 55.1–55.5	Wed	11:15–12:30	HSZ 204	**Correlated Electrons: Quantum-Critical Phenomena - Experiment II**
TT 56.1–56.5	Wed	9:30–12:15	HSZ 03	**Focus Session: Electronic Properties of Spin-Orbit Driven Oxides**
TT 57.1–57.12	Wed	9:30–13:00	HSZ 304	**Transport: Molecular Electronics I**
TT 58.1–58.13	Wed	9:30–13:00	HSZ 04	**Multiferroics II (organized by MA)**
TT 59.1–59.13	Wed	9:30–13:00	BEY 81	**Low-Dimensional Systems: 2D - Theory (organized by TT)**
TT 60.1–60.5	Wed	9:30–12:15	BEY 118	**Focus Session: Chiral Domain Walls in Ultrathin Films (organized by MA)**
TT 61.1–61.10	Wed	9:30–12:15	POT 051	**Graphene: Transport (organized by HL)**
TT 62.1–62.7	Wed	10:15–12:00	POT 006	**Spintronics I (organized by HL)**
TT 63.1–63.7	Wed	9:30–11:15	POT 151	**Topological Insulators: Theory (organized by HL)**
TT 64.1–64.7	Wed	9:30–11:15	POT 251	**Quantum Dots: Optical Properties I (organized by HL)**
TT 65.1–65.6	Wed	11:30–13:00	POT 251	**Quantum Dots: Optical Properties II (organized by HL)**
TT 66.1–66.10	Wed	10:30–13:15	TRE Ma	**Focus Session: Frontiers of Electronic Structure Theory - Non-Equilibrium Phenomena at the Nano-Scale IV (organized by O)**
TT 67.1–67.1	Wed	12:30–13:00	HSZ 02	**Gaede Prize Talk (organized by VA; with DS, O, TT)**
TT 68.1–68.10	Wed	15:00–18:00	HSZ 201	**Superconductivity: Fe-based Superconductors - Theory I**
TT 69.1–69.5	Wed	15:00–16:15	HSZ 204	**Correlated Electrons: Spin Systems and Itinerant Magnets - Chiral Magnets**
TT 70.1–70.8	Wed	16:30–18:30	HSZ 204	**Transport: Topological Insulators II (organized by TT)**
TT 71.1–71.10	Wed	15:00–18:00	HSZ 03	**Transport: Majorana Fermions (organized by TT)**
TT 72.1–72.5	Wed	15:00–16:15	HSZ 304	**Transport: Molecular Electronics II**
TT 73.1–73.8	Wed	16:30–18:30	HSZ 304	**Transport: Carbon Nanotubes (organized by TT)**
TT 74.1–74.14	Wed	15:00–18:45	BEY 81	**Correlated Electrons: Quantum Impurities, Kondo Physics**
TT 75.1–75.5	Wed	15:00–17:45	BEY 118	**Focus Session: Spin-Orbit Torque at Surfaces and Interfaces (organized by MA)**
TT 76.1–76.6	Wed	15:00–16:30	POT 006	**Quantum Information Systems I (organized by HL)**
TT 77.1–77.11	Wed	16:00–19:15	TRE Ma	**Focus Session: Frontiers of Electronic Structure Theory - Non-Equilibrium Phenomena at the Nano-Scale V (organized by O)**
TT 78.1–78.13	Wed	16:00–19:15	WIL C107	**Graphene: Electronic Properties (organized by O)**
TT 79.1–79.75	Wed	15:00–19:00	P2	**Correlated Electrons - Poster Session**
TT 80.1–80.22	Wed	15:00–19:00	P2	**Low-Dimensional Systems - Poster Session**
TT 81.1–81.14	Thu	9:30–13:15	HSZ 201	**Superconductivity: Properties and Electronic Structure**
TT 82.1–82.13	Thu	9:30–13:15	HSZ 204	**Low-Dimensional Systems: Topological Order (organized by TT)**
TT 83.1–83.12	Thu	9:30–13:00	HSZ 03	**Correlated Electrons: Nonequilibrium Quantum Many-Body Systems I**
TT 84.1–84.14	Thu	9:30–13:15	HSZ 304	**Correlated Electrons: (General) Theory**
TT 85.1–85.10	Thu	9:30–12:15	HSZ 04	**Spincaloric Transport II (organized by MA)**
TT 86.1–86.12	Thu	9:30–12:45	BEY 81	**Correlated Electrons: Other Materials**
TT 87.1–87.6	Thu	9:30–12:45	BEY 118	**Focus Session: Unconventional Spin Structures (organized by MA)**
TT 88.1–88.1	Thu	9:30–10:00	POT 081	**Invited Talk - Tobias Korn (organized by HL)**
TT 89.1–89.9	Thu	10:00–12:30	POT 081	**Graphene-Like Materials: Silicene, MoS_2 and Relatives (organized by HL)**
TT 90.1–90.9	Thu	10:00–12:15	POT 151	**Spintronics II (organized by HL)**

TT 91.1–91.10	Thu	10:30–13:15	TRE Ma	**Focus Session: Frontiers of Electronic Structure Theory - Non-Equilibrium Phenomena at the Nano-Scale VI (organized by O)**
TT 92.1–92.5	Thu	15:00–16:15	HSZ 201	**Superconductivity: Fe-based Superconductors - Theory II**
TT 93.1–93.6	Thu	16:30–18:00	HSZ 201	**Superconductivity: (General) Theory**
TT 94.1–94.10	Thu	15:00–17:45	HSZ 204	**Low-Dimensional Systems: Oxide Hetero-Interfaces**
TT 95.1–95.7	Thu	15:00–18:25	HSZ 03	**Focus Session: Theoretical Advances in Interacting Topological Phases (organized by TT)**
TT 96.1–96.8	Thu	15:00–17:00	HSZ 304	**Correlated Electrons: Nonequilibrium Quantum Many-Body Systems II**
TT 97.1–97.8	Thu	16:45–18:45	HSZ 403	**Spincaloric Transport I (organized by MA)**
TT 98.1–98.10	Thu	15:00–18:00	BEY 81	**Transport: Nanomechanics**
TT 99.1–99.11	Thu	15:00–18:00	POT 081	**Graphene: Spintronics, Transistors, and Sensors (organized by HL)**
TT 100.1–100.11	Thu	16:00–18:45	WIL C107	**Graphene: Adsorption, Intercalation, Doping (organized by O)**
TT 101.1–101.45	Thu	15:00–19:00	P2	**Transport - Poster Session**
TT 102.1–102.6	Thu	15:00–19:00	P2	**Cold Atomic Gases - Poster Session**
TT 103.1–103.4	Fri	9:30–12:30	HSZ 02	**Symposium One-Dimensional Metals: Reality or Fiction (organized by DS; with HL, O, TT)**
TT 104.1–104.9	Fri	9:30–12:00	HSZ 04	**Topological Insulators (organized by MA)**
TT 105.1–105.6	Fri	9:30–11:00	POT 081	**Graphene: Bi- and Multi-Layers (organized by HL)**
TT 106.1–106.7	Fri	11:15–13:00	POT 081	**Graphene: Interaction with the Substrate (organized by HL)**
TT 107.1–107.5	Fri	9:30–10:45	POT 151	**Quantum Information Systems II (organized by HL)**
TT 108.1–108.7	Fri	11:30–13:15	CHE 89	**Graphene (joint session with TT, MA, HL, DY, O)**

Annual General Meeting of the Low Temperature Physics Division

Thursday 18:30 Room H304