

## Low Temperature Physics Division Fachverband Tiefe Temperaturen (TT)

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### Overview of Invited Talks and Sessions

(Lecture rooms H18-23; Poster D2)

#### Tutorials

TT 1.1	Sun	16:00–16:45	H20	<b>Correlation functions of integrable models</b> — ●FRANK GÖHMANN
TT 1.2	Sun	16:45–17:30	H20	<b>Non-Abelian anyons</b> — ●HOLGER FRAHM
TT 1.3	Sun	17:45–18:30	H20	<b>Quantum quenches and equilibration of lattice and continuum systems</b> — ●MICHAEL BROCKMANN

#### Invited Talks

TT 5.7	Mon	11:30–12:00	H22	<b>Coherent Suppression of Quasiparticle Dissipation in a Superconducting Artificial Atom</b> — ●IOAN POP
TT 14.7	Mon	16:45–17:15	H19	<b>Spectroscopic signatures of collective modes in superconductors</b> — ●LARA BENFATTO
TT 15.1	Mon	15:00–15:30	H20	<b>Thermodynamics of Fractional Quantum Spin Liquids</b> — ●YUKITOSHI MOTOME
TT 15.2	Mon	15:30–16:00	H20	<b>Proximate Kitaev quantum spin liquid behavior in <math>\alpha</math>-RuCl<sub>3</sub></b> — ●STEPHEN NAGLER
TT 15.3	Mon	16:00–16:30	H20	<b>Kagome chiral spin liquid and symmetry protected topological phases</b> — ●YIN-CHEN HE
TT 15.4	Mon	16:45–17:15	H20	<b>Three-dimensional Kitaev spin liquids</b> — ●MARIA HERMANN
TT 15.5	Mon	17:15–17:45	H20	<b>Landau levels of Majorana fermions in a spin liquid</b> — ●MATTHIAS VOJTA
TT 24.1	Tue	9:30–10:00	H18	<b>Detecting Weyl fermions in condensed matter</b> — ●TITUS NEUPERT
TT 26.1	Tue	9:30–10:00	H20	<b>Classical and quantum correlation induced bias asymmetries in coupled spin systems</b> — ●MARKUS TERNES
TT 26.2	Tue	10:00–10:30	H20	<b>Magnetic anisotropy goes spintronic</b> — ●MAARTEN R. WEGEWIJS
TT 26.3	Tue	10:30–11:00	H20	<b>Engineering the Kondo Effect in clean Carbon Nanotubes</b> — ●CHRISTOPH STRUNK
TT 26.4	Tue	11:15–11:45	H20	<b>Majorana Fermions in Atomic Chains</b> — ●ALI YAZDANI
TT 26.5	Tue	11:45–12:15	H20	<b>Magnetic adatoms on superconductors - a new venue for Majorana bound states?</b> — ●FELIX VON OPPEN
TT 30.1	Tue	11:00–11:30	H19	<b>Selective correlations and heavy-fermionic behaviour in Iron-based superconductors</b> — ●LUCA DE' MEDICI
TT 32.1	Tue	14:00–14:30	H18	<b>Coupled-wire constructions: New insights into the physics of interacting topological systems in two and three dimension (and beyond)</b> — ●TOBIAS MENG
TT 37.5	Tue	15:00–15:30	H23	<b>Dynamical Coulomb Blockade theory of resonantly enhanced light emission from a tunnel junction</b> — ●WOLFGANG BELZIG
TT 43.11	Wed	12:15–12:45	H20	<b>Rare-earth-like behavior of transition metals substituted in Li<sub>3</sub>N</b> — ●ANTON JESCHE
TT 44.1	Wed	9:30–10:00	H22	<b>Ultrafast photo-thermoelectric currents in graphene</b> — ●ALEXANDER HOLLEITNER
TT 46.6	Wed	11:30–12:00	H19	<b>On Nematicity, Magnetism and Superconductivity in FeSe</b> — ●A. E. BÖHMER

TT 52.1	Wed	15:00–15:30	H20	<b>Hund’s Metals: a New Road to Strongly Correlated Electron Behavior</b> — ●GABRIEL KOTLIAR
TT 52.2	Wed	15:30–16:00	H20	<b>Screened Exchange Dynamical Mean Field Theory</b> — ●SILKE BIERMANN
TT 52.3	Wed	16:00–16:30	H20	<b>Dynamical Screening in Correlated Electron Materials</b> — ●PHILIPP WERNER
TT 52.4	Wed	16:45–17:15	H20	<b>Lattice stability of correlated electron materials</b> — ●IVAN LEONOV
TT 52.5	Wed	17:15–17:45	H20	<b>Tin Foil at the Nanometer Scale - from Electronic Correlations to Topological Physics</b> — ●RALPH CLAESSEN
TT 52.6	Wed	17:45–18:15	H20	<b>Electron Correlations in Nanosystems and 2D Materials: What’s so Different from Bulk?</b> — ●TIM WEHLING
TT 54.7	Wed	16:45–17:15	H22	<b>Cooling a nanomechanical resonator by electron transport in hybrid devices.</b> — ●GIANLUCA RASTELLI
TT 62.1	Thu	9:30–10:00	H20	<b>Conventional high temperature superconductivity: from A15 to MgB<sub>2</sub> to H<sub>3</sub>S</b> — ●IGOR MAZIN
TT 62.2	Thu	10:00–10:30	H20	<b>Conventional superconductivity at 203 K at high pressures</b> — ●MIKHAIL EREMETS
TT 62.3	Thu	10:30–11:00	H20	<b>Crystal Structure of 200 K-Superconducting Phase in Sulfur Hydride System</b> — ●MARI EINAGA
TT 62.4	Thu	11:15–11:45	H20	<b>Strong-Coupling Electron-Phonon Superconductivity in H<sub>3</sub>S</b> — ●WARREN E. PICKETT
TT 62.5	Thu	11:45–12:15	H20	<b>High-pressure phases of S, Se, and P hydrides and their superconducting properties: Predictions from ab-initio theory</b> — ●E. K. U. GROSS
TT 62.6	Thu	12:15–12:45	H20	<b>New sulfur hydride H<sub>3</sub>S and excellent superconductivity at high</b> — ●TIAN CUI
TT 73.7	Thu	16:45–17:15	H19	<b>Imaging currents in 2D quantum materials</b> — ●KATJA NOWACK
TT 81.1	Thu	16:15–16:45	H23	<b>Non-Abelian gauge theory description of (dynamical) spin-orbit coupling effects in Fermi gases.</b> — ●COSIMO GORINI

### Invited talks of the joint symposium SYTI

See SYTI for the full program of the symposium.

SYTI 1.1	Wed	9:30–10:10	H1	<b>Topological insulators and topological superconductors</b> — ●SHOUCHENG ZHANG
SYTI 1.2	Wed	10:10–10:50	H1	<b>Three-dimensional topological insulators and superconductors</b> — ●YOICHI ANDO
SYTI 1.3	Wed	10:50–11:30	H1	<b>Interplay of magnetic and electronic states in pyrochlore iridates</b> — ●LEON BALENTS
SYTI 1.4	Wed	11:40–12:20	H1	<b>Magnetic imaging of edge states</b> — ●KATHRYN MOLER
SYTI 1.5	Wed	12:20–13:00	H1	<b>Sub-nm wide edge states at the dark side of a weak topological insulator</b> — ●MARKUS MORGENSTERN

### Invited talks of the joint symposium SYQS

See SYQS for the full program of the symposium.

SYQS 1.1	Wed	15:00–15:30	H1	<b>Magnonic macroscopic quantum states and supercurrents</b> — ●BURKARD HILLEBRANDS, DMYTRO A. BOZHKO, ALEXANDER A. SERGA
SYQS 1.2	Wed	15:30–16:00	H1	<b>Elementary excitations of magnetic insulators and its heterostructures with metals</b> — ●GERRIT BAUER
SYQS 1.3	Wed	16:00–16:30	H1	<b>Cavity Spintronics</b> — ●CAN-MING HU
SYQS 1.4	Wed	16:45–17:15	H1	<b>Hybrid Quantum Systems - Coupling Color Centers to Superconducting Cavities</b> — ●JOHANNES MAJER
SYQS 1.5	Wed	17:15–17:45	H1	<b>Quantum enhanced sensing with single spins in diamond</b> — ●FEDOR JELEZKO

## Invited talks of the joint symposium SYES

See SYES for the full program of the symposium.

SYES 1.1	Fri	9:30–10:00	H1	<b>Intrinsic Transport Coefficients and Momentum Space Berry Curvatures</b> — •ALLAN H MACDONALD
SYES 1.2	Fri	10:00–10:30	H1	<b>Berry phase linked spin-orbit torques in Ferromagnetic and Antiferromagnetic systems</b> — •JAIRO SINOVA
SYES 1.3	Fri	10:30–11:00	H1	<b>Transport in Topological Insulators and Topological Superconductors: In Search of Majorana Fermions</b> — •EWELINA HANKIEWICZ
SYES 1.4	Fri	11:15–11:45	H1	<b>Engineering Topological Quantum States: From 1D to 2D.</b> — •JELENA KLINOVAJA
SYES 1.5	Fri	11:45–12:15	H1	<b>Skyrmions – Topological magnetization solitons for future spintronics</b> — •STEFAN BLÜGEL

## Sessions

TT 1.1–1.3	Sun	16:00–18:30	H20	<b>Tutorial: Correlations in Integrable Quantum Many-Body Systems</b>
TT 2.1–2.10	Mon	9:30–12:30	H17	<b>Graphene: Theory</b> (Joint session of DS, DY, HL, MA, O and TT organized by HL)
TT 3.1–3.13	Mon	9:30–13:00	H20	<b>Correlated Electrons: Frustrated Magnets - Pyrochlore Systems and Iridates</b>
TT 4.1–4.12	Mon	9:30–12:45	H47	<b>Dynamics in many-body systems: Equilibration and localization</b> (Joint session of DY and TT organized by DY)
TT 5.1–5.11	Mon	9:45–13:00	H22	<b>Transport: Quantum Coherence and Quantum Information Systems - Experiment</b> (Joint session of HL, MA and TT organized by TT)
TT 6.1–6.11	Mon	10:00–13:00	H19	<b>Superconductivity: Properties and Electronic Structure</b>
TT 7.1–7.10	Mon	10:15–13:00	H18	<b>Cold Atomic Gases</b>
TT 8.1–8.10	Mon	10:15–13:00	H21	<b>Correlated Electrons: Quantum Impurities, Kondo Physics</b>
TT 9.1–9.11	Mon	10:30–13:30	H24	<b>Graphene: Structure and Dynamics</b> (Joint session of DS, DY, HL, MA, O and TT organized by O)
TT 10.1–10.4	Mon	11:30–13:00	H10	<b>Focus Session: Single Particle Sources for Electronic Devices I</b> (Joint session of HL and TT organized by HL)
TT 11.1–11.10	Mon	14:45–18:45	H10	<b>Focus Session: Single Particle Sources for Electronic Devices II</b> (Joint session of HL and TT organized by HL)
TT 12.1–12.8	Mon	14:45–17:45	H17	<b>Graphene: Transport</b> (Joint session of DS, DY, HL, MA, O and TT organized by HL)
TT 13.1–13.10	Mon	15:00–17:45	H18	<b>Transport: Topological Insulators - 2D</b> (Joint session of DS, HL, MA, O and TT organized by TT)
TT 14.1–14.10	Mon	15:00–18:00	H19	<b>Superconductivity: (General) Theory</b>
TT 15.1–15.5	Mon	15:00–17:45	H20	<b>Focus Session: Spectroscopy of Quantum Spin Liquids</b>
TT 16.1–16.10	Mon	15:00–17:45	H21	<b>Transport: Quantum Dots, Quantum Wires, Point Contacts</b>
TT 17.1–17.8	Mon	15:00–17:15	H22	<b>Low-Dimensional Systems: Oxide Hetero-Interfaces</b>
TT 18.1–18.12	Mon	15:00–18:15	H31	<b>Spin-caloric Transport</b> (Joint session of MA and TT organized by MA)
TT 19.1–19.56	Mon	15:00–18:00	Poster D	<b>Superconductivity: Poster Session</b>
TT 20.1–20.6	Mon	15:00–18:00	Poster D	<b>Cryotechnique &amp; Measuring Devices: Poster Session</b>
TT 21.1–21.7	Mon	15:45–17:45	H51	<b>Frontiers of Electronic Structure Theory: Focus on Topology and Transport</b> (Joint session of DS, HL, MA, MM, O and TT organized by MM)
TT 22.1–22.4	Mon	17:45–18:45	H17	<b>Graphene: Fabrication</b> (Joint session of DS, DY, HL, MA, O and TT organized by HL)

TT 23.1–23.10	Tue	9:30–12:30	H15	<b>Quantum Information Systems</b> (Joint session of HL, MA, O and TT organized by HL)
TT 24.1–24.12	Tue	9:30–13:00	H18	<b>Transport: Weyl Semimetals</b>
TT 25.1–25.5	Tue	9:30–10:45	H19	<b>Superconductivity: Fe-based Superconductors - 1111 &amp; 111</b>
TT 26.1–26.5	Tue	9:30–12:15	H20	<b>Focus Session: Engineered Magnetic Impurities: Interaction and Superconductivity</b>
TT 27.1–27.12	Tue	9:30–12:45	H22	<b>Transport: Quantum Coherence and Quantum Information Systems - Theory 1</b> (Joint session of HL, MA and TT organized by TT)
TT 28.1–28.11	Tue	10:00–13:00	H21	<b>Correlated Electrons: Quantum-Critical Phenomena - Experiment</b>
TT 29.1–29.11	Tue	10:30–13:30	S051	<b>Topology- and Symmetry-Protected Materials</b> (Joint session of DS, HL, MA, O and TT organized by O)
TT 30.1–30.7	Tue	11:00–13:00	H19	<b>Superconductivity: Fe-based Superconductors - Theory</b>
TT 31.1–31.2	Tue	12:30–13:00	H8	<b>Topological Insulators: Status Quo and Future Directions</b> (Joint session of DS, MA, HL, O and TT organized by DS)
TT 32.1–32.6	Tue	14:00–15:45	H18	<b>Transport: Topological Insulators - 3D</b> (Joint session of DS, HL, MA, O and TT organized by TT)
TT 33.1–33.6	Tue	14:00–15:30	H19	<b>Superconductivity: Cryodetectors &amp; Cryotechnique</b>
TT 34.1–34.8	Tue	14:00–16:00	H20	<b>Correlated Electrons: Frustrated Magnets - Chiral Magnets &amp; RuCl<sub>3</sub></b>
TT 35.1–35.7	Tue	14:00–15:45	H21	<b>Correlated Electrons: Quantum-Critical Phenomena - Theory</b>
TT 36.1–36.4	Tue	14:00–15:00	H22	<b>Transport: Quantum Coherence and Quantum Information Systems - Theory 2</b> (Joint session of HL, MA and TT organized by TT)
TT 37.1–37.6	Tue	14:00–15:45	H23	<b>Transport: Fluctuation and Noise</b> (Joint session of DY and TT organized by TT)
TT 38.1–38.7	Tue	14:00–16:00	H24	<b>Frontiers of Electronic Structure Theory: Focus on Topology and Transport I</b> (Joint session of DS, HL, MA, MM, O and TT organized by O)
TT 39.1–39.8	Tue	14:00–16:00	S051	<b>Spintronics</b> (Joint session of DS, HL, MA, O and TT organized by O)
TT 40.1–40.3	Tue	14:45–15:45	H17	<b>Graphene: Optics</b> (Joint session of DS, DY, HL, MA, O and TT organized by HL)
TT 41.1–41.5	Wed	9:30–13:00	H1	<b>Symposium Topological Insulators: Status Quo and Future Directions (SYTI)</b> (Joint symposium of HL, MA, O and TT organized by TT)
TT 42.1–42.13	Wed	9:30–13:00	H18	<b>Correlated Electrons: Frustrated Magnets - Cu-based Systems &amp; FeCr</b>
TT 43.1–43.12	Wed	9:30–13:00	H20	<b>Correlated Electrons: f-Electron &amp; Heavy Fermion Systems</b>
TT 44.1–44.13	Wed	9:30–13:15	H22	<b>Transport: Graphene</b> (Joint session of DS, DY, HL, MA, O and TT organized by TT)
TT 45.1–45.10	Wed	9:30–12:15	H32	<b>Spintronics (incl. Quantum Dynamics)</b> (Joint session of MA, HL and TT organized by MA)
TT 46.1–46.9	Wed	10:00–12:45	H19	<b>Superconductivity: Fe-based Superconductors - FeSe</b>
TT 47.1–47.9	Wed	10:30–13:00	H21	<b>Correlated Electrons: Other Materials</b>
TT 48.1–48.10	Wed	10:30–13:00	H24	<b>Frontiers of Electronic Structure Theory: Focus on Topology and Transport II</b> (Joint session of DS, HL, MA, MM, O and TT organized by O)
TT 49.1–49.5	Wed	15:00–17:45	H1	<b>Symposium on Quantum Signatures in Magnetism (SYQS)</b> (Joint symposium of HL, MA, O and TT organized by MA)
TT 50.1–50.15	Wed	15:00–19:15	H18	<b>Correlated Electrons: Frustrated Magnets - Theory</b>
TT 51.1–51.14	Wed	15:00–19:00	H19	<b>Superconductivity: Tunneling, Josephson Junctions, SQUIDs</b>
TT 52.1–52.6	Wed	15:00–18:15	H20	<b>Focus Session: Realistic Dynamical Mean-Field Approaches to Correlated Quantum Materials</b>
TT 53.1–53.12	Wed	15:00–18:15	H21	<b>Low-Dimensional Systems: 1D - Theory</b>
TT 54.1–54.11	Wed	15:00–18:15	H22	<b>Transport: Carbon Nanotubes</b>

TT 55.1–55.12	Wed	15:00–18:30	H24	<b>Frontiers of Electronic Structure Theory: Focus on Topology and Transport III</b> (Joint session of DS, HL, MA, MM, O and TT organized by O)
TT 56.1–56.12	Wed	15:00–18:00	S053	<b>Graphene: Adsorption, Intercalation and Doping</b> (Joint session of DS, DY, HL, MA, O and TT organized by O)
TT 57.1–57.10	Wed	15:00–17:45	H32	<b>Topological Insulators</b> (Joint session of MA, DS, HL, O and TT organized by MA)
TT 58.1–58.54	Wed	15:00–18:30	Poster D	<b>Transport: Poster Session</b>
TT 59.1–59.22	Wed	15:00–18:30	Poster D	<b>Low-Dimensional Systems: Poster Session</b>
TT 60.1–60.7	Wed	18:15–20:30	Poster A	<b>Frontiers of Electronic Structure Theory: Focus on Topology and Transport</b> (Joint session of DS, HL, MA, MM, O and TT organized by O)
TT 61.1–61.13	Thu	9:30–13:00	H18	<b>Correlated Electrons: (General) Theory 1</b>
TT 62.1–62.6	Thu	9:30–12:45	H20	<b>Focus Session: High Temperature Superconductivity in Hydrides</b>
TT 63.1–63.13	Thu	9:30–13:00	H21	<b>Low-Dimensional Systems: 2D - Theory</b>
TT 64.1–64.13	Thu	9:30–13:00	H22	<b>Correlated Electrons: Nonequilibrium Quantum Many-Body Systems 1</b>
TT 65.1–65.13	Thu	9:30–13:00	H23	<b>Transport: Molecular Electronics and Photonics 1</b> (Joint session of CPP, DS, HL, MA, O and TT organized by TT)
TT 66.1–66.11	Thu	9:30–12:30	H34	<b>Magnetic Heusler Materials, Semimetals und Oxides</b> (Joint session of MA and TT organized by MA)
TT 67.1–67.11	Thu	10:30–13:30	H4	<b>Oxides and Insulator Surfaces: Structure, Epitaxy and Growth</b> (Joint session of O and TT organized by O)
TT 68.1–68.9	Thu	10:30–13:00	H19	<b>Transport: Majorana Fermions</b>
TT 69.1–69.9	Thu	10:30–13:15	H24	<b>Frontiers of Electronic Structure Theory: Focus on Topology and Transport IV</b> (Joint session of DS, HL, MA, MM, O and TT organized by O)
TT 70.1–70.9	Thu	10:30–12:45	S053	<b>Graphene: Electronic Properties</b> (Joint session of DS, DY, HL, MA, O and TT organized by O)
TT 71.1–71.11	Thu	10:30–13:30	S054	<b>2D Materials beyond Graphene -Dynamics and Excitation</b> (Joint session of DS, DY, HL, MA, O and TT organized by O)
TT 72.1–72.8	Thu	14:45–17:15	H10	<b>Topological Insulators I</b> (Joint session of DS, HL, MA, O and TT organized by HL)
TT 73.1–73.10	Thu	15:00–18:00	H19	<b>Low-Dimensional Systems: Topological Order</b>
TT 74.1–74.5	Thu	15:00–17:45	H20	<b>Focus Session: Many-Body Interference and Quantum Statistical Physics</b> (Joint session of DY and TT organized by DY)
TT 75.1–75.4	Thu	15:00–16:00	H23	<b>Transport: Molecular Electronics and Photonics 2</b> (Joint session of CPP, DS, HL, MA, O and TT organized by TT)
TT 76.1–76.13	Thu	15:00–18:15	H24	<b>Frontiers of Electronic Structure Theory: Focus on Topology and Transport V</b> (Joint session of DS, HL, MA, MM, O and TT organized by O)
TT 77.1–77.9	Thu	15:00–17:30	H34	<b>Multiferroics</b> (Joint session of MA, DF, DS, KR and TT organized by MA)
TT 78.1–78.63	Thu	15:00–18:30	Poster D	<b>Correlated Electrons: Poster Session</b>
TT 79.1–79.11	Thu	15:30–18:30	H21	<b>Superconductivity: Fe-based Superconductors - 122</b>
TT 80.1–80.9	Thu	16:00–18:30	H18	<b>Correlated Electrons: (General) Theory 2</b>
TT 81.1–81.7	Thu	16:15–18:30	H23	<b>Transport: Spintronics and Magnetotransport</b> (Joint session of DS, HL, MA and TT organized by TT)

TT 82.1–82.8	Thu	16:30–18:30	H22	<b>Correlated Electrons: Nonequilibrium Quantum Many-Body Systems 2</b>
TT 83.1–83.5	Fri	9:30–12:15	H1	<b>Symposium on Frontiers of Electronic Structure Theory: Focus on Topology and Transport (SYES)</b> (Joint symposium of DS, HL, MA, MM, O and TT organized by O)
TT 84.1–84.8	Fri	9:30–12:00	H15	<b>Topological Insulators II</b> (Joint session of DS, HL, MA, O and TT organized by O)
TT 85.1–85.10	Fri	10:30–13:00	S051	<b>Graphene: Electronic Properties &amp; Structure</b> (Joint session of O and TT organized by O)
TT 86.1–86.10	Fri	10:30–13:00	S051	<b>Graphene: Electronic Properties and Structure</b> (Joint session of DS, DY, HL, MA, O and TT organized by O)

### Annual General Meeting of the Low Temperature Physics Division

Thursday 18:45 H19