

Low Temperature Physics Division Fachverband Tiefe Temperaturen (TT)

Christian Enss
Universität Heidelberg
Kirchhoff-Institut für Physik
Im Neuenheimer Feld 227
69120 Heidelberg, Germany
christian.enss@kip.uni-heidelberg.de

Overview of Invited Talks and Sessions

(Lecture halls HSZ 03, HSZ 103, HSZ 201, HSZ 204, HSZ 304; Poster P2)

Plenary Talks

PLV VIII	Wed	14:00–14:45	HSZ 01	Revealing the topological nature of transport at mesoscopic scales with quantum interferences — ●HÉLÈNE BOUCHIAT
PLV XIII	Thu	14:00–14:45	HSZ 02	A Path Towards Room Temperature Superconductivity? — ●MIKHAIL EREMETS

Invited Talks of the Joint Symposium SYSD (SKM Dissertation-Prize 2020)

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	9:30– 9:55	HSZ 02	Disentangling transport in topological insulator thin films down to the nanoscale — ●FELIX LÜPKE
SYSD 1.2	Mon	9:55–10:20	HSZ 02	Spintronics with Terahertz Radiation: Probing and driving spins at highest frequencies — ●TOM SEBASTIAN SEIFERT
SYSD 1.3	Mon	10:20–10:45	HSZ 02	Non-radiative voltage losses in organic solar cells — ●JOHANNES BENDUHN
SYSD 1.4	Mon	10:45–11:10	HSZ 02	Multivalent ions for tuning the phase behaviour of protein solutions — ●OLGA MATSARSKAIA
SYSD 1.5	Mon	11:10–11:35	HSZ 02	Network Dynamics under Constraints — ●MALTE SCHRÖDER
SYSD 1.6	Mon	11:35–12:00	HSZ 02	Exciton spectroscopy of van der Waals heterostructures — ●PHILIPP NAGLER

Invited Talks of the Joint Symposium SYAS

See SYAS for the full program of the symposium.

SYAS 1.1	Mon	15:00–15:30	HSZ 02	Ultrafast Coherent Spin-Lattice Interactions in Ferromagnets — ●STEVEN L. JOHNSON
SYAS 1.2	Mon	15:30–16:00	HSZ 02	Ab-initio treatment of ultrafast spin-dynamics — ●SANGEETA SHARMA
SYAS 1.3	Mon	16:00–16:30	HSZ 02	Light-wave driven Spin Dynamics — ●MARTIN SCHULTZE
SYAS 1.4	Mon	16:45–17:15	HSZ 02	All-coherent subcycle switching of spins by THz near fields — ●CHRISTOPH LANGE
SYAS 1.5	Mon	17:15–17:45	HSZ 02	Ultrafast optically-induced spin transfer in ferromagnetic alloys — ●STEFAN MATHIAS

Invited Talks of the Joint Symposium SYWH

See SYWH for the full program of the symposium.

SYWH 1.1	Wed	15:00–15:30	HSZ 02	Engineering 2D materials with a twist — ●CORY DEAN
SYWH 1.2	Wed	15:30–16:00	HSZ 02	Flat Bands and Correlated Electronic States in Two Dimensional Atomic Crystals — ●EVA Y. ANDREI

SYWH 1.3	Wed	16:00–16:30	HSZ 02	Lightwave electronics and valleytronics in van der Waals layered materials — ●RUPERT HUBER
SYWH 1.4	Wed	16:30–17:00	HSZ 02	Interaction and Topological Effects in Atomically Thin Two-dimensional Materials — ●STEVEN G. LOUIE
SYWH 1.5	Wed	17:00–17:30	HSZ 02	Excitons in 2D Semiconductors and Heterostructures — ●ALEXANDER HÖGELE

Invited Talks of the Joint Symposium SYES

See SYES for the full program of the symposium.

SYES 1.1	Thu	9:30–10:00	HSZ 02	Understanding the physical variables driving mechanosensing — ●PERE ROCA-CUSACHS
SYES 1.2	Thu	10:00–10:30	HSZ 02	Mechanics of life: Cellular forces and mechanics far from thermodynamic equilibrium — ●TIMO BETZ
SYES 1.3	Thu	10:30–11:00	HSZ 02	A hydrodynamic approach to collective cell migration in epithelial tissues — ●JAUME CASADEMUNT
SYES 1.4	Thu	11:15–11:45	HSZ 02	The spindle is a composite of two permeating polar gels — ●JAN BRUGUES
SYES 1.5	Thu	11:45–12:15	HSZ 02	Adding magnetic properties to epitaxial graphene — ●RODOLFO MIRANDA
SYES 2.1	Thu	15:00–15:30	HSZ 01	Interactions in assemblies of surface-mounted magnetic molecules — ●WOLFGANG KUCH
SYES 2.2	Thu	15:30–16:00	HSZ 01	Towards phononic circuits based on optomechanics — ●CLIVIA M. SOTOMAYOR-TORRES
SYES 2.3	Thu	16:00–16:30	HSZ 01	Optical properties of 2D materials and heterostructures — ●JANINA MAULTZSCH
SYES 2.4	Thu	16:45–17:15	HSZ 01	Bringing nanophotonics to the atomic scale — ●JAVIER AIZPURUA
SYES 2.5	Thu	17:15–17:45	HSZ 01	Infrared signatures of the coupling between vibrational and plasmonic excitations — ●ANNEMARIE PUCCI

Focus Session “Simulating Quantum Many-Body Systems on Noisy Intermediate-Scale Quantum Computers”

TT 11.1	Mon	15:00–15:30	HSZ 03	Quantum simulations with linear ion crystals interacting with laser light — ●CHRISTIAN ROOS
TT 11.2	Mon	15:30–16:00	HSZ 03	Entanglement spectroscopy on the IBM quantum computer — ●TITUS NEUPERT
TT 11.3	Mon	16:00–16:30	HSZ 03	Simulating quantum many-body systems on a quantum computer — ●ADAM SMITH
TT 11.4	Mon	16:45–17:15	HSZ 03	Quantum computing and its applications in chemistry and physics — ●IVANO TAVERNELLI
TT 11.5	Mon	17:15–17:45	HSZ 03	Randomized measurements: A toolbox for probing quantum simulators and quantum computers — ●BENOIT VERMERSCH

Focus Session “The Nickel Age of Superconductivity: Cuprates Reloaded or Something New?”

TT 20.1	Tue	9:30–10:00	HSZ 03	Superconductivity in infinite layer nickelates — ●HAROLD HWANG
TT 20.2	Tue	10:00–10:30	HSZ 03	Materials design of dynamically stable d^9 layered nickelates — ●RYOTARO ARITA
TT 20.3	Tue	10:30–11:00	HSZ 03	Superconductivity in Nickelates: Similarities and Differences from Cuprates — ●MICHAEL NORMAN
TT 20.4	Tue	11:15–11:45	HSZ 03	Comparing the electronic structure and magnetism of hole doped Nickelate and Cuprate superconductors — ●GEORGE SAWATZKY
TT 20.5	Tue	11:45–12:15	HSZ 03	Doping infinite-layer nickelates: A superlattice approach — ●EVA BENCKISER

Focus Session “Frontiers in Cryogenic Particle Detection”

TT 39.1	Wed	15:00–15:30	HSZ 03	Magnetic Micro-Calorimeters: Present success stories, concepts and visions — •ANDREAS FLEISCHMANN
TT 39.2	Wed	15:30–16:00	HSZ 03	Ultra-Sensitive Microwave Kinetic Inductance Detectors from the Optical to the Far Infrared — •JOCHEM BASELMANS
TT 39.3	Wed	16:00–16:30	HSZ 03	LTS dc-SQUID sensors for TES and MMC readout — •JÖRN BEYER
TT 39.4	Wed	16:45–17:15	HSZ 03	CRESST and NUCLEUS: The low-energy frontier of Dark Matter and neutrino physics — •RAIMUND STRAUSS
TT 39.5	Wed	17:15–17:45	HSZ 03	Large Array of Superconducting Transition-Edge Sensors for High Sensitive Photon and Particle Detectors — •LUCIANO GOTTARDI

Invited Talks not included in Focus Sessions

TT 4.1	Mon	9:30–10:00	HSZ 204	Towards an <i>ab-initio</i> theory of Anderson localization with correlated electrons — •LIVIU CHIONCEL
TT 14.1	Mon	15:00–15:30	HSZ 204	Magnetotransport and 2D Superconductivity in Heterostructures of BaBiO₃ and BaPbO₃ — •GERMAN HAMMERL
TT 35.1	Wed	9:30–10:00	HSZ 304	Field-induced magnetic order in the Kitaev material α-RuCl₃ — •LUKAS JANSSEN
TT 38.1	Wed	11:00–11:30	HSZ 103	Nematic superconductivity in the superconducting doped topological insulators Nb_xBi₂Se₃ and Sr_xBi₂Se₃ — •KRISTIN WILLA
TT 41.1	Wed	15:00–15:30	HSZ 201	Probing unconventional superconductivity using the field dependent magnetic penetration depth — •JOSEPH A. WILCOX
TT 55.1	Thu	9:30–10:00	HSZ 204	Probing Triplet Superconductivity by Scanning Tunneling Spectroscopy — •ELKE SCHEER
TT 63.1	Thu	15:00–15:30	HSZ 304	Linear magnets: a structure-property-relation for finding unquenched orbital moments — •ANTON JESCHE
TT 60.7	Thu	16:45–17:15	HSZ 103	Heat and Work Fluctuations in a Quantum Heat Engine — •PATRICK P. POTTS
TT 69.1	Fri	9:30–10:00	HSZ 03	Microwave Optomechanics with Superconducting Quantum Interference Cavities — •DANIEL BOTHNER

Sessions

TT 1.1–1.12	Mon	9:30–12:45	HSZ 03	Topological Insulators 1 (joint session TT/HL)
TT 2.1–2.12	Mon	9:30–12:45	HSZ 103	Superconductivity: Sample Preparation, Characterization, Properties and Electronic Structure
TT 3.1–3.13	Mon	9:30–13:00	HSZ 201	Complex Oxides: Bulk Properties (joint session TT/MA/HL)
TT 4.1–4.6	Mon	9:30–11:15	HSZ 204	Disordered Quantum Systems
TT 5.1–5.13	Mon	9:30–13:00	HSZ 304	Frustrated Magnets - General 1 (joint session TT/MA)
TT 6.1–6.15	Mon	9:30–13:15	HSZ 401	Cooperative Phenomena and Phase Transitions (joint session MA/TT)
TT 7.1–7.7	Mon	9:30–11:15	HSZ 403	Micro- and Nanostructured Materials (joint session MA/TT)
TT 8.1–8.8	Mon	9:30–11:30	POT 6	Topological Phenomena (joint session MA/TT)
TT 9.1–9.13	Mon	10:00–13:30	HÜL 186	Many-body Systems: Equilibration, Chaos and Localization I (joint session DY/TT)
TT 10.1–10.6	Mon	11:30–13:00	HSZ 204	Nanotubes and Nanoribbons
TT 11.1–11.7	Mon	15:00–18:15	HSZ 03	Focus Session: Simulating Quantum Many-Body Systems on Noisy Intermediate-Scale Quantum Computers (joint session TT/DY)
TT 12.1–12.7	Mon	15:00–16:45	HSZ 103	Topological Insulators 2 (joint session TT/HL)
TT 13.1–13.13	Mon	15:00–18:30	HSZ 201	Graphene (joint session TT/DY/HL)
TT 14.1–14.11	Mon	15:00–18:15	HSZ 204	Superconductivity: Theory 1
TT 15.1–15.4	Mon	15:00–16:00	HSZ 304	Frustrated Magnets - General 2 (joint session TT/MA)
TT 16.1–16.48	Mon	15:00–19:00	P2/EG	Poster Session Superconductivity, Cryogenic Particle Detectors, Cryotechnique
TT 17.1–17.19	Mon	15:00–19:00	P2/EG	Poster Session Correlated Electrons 1
TT 18.1–18.8	Mon	16:15–18:15	HSZ 304	Skyrmions (joint session TT/MA)
TT 19.1–19.6	Mon	17:00–18:30	HSZ 103	Low Dimensional Systems: Other Topics
TT 20.1–20.7	Tue	9:30–12:45	HSZ 03	Focus Session: The Nickel Age of Superconductivity: Cuprates Reloaded or Something New?

TT 21.1–21.13	Tue	9:30–13:00	HSZ 103	Topological Semimetals 1
TT 22.1–22.14	Tue	9:30–13:15	HSZ 201	Quantum Dots, Quantum Wires, Point Contacts
TT 23.1–23.13	Tue	9:30–13:00	HSZ 204	Nonequilibrium Quantum Many-Body Systems 1 (joint session TT/DY)
TT 24.1–24.13	Tue	9:30–13:00	HSZ 304	Frustrated Magnets - Spin Liquids 1 (joint session TT/MA)
TT 25.1–25.12	Tue	9:30–13:00	POT 6	Skyrmions I (joint session MA/TT)
TT 26.1–26.7	Tue	14:00–15:45	HSZ 02	Complex Oxides: Surfaces and Interfaces (joint session TT/MA/HL)
TT 27.1–27.7	Tue	14:00–15:45	HSZ 103	Topological Semimetals 2
TT 28.1–28.7	Tue	14:00–15:45	HSZ 201	Twisted Bilayer Graphene (joint session TT/HL)
TT 29.1–29.8	Tue	14:00–16:00	HSZ 204	Nonequilibrium Quantum Many-Body Systems 2 (joint session TT/DY)
TT 30.1–30.5	Tue	14:00–15:15	HSZ 304	Frustrated Magnets - Spin Liquids 2 (joint session TT/MA)
TT 31.1–31.13	Wed	9:30–13:00	HSZ 03	Superconducting Electronics: SQUIDs, Qubits, Circuit QED, Quantum Coherence and Quantum Information Systems 1
TT 32.1–32.5	Wed	9:30–10:45	HSZ 103	Superconductivity: Theory 2
TT 33.1–33.12	Wed	9:30–12:45	HSZ 201	Correlated Electrons: Method Development 1
TT 34.1–34.13	Wed	9:30–13:00	HSZ 204	Correlated Electrons: f-Electron Systems and Heavy Fermions 1
TT 35.1–35.12	Wed	9:30–13:00	HSZ 304	Frustrated Magnets - Strong Spin-Orbit Coupling 1 (joint session TT/MA)
TT 36.1–36.13	Wed	9:30–13:00	HÜL 186	Many-body Systems: Equilibration, Chaos and Localization II (joint session DY/TT)
TT 37.1–37.12	Wed	9:30–13:00	POT 6	Skyrmions II (joint session MA/TT)
TT 38.1–38.6	Wed	11:00–12:45	HSZ 103	Topological Superconductors
TT 39.1–39.8	Wed	15:00–18:30	HSZ 03	Focus Session: Frontiers in Cryogenic Particle Detection
TT 40.1–40.8	Wed	15:00–17:00	HSZ 103	Topological Josephson Junctions
TT 41.1–41.14	Wed	15:00–19:00	HSZ 201	Unconventional Superconductors
TT 42.1–42.10	Wed	15:00–17:45	HSZ 204	Correlated Electrons: f-Electron Systems and Heavy Fermions 2
TT 43.1–43.10	Wed	15:00–17:45	HSZ 304	Frustrated Magnets - Strong Spin-Orbit Coupling 2 (joint session TT/MA)
TT 44.1–44.14	Wed	15:00–19:00	HÜL 186	Quantum Chaos (joint session DY/TT)
TT 45.1–45.13	Wed	15:00–18:30	POT 6	Skyrmions III (joint session MA/TT)
TT 46.1–46.22	Wed	15:00–19:00	P2/2OG	Poster Session: Frustrated Magnets, Quantum Magnets, Charge Order and Complex Oxids
TT 47.1–47.30	Wed	15:00–19:00	P2/3OG	Poster Session Correlated Electrons 2
TT 48.1–48.12	Wed	15:00–19:00	P2/4OG	Poster Session: Many Body Systems, Quantum Critical Phenomena
TT 49.1–49.7	Wed	17:15–19:00	HSZ 103	Topolelectric Circuits and Quantum Hall Systems
TT 50.1–50.4	Wed	18:00–19:00	HSZ 204	Many-Body Localization
TT 51.1–51.4	Wed	18:00–19:00	HSZ 304	Molecular Electronics and Photonics (joint session TT/PPP)
TT 52.1–52.11	Thu	9:30–12:30	HSZ 03	Superconducting Electronics: SQUIDs, Qubits, Circuit QED, Quantum Coherence and Quantum Information Systems 2 (joint session TT/HL)
TT 53.1–53.14	Thu	9:30–13:15	HSZ 103	Topology: Majorana Physics
TT 54.1–54.14	Thu	9:30–13:15	HSZ 201	Fe-based Superconductors
TT 55.1–55.11	Thu	9:30–12:45	HSZ 204	Superconductivity: Tunnelling and Josephson Junctions
TT 56.1–56.13	Thu	9:30–13:00	HSZ 304	Correlated Electrons: Quantum-Critical Phenomena
TT 57.1–57.7	Thu	9:30–11:15	POT 6	Skyrmions IV (joint session MA/TT)
TT 58.1–58.6	Thu	10:30–12:00	GER 37	Graphene I: Growth, Structure and Substrate Interaction (joint session O/TT)
TT 59.1–59.13	Thu	15:00–18:30	HSZ 03	Correlated Electrons: Quantum Impurities and Kondo Physics; Other Materials
TT 60.1–60.9	Thu	15:00–17:45	HSZ 103	Cryotechnique: Refrigeration and Thermometry
TT 61.1–61.10	Thu	15:00–17:45	HSZ 201	Ultrafast Dynamics of Light-Driven Systems (joint session TT/MA)
TT 62.1–62.5	Thu	15:00–16:15	HSZ 204	Correlated Electrons: Method Development 2
TT 63.1–63.10	Thu	15:00–18:00	HSZ 304	Quantum Magnets and Molecular Magnets (joint session TT/MA)

TT 64.1–64.9	Thu	15:00–18:00	P1A	Poster: Active Matter and Microswimmers (joint session DY/TT)
TT 65.1–65.32	Thu	15:00–19:00	P2/EG	Poster Session Topological Topics
TT 66.1–66.18	Thu	15:00–19:00	P2/EG	Poster Session Transport
TT 67.1–67.8	Thu	16:30–18:30	HSZ 204	Cold Atomic Gases and Superfluids
TT 68	Thu	18:30–20:00	HSZ 03	Annual General Meeting
TT 69.1–69.3	Fri	9:30–10:30	HSZ 03	Nano- and Optomechanics (joint session TT/HL/CPP)
TT 70.1–70.5	Fri	9:30–10:45	HSZ 103	Correlated Electrons: Charge Order
TT 71.1–71.9	Fri	9:30–12:00	HSZ 304	Correlated Electrons: Other Theoretical Topics
TT 72.1–72.8	Fri	10:30–12:30	GER 37	Graphene II: Adsorption, Intercalation and Doping (joint session O/TT)
TT 73.1–73.5	Fri	11:00–12:15	HSZ 103	Topology: Other Topics

Annual General Meeting of the Low Temperature Physics Division

Thursday 18:30–20:00 Room HSZ 304

- Bericht
- Wahl
- Verschiedenes