

From Mesoscopic Superconductivity to Quantum Technologies

Workshop in Memory of Gerd Schön

18 - 20 February 2026

Program

Wednesday, 18.02.2026

Chair: M. Garst

09:00-09:25		Welcome
09:25-09:50	F. Guinea	Superconductivity in twisted and un-twisted graphene multilayers
09:50-10:15	Y. Nakamura	Superconducting single-electron transistor and Cooper-pair box
10:15-10:40	Y. Makhlin	Bound states in topological Josephson junctions

10:40–11:10 Coffee Break

Chair: C. Bruder

11:10-11:35	H. Pothier	Mesoscopic superconductivity
11:35-12:00	F. Sols	From quantum Andreev-Hawking radiation to spontaneous Floquet states and the time operator
12:00-12:25	M. Schechter	Noise and dissipation in superconducting devices and near the superconductor-insulator transition

12:30-14:00 Lunch

Chair: W. Belzig

14:00-14:25	G. Zimanyi	The Quantum Science of Solar Cell Degradation
14:25-14:50	G. Zarand	Cumulant Evolution and Full Counting Statistics: Classical vs. Quantum Simulation of Infinite Temperature Quantum Spin Chains
14:50-15:15	J. König	Charge-Carrier Dynamics in Nanostructures: What can we learn from Real-Time Measurements of Electron Tunneling in Quantum Dots?

15:15–15:45 Coffee Break

Chair: A. Mirlin

15:45-16:10	A. Wallraff	Loophole-free Bell inequality violation with superconducting circuits
16:10-16:35	J. von Delft	Tangent Space Krylov Computation of Real-Frequency Spectral Functions: Influence of Density-Assisted Hopping on 2D Mott Physics

**We would like to encourage discussions
and it is very important to stay on time**

Thursday, 19.02.2026

Chair: R. Fazio

09:00-09:25	Y. Gefen	How to use quantum measurement to engineer a dissipative bath
09:25-09:50	T. Kopp	Topological Superconductivity
09:50-10:15	J. Siewert	Evidence for multiple Andreev reflection in a hybrid superconducting single-electron transistor
10:15-10:40	J.C. Cuevas	Multi-terminal Josephson junctions: Andreev bound states, quartets and topology

10:40–11:10 Coffee Break

Chair: C. Rockstuhl

11:10-11:35	J. Schmalian	Superconductivity without Quasiparticles near the Relativistic Mott Transition
11:35-12:00	T. Heikkilä	Non-reciprocity in Josephson junctions
12:00-12:25	Y. Blanter	Magnonics with hybrid systems: Cavities, superconducting qubits, and phonons

12:30-14:00 Lunch

Chair: A. Shnirman

14:00-14:25	W. Zwerger	The Josephson-Effect: from BCS to BEC
14:25-14:50	M. Fogelström	Mesoscopic unconventional superconductivity
14:50-15:15	T. Martin	Andreev reflection and non-local Cooper pair transfer in nanoscale devices

15:15–15:45 Coffee Break

Chair: G. Falci

15:45-16:10	J. Pekola	Heat measurement of quantum interference
16:10-16:35	M. Governale	Thermodynamic Uncertainty Relation in Hybrid Normal-Superconducting Systems: The Role of Superconducting Coherence
16:35-17:00	J. Cole	The materials science of Josephson junctions: understanding their formation and electrical response from the atomic to the device scale

19:00 Dinner

**We would like to encourage discussions
and it is very important to stay on time**

Friday, 20.02.2026

Chair: U. Eckern

09:00-09:25	A. Zaikin	Absence of fractional ac Josephson effect in superconducting junctions
09:25-09:50	Y. Utsumi	Network Analysis of Steady-State Current Fluctuations
09:50-10:15	J. Martinek	Exchange interactions in a magnetically contacted quantum dot: from the Kondo effect to an all-electrical STM-ESR mechanism
10:15-10:40	D. Golubev	System-bath model for quantum chemistry

10:40–11:10 Coffee Break

Chair: F. Wilhelm-Mauch

11:10-11:35	V. Brosco	Superconducting quantum devices based on twisted van der Waals heterostructures
11:35-12:00	M. Marthaler	What is a good use case for a quantum computer?

12:30 – 14:00 Lunch