# Monday, June 24

8.50 - 9.10 Introduction and foreword by president Prof. Michael Weber

9.10-9.40 Jukka Pekola, Aalto University, Finland
*Quantum Thermodynamics in circuits*

9.40-10.00 Mikko Möttönen, Aalto University, Finland
*Quantum twister*

10.00-10.20 Milena Grifoni, University of Regensburg, Germany
*Heat transport in the quantum Rabi model: Universality and ultrastrong coupling effects.*

10.20-10.50 Coffee

10.50-11.20 Michael Thoss, Freiburg University, Germany
*Quantum transport and thermodynamics using the hierarchical equations of motion approach*

11.20-11.40 Frank Grossmann, TU Dresden, Germany
*Trajectory based multi-configuration approaches Bose-Hubbard dynamics*

11.40-12.00 Eric Lutz, Stuttgart University, Germany
*Converting quantum statistics into work*

12.00-12.20 Bayan Karimi, Aalto University, Finland
*Bolometric detection of Josephson radiation*

12.20-13.50 Lunch

# Monday, June 24

13.50-14.10 Rosario Fazio, University of Naples, Italy
*Time crystals, clocks and heat engines*

14.10-14.30 Christoph Bruder, University of Basel, Switzerland
*Quantum limit cycles, synchronization, and chimera states*

14:30-14:50 Wolfgang Schleich, Ulm University, Germany
*Tunnelling, the Landau-Zener effect and Hawking Radiation*

14.50-15.20 Coffee

15.20-15.50 Alfredo Levy Yeyati, Universidad Autónoma de Madrid, Spain
*Andreev/Shiba bound states: from charge transport to qubits*

15.50-16.10 Elisabetta Paladino, University of Catania, Italy
*Noise mechanisms in short ballistic graphene Josephson junctions*

16.10-16.30 Sebastian Loth, Stuttgart University, Germany
*Quantum stochastic resonance at the atomic scale*

16.30-16.50 Fabian Pauly
*Quantum transport through single-atom and single-molecule junctions*

17.00-18.30 Poster Session

# Tuesday, June 25

9.00-9.30 Daniel Esteve, CEA Paris-Saclay, France
*Quantum microwave optics in Josephson junction circuits*

9.30-9.50 Ambroise Peugeot, Ecole Normale Supérieure de Lyon, France
*DC-biased Josephson junction for the parametric coupling of quantum systems*

9.50-10.10 Nadav Katz, Hebrew University of Jerusalem, Israel
*Superconducting quantum circuits: algorithmic sensing and optimization*

10.10-10.40 Coffee

10.40-11.00 Jianshu Cao, MIT, USA
*Numerical Processing of non-Markovian Trajectories: Transfer Tensor Method*

11.00-11.20 Walter Strunz, TU Dresden, Germany
*TBD*

11.20-11.40 Simone Montangero, Padova University, Italy
*Tensor network algorithms for high-dimensional quantum many-body systems*

11.40-12.00 Annica Black-Schaeffer, Uppsala University, Sweden
*Enhanced topological superconductivity and Majorana bound states in one-dimensional systems*

12.00-13.50 Lunch & Group Photo

# Tuesday, June 25

13.50-14.20 Eli Pollak, Weizmann Institute of Science, Israel
*What is the crossover temperature between tunneling and thermal activation?*

14.20-14.40 Philippe Joyez, CEA Paris-Saclay, France
*Debunking a 40-year-old myth: the dissipative quantum phase transition in Josephson junctions*

14.40-15.00 Roman Riwar, Forschungszentrum Jülich, Germany
*Phase transitions and compact observables*

15.00-15.30 Coffee

15.30-15.50 Guido Burkhard, University of Konstanz, Germany
*Quantum theory of valleys in semiconductor quantum dots with applications for quantum computing*

15.50-16.10 Gershon Kurizki, Weizmann Institute of Science, Israel
*The Quantum Revolution Control-Our Successes and Missed Opportunities*

16.10-16.30 Léo Peyruchat, EPFL, Switzerland
*Spectral signatures of non-trivial topology in a superconducting circuit*

16.30-16.50 Hugues Pothier, CEA Paris-Saclay, France
*Effects of the measurement power on the states dynamics in a circuit-QED experiment*

**19.00 Conference Dinner at Restaurant Bellavista Ulm**

# Wednesday, June 26

9.00-9.20 Fabian Hassler, RWTH Aachen, Germany
*On-chip AC radiation and synchronization of Josephson circuits for high impedance electronics*

9.20-9.40 Andrew Armour, University of Nottingham, UK
*From Josephson Photonics to the Rabi model*

9.40-10.00 Berthold Jäck, Hong Kong University of Science and Technology, Hong Kong
*Visualizing topological quasiparticle excitations at the atomic scale*

10.00-10.20 Géraldine Haack, Université de Genève, Switzerland
*TBD*

10.20-10.50 Coffee

10.50-11.10 Gert-Ludwig Ingold, University of Augsburg, Germany
*Casimir interaction in colloidal and biophysical systems*

11.10-11.30 Sigmund Kohler, Instituto de Ciencia de Materiales de Madrid, Spain
*Floquet States Populations at Conical Intersections of Quasienergies*

11.30-11.50 Daniel Braun, University of Tübingen, Germany
*Recent developments in quantum metrology*

11.50-12.10 Vasilii Vadimov, Aalto University, Finland
*Nonlinear response theory for lossy superconducting quantum circuits*

12.10-12.20 Concluding remarks

**12.30 Lunch, departure**