

Quantum Microwaves, Heat Transfer and Many-Body Physics in Superconducting Devices



16 - 20 May 2022
An ICTP Hybrid Meeting
Trieste, Italy

Further information:

<http://indico.ictp.it/event/9788/>
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This conference will be a venue for bringing together world-leading experts, young researchers, and newcomers to discuss and to tackle modern challenges in mesoscopic superconducting devices.

Description:

Mesoscopic superconducting devices open up bright perspectives not only for current and future developments in quantum technologies but also to address fundamental physics. For example, a key for promising applications is utilizing the interplay between superconducting charge transport and energy dissipation in the form of microwave radiation and heat. Superconducting circuits are engineered to serve as bright sources of quantum microwave light and for the phase-coherent transfer of heat. From a different viewpoint, superconducting devices have been recognized as tools to realize, to probe and to control non-locality and topology in charge transport phenomena as well as strong correlations in many-body systems.

The conference will provide a bridge of shared expertise between communities aiming from different angles at novel superconducting phenomena and quantum technologies.

Participants are encouraged to submit abstracts.

A number of short oral presentation slots will be available for some of them upon selection, and a number of poster abstracts will be selected for poster session.

Topics:

- Sources and detection of quantum microwave light
- Driven dissipative Josephson circuits
- Many-body physics with novel Josephson devices and material designs
- Modern Josephson transport and quantum phase slips
- Heat transfer in superconducting devices

How to apply:

Online application:
<http://indico.ictp.it/event/9788/>

Female scientists are encouraged to apply.

Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

Directors:

J. ANKERHOLD, Ulm University, Germany
B. KUBALA, DLR and Ulm University, Germany
C. PADURARIU, Ulm University, Germany
N. ROCH, Institute Néel, France

Local Organiser:

R. FAZIO, ICTP, Italy

Speakers:

M. ABDI, Isfahan University of Technology, Iran
C. ALTIMIRAS, CEA Saclay-Paris, France
A. ARMOUR, The University of Nottingham, UK
L. ARRACHEA, Universidad de Buenos Aires, Argentina
C. AST, Max Plank FKF Stuttgart, Germany
D. BASKO, Institut Neel, Grenoble, France, France
W. BELZIG, University of Konstanz, Germany
N. BOURLET, Sherbrooke University, Canada, Canada
A. CLERK, University of Chicago, USA
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F. HASSLER, RWTH Aachen University, Germany
E. PALADINO, University of Catania, Italy
H. HUTIN, Ecole Normale Supérieure Lyon, France
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T. KONTOS, Université Paris Sud, France
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M. SÁNCHEZ, Bariloche Atomic Center, Argentina
F. TADDEI, NEST NANO-CNR & Scuola Normale Superiore, Italy
E. TURECI, Princeton University, USA
A. USTINOV, Kfa - Forschungszentrum Julich GmbH, Germany
D. VION, CEA Saclay-Paris, France
S. VIRALLY, Sherbrooke University, Canada, Canada
A. WALLRAFF, ETH Zurich, Switzerland, Switzerland
F. WILHELM-MAUCH, University of Saarbrücken, Germany
C. WILSON, University Waterloo, Canada

Deadlines:

15 April 2022

For applications to attend in presence

6 May 2022

For applications to attend online only

