

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



17 August to 21 August 2020
Trieste, Italy

Further information:
<http://indico.ictp.it/event/9115/smr3470@ictp.it>

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.

Topics:

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

Remarks:

The program will also include a number of contributed talks.

A poster session will be organized.

Directors:

R. Fazio (ICTP) - Local Organizer
C. Padurariu (Ulm University)
B. Kubala (DLR and Ulm University)
N. Roch (CNRS)
J. Ankerhold (Ulm University)

Workshop Speakers:

C. Altimiras, France
A. Armour, UK
L. Arrachea, Argentina
C. Ast, Germany
O. Astafiev, Russian Fed./UK
W. Belzig, Germany
A. Clerk, USA
B. Dassonneville, France
F. Deppe, Germany
M. Dykman, USA
S. Florens, France
S. Gasparinetti, Sweden
A. Geresdi, Sweden
P. Hakonen, Finland
M. Hofheinz, Canada
N. Katz, Israel
T. Kontos, France
A. Levy Yeyati, Spain
X.-Q. Li, China
C. Metzger, France
J. Meyer, France
M. Möttönen, Finland
Y. Nazarov, The Netherlands
E. Paladino, Italy
J. P. Paz, Argentina
J. Pekola, Finland
F. Portier, France
B. Reulet, Canada
M. J. Sanchez, Argentina
I. Snyman, South Africa
E. Solano, Spain
F. Taddei, Italy
A. Ustinov, Russian Fed./Germany
A. Wallraff, Switzerland
F. Wilhelm-Mauch, Germany
C. Wilson, Canada
A. Zorin, Germany

How to apply:

Online application:
<http://indico.ictp.it/event/9115/>

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.

Deadline:

15 April 2020



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