



MAX-PLANCK-GESELLSCHAFT

Charge Transfer meets Circuit Quantum Electrodynamics

International Workshop 29 June - 3 July 2015

Recent experiments have considered various mesoscopic transport devices embedded within microwave cavities to investigate correlated photon-charge transfer processes. This workshop will discuss experimental and theoretical aspects relevant to these and related set-ups.

Topics include

- Quantum-classical crossovers far from equilibrium
- Interaction between voltage driven charge transfer and electromagnetic excitations
- From Coulomb blockade to AC Josephson effect
- Creation of photon entanglement via charge transfer
- Quantum limited detection
- Nonlinear resonators far from equilibrium
- Photon emission from cavities coupled to double quantum dots or Josephson junctions
- Creation of coherent and/or squeezed microwave photon states
- Interaction of charge and mechanical vibrations
- Photon radiation emitted from quantum point contacts

Invited speakers

J. Ankerhold (DE)
O. Astafiev (UK)
G. Blatter (CH)
T. Brandes (DE)
E. Buks (IL)
R. Berndt (DE)
H. Bouchiat (FR)
A. Cottet (FR)
F. Deppe (DE)
M. Devoret (US)
M.I. Dykman (US)
D. Esteve (FR)
M. Grifoni (DE)
P. Hakonen (FI)
M. Hofheinz (FR)
G. Johansson (SE)
S. Komiyama (JP)
T. Kontos (FR)
W.D. Oliver (US)

J.R. Petta (US)
F. Portier (FR)
A.J. Rimberg (US)
P. Samuelsson (SE)
G. Schön (DE)
G.A. Steele (NL)
H.E. Türeci (US)
A. Wallraff (CH)

The complete, up-to-date list of confirmed speakers can be found on the workshop's webpage.

Scientific coordinators

Miles P. Blencowe
Hanover, USA
Benjamin Huard
Paris, France
Björn Kubala
Ulm, Germany

Organisation

Katrin Lantsch, MPIPKS

Applications received before 15 March 2015 are considered preferentially.

Applications are welcome and should be made by using the application form on the workshop's web page. The number of attendees is limited. The registration fee for the international workshop is 120 Euro and should be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses. Please note that childcare is available upon request.

For further information please contact:

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CTcQED15

Dresden, 29 June-3 July 2015

