

"NIM Conference on Resonator QED"

Tuesday, August 29 - Friday, September 1, 2017

Kardinal-Wendel-Haus München

The NIM Conference on Resonator Quantum Electrodynamics (Resonator QED 2017) will take place at Munich from August 29 - September 1, 2017. It is organized by the Cluster of Excellence "Nanosystems Initiative Munich" (NIM) which has been established in 2006 by the German government's "Excellence Initiative".

The Resonator QED 2017 conference is a continuation of the highly successful Resonator QED 2013 and 2015 conference, also held in Munich. The Resonator QED 2017 conference will consist of tutorials and invited talks, as well as a small number of contributed talks and poster presentations.

Scope

The NIM Conference on Resonator Quantum Electrodynamics (Resonator QED 2017) aims to bridge two communities in quantum physics – optical cavity QED and solid state circuit QED – to share, pursue and diffuse the benefits of collaborations in the science of elementary quanta. Both fields made spectacular progress in the past years, with a remarkable diversity of demonstrated physical effects.

To list a few, milestones include the direct observation of the quantum jumps of microwave light, the deterministic generation and tomography of arbitrary quantum states of a resonator by superconducting quantum bits, the evidence of the Lamb shift in a solid-state system, the generation of nonlinear photonics with one atom, the realization of real-time feedback schemes on single atoms triggered by the detection of single photons, the nondestructive detection of an optical photon as well as the implementation of quantum gates between flying optical photons and stationary matter qubits.

It is remarkable that circuit and cavity quantum electrodynamics share the same concepts, whereas they explore different regimes with essentially different techniques. Such complementarities give a strong motivation to bring together the solid-state circuit and the atomic physics cavity groups to form a unified scientific community. Within Resonator QED 2017, the Cluster of Excellence NIM intends to foster interactions between the optical cavity QED and solid state circuit QED communities.

Invited speakers

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| <ul style="list-style-type: none">➤ Charles Adams (Durham University, UK)➤ Wolfgang Alt (Universität Bonn, Germany)➤ Mete Atatüre (University of Cambridge, UK)➤ Howard Carmichael (University of Auckland, New Zealand)➤ Michel Devoret* (Yale University, USA)➤ Leo DiCarlo* (TU Delft, The Netherlands)➤ Fei Ding (Leibniz-Universität Hannover, Germany)➤ Ralph Eichler* (ETH Zurich, Switzerland)➤ Dirk Englund (Stanford University, USA)➤ Daniel Esteve* (CEA, Paris, France)➤ Kirill Fedorov (TU München / WMI, Germany)➤ Mark Fox (University of Sheffield, UK)➤ Alexey Gorshkov (University of Maryland, USA)➤ Jack Harris* (Yale University, USA)➤ Sebastian Hofferberth (Universität Stuttgart, Germany) | <ul style="list-style-type: none">➤ Hans Hübl (TU München / WMI, Germany)➤ Fabrice Laussy (University of Wolverhampton, UK)➤ Konrad Lehnert* (NIST, Boulder, USA)➤ Norbert Lütkenhaus (University of Waterloo, Canada)➤ Luis Orozco (University of Maryland, USA)➤ Jianwei Pan* (Shanghai University, China)➤ Oskar Painter* (Caltech, USA)➤ Wolfgang Pfaff (Yale University, USA)➤ Rob Schoelkopf (Yale University, USA)➤ Irfan Siddiqui (University of California Berkeley, USA)➤ Glenn Solomon (University of Maryland, USA)➤ Mark Thompson* (University of Bristol, UK)➤ Jelena Vuckovic* (Stanford University, USA)➤ Vladan Vuletic (MIT, USA) |
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(* to be confirmed)

More information can be found on the following link:

<http://www.nano-initiative-munich.de/events/nim-conference-on-resonator-qed-2017/>