Superconducting Quantum Devices 2017 – SQD17

Tuesday 12th September 2017
Faraday Lecture Theatre
Lancaster University
Lancaster LA1 4YB

Programme

10.30 Refreshments available
10:50 Introduction
11.00 Talk 1
Malcolm Connolly, Center for Quantum Devices, University of Copenhagen
A 2DEG gatemon qubit
11.25 Talk 2
Alessandro Romito, Lancaster University
Thermodynamics along individual trajectories of a superconducting quantum bit
11.50 Talk 3
Andrew Patterson, University of Oxford
High fidelity two-qubit control of coaxmons
12.15 Talk 4
Themis Mavrogordatos, UCL
Rare quantum fluctuations in the strongly dispersive Jaynes-Cummings oscillator
12:40 Talk 5
Joseph Allen, University of Surrey
Robust optimal control of superconducting qubits
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13:05 Lunch and posters, Physics Atrium
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14.30 Talk 6
Jacob Dunstan, Royal Holloway
On the instability of the flux configuration in SQUID arrays
14.55 Talk 7
Connor Shelly, NPL
Hybrid Quantum Interference Devices (HyQUIDs) in bifurcation mode as a quantum readout
15.20 Talk 8
Dmitry Morozov, University of Glasgow
Titanium nitride kinetic inductance detectors for passive terahertz imaging
15.45 Talk 9
Kaveh Delfanazari, University of Cambridge
On-chip hybrid superconducting-semiconducting circuits for scalable topological quantum computing
16.10 Talk 10
Shaun Geaney, NPL
The design of a near-field scanning microwave microscope operating in the quantum regime
16.35 Talk 11
Jeremy Good, Cryogenic Ltd.
High field SQUID magnetometers
17.00 End, refreshments available

**Poster presentations**
13:05 – 14:30
Atrium, Physics Department, Lancaster University

1. Tianyi Li, UCL
   Ballistic Josephson junctions based on CVD graphene

2. Tom Godfrey, UCL- LCN
   Investigating microwave properties of nanobridge based Josephson junctions fabricated by Xe focused ion beam

3. Sebastian de Graaf, NPL
   Reducing 1/f noise in superconducting resonators by desorption of surface spins

4. Sebastian de Graaf, NPL
   Duality and the charge quantum interference device

5. Peter Spring, University of Oxford
   Coherence and control in double-sided coaxial circuit QED

6. Martin Esposito, University of Oxford
   Towards single shot readout in double-sided coaxial circuit QED

7. Connor Shelly, NPL
   Suitability of nanobridges for Josephson junction elements in superconducting circuits

8. Robert Heath, University of Glasgow
   Waveguide-integrated superconducting single photon detectors for on-chip quantum information processing

9. Alex Jones, Lancaster University
   On-chip nuclear demagnetisation cooling of electrons in a nanoelectronic device

10. Jon Fenton, UCL
    Influence of shunting environment on coherent quantum phase-slips in superconducting nanowires