

LTQD2025 PROGRAMME

Sunday, August 3, 2025

17:00 - 21:00	Registration and Welcome drinks	Clarion Hotel, Living room
18:00 – 18:25	Introduction	Sorin Paraoanu

Monday, August 4, 2025

8:00 - 8:45	Registration, Morning coffee	
8:45 – 9:00	Welcome	Sorin Paraoanu, Pertti Hakonen
SESSION I Chair: Jose Lado		
9:00 – 9:45	Keynote talk: Microwave photon counting applied to magnetic resonance	Patrice Bertet (CEA Saclay, France)
9:45 – 10:20	Zeptojoule calorimetry and beyond with applications in circuit quantum electrodynamics	Mikko Möttönen (Aalto, Finland)
10:20 – 10:45	Development of photon detectors based on granular aluminum superconducting resonators	Kelvin Julinio Ramos Villalobos (Balseiro Institute)
10:45 – 11:15	Coffee break	
SESSION II Chair: Manohar Kumar		
11:15 – 11:50	Low temperature detector experiments to test fundamental physics	Michael Tobar (UWA, Australia)
11:50 – 12:15	Development of a new type of tunable haloscope for axion detection	Chloé Fruy (LPENS)
12:15 – 12:40	Contributed talk	Contributed speaker
12:40 – 14:10	Lunch (Clarion buffet)	
SESSION III Chair: Jukka Pekola		
14:10 - 14:55	Superconducting Nanowire Detectors	Karl Berggren (MIT, US)
14:55 – 15:30	Superfluid 3He as a sub-GeV dark matter detector	Samuli Autti (Lancaster University, UK)
15:30 – 15:55	A single superconducting vortex on a leash: thermodynamics and applications	Maciej Zgirski (Institute of Physics, PAN)
15:55 – 16:20	Sub-40 nm Magnon Generation and Detection Enabled by Moving Fluxons	Oleksandr Dobrovolskiy (Technische Universität Braunschweig)
16:30 – 18:30	Coffee break/Poster session	

Tuesday, August 5, 2025		
8:30 - 9:00	Morning coffee	
SESSION IV	Chair:	
9:00 – 9:45	Keynote talk: Exploring phonons as mobile qubits	Andrew Cleland (Chicago, US)
9:45 – 10:20	Physics and Applications of Andreev Spin Qubits	Valla Fatemi (Cornell, US)
10:20 – 10:45	Ytterbium Ion-Based Interfaces for Optical and Microwave Remote Entanglement Distribution	Louis Nicolas (Applied Physics, Geneva group)
10:45 – 11:15	Coffee break	
SESSION V	Chair:	
11:15 – 11:50	Parametric amplification with an Al-InAs superconductor	Shyam Shankar (Texas, US)
11:50 – 12:15	Nonlinearity-enhanced dispersive-plus-dissipative coupling in tunable niobium photon-pressure circuits	Daniel Bothner (Universität Tübingen)
12:15 – 12:40	Interferometric readout of high Q magnetically levitated superconductors at mK temperatures	Jannek J Hansen (Vienna Center for Quantum Science and Technology)
12:40 – 14:00	Lunch (Clarion buffet)	
SESSION VI	Chair:	
14:00 - 14:35	Bound states in waveguide Quantum Electrodynamics	Arkady Fedorov (Queensland, Australia)
14:35 – 15:00	Escape rate problem in driven Josephson junctions	Tomáš Novotný (Charles University)
15:00 – 15:25	Feasibility of the Josephson voltage and current standards on a single chip	Rais Shaikhaidarov (Royal Holloway University of London)
15:25 – 16:00	Microwave impedance microscopy of quantum materials at mK temperatures	Monica Allen (U. California, US)
16:00 – 16:10	Sponsor talk	IQM
16:10 – 18:00	Coffee break/ Poster session II	
19:00	Conference dinner	

Wednesday, August 6, 2025

8:30 - 9:00	Morning coffee	
SESSION VII Chair: Jorden Senior		
9:00 – 9:45	Keynote talk II	Kent Irwin (Stanford University, US)
9:45 – 10:20	Exploring New Physics with Superconducting Quantum Technologies	Nicolò Crescini (CNRS, France)
10:20 – 10:45	Quantum sensing with TES for dark matter detection	Christina Schwemmbauer (DESY)
10:45 – 10:50	Poster winners announced	
10:50 – 11:20	Coffee break	
SESSION VIII Chair: Peter Liljeroth		
11:20 – 11:55	Imaging vdW magnets and magnetic devices in the 2D limit	Martino Poggio (Basel, Switzerland)
11:55 – 12:20	Multi-channel second-order topological states in $\text{Bi}_{0.97}\text{Sb}_{0.03}$	Biplab Bhattacharyya (University of Twente)
12:20 – 12:45	When dissipation kills dissipation in a metastable dynamic vortex state	Ch. Feuillet-Palma (LPEM, ESPCI-Paris, PSL, CNRS, Sorbonne University)
12:45 – 14:15	Lunch (Clarion buffet)	