

DAQS2018

PROGRAMME

MONDAY, 15 JANUARY 2018

- 08:30–09:30 Registration & Opening
- CHAIR Yasunobu Nakamura
- 09:30-10:00 Mo01 **Antonio Córcoles** (IBM)
“Redefining metrics in near-term devices for quantum information processing”
- 10:00-10:30 Mo02 **Keisuke Fujii** (Kyoto University)
“Efficient simulation of quantum error correction under coherent error based on non-unitary free-fermionic formalism”
- 10:30-11:00 Coffee Break
- CHAIR Aashish Clerk
- 11:00-11:30 Mo03 **Harald Schwefel** (University of Otago)
“Efficient microwave to optical photon conversion: an electro-optical realisation”
- 11:30-12:00 Mo04 **Amir Safavi-Naeini** (Stanford University)
“Laser cooling of single-mode phononic wires and quantum electro-optics”
- 12:00-12:30 Mo05 **Atsushi Noguchi** (The University of Tokyo)
“Quantum hybrid systems with surface acoustic waves”
- 12:30-14:00 Lunch
- CHAIR Takeshi Fukuhara
- 14:00-14:30 Mo06 **Ahmed Omran** (Harvard University)
“Probing many-body dynamics on a 51-atom quantum simulator”

- 14:30-15:00 Mo07 **Zhen-Sheng Yuan** (University of Science and Technology of China)
"Atomic spin entanglement and anyonic fractional statistics in an optical lattice"
- 15:00-15:30 Mo08 **Masahito Ueda** (The University of Tokyo & RIKEN CEMS)
"Zeno Hall effect"
- 15:30-16:00 Coffee Break
- 16:00-17:30 Poster Session (Odd-number presenters)
- CHAIR Masahito Ueda
- 17:30-18:00 Mo09 **Hiroki Ikegami** (RIKEN CEMS)
"Topological phenomena and relativistic fermions in superfluid ^3He "
- 18:00-18:30 Mo10 **Jean-Philippe Brantut** (EPFL)
"Quantum transport experiments with cold atoms"

TUESDAY, 16 JANUARY 2018

- CHAIR Koji Usami
- 09:30-10:00 Tu01 **Mete Atatüre** (University of Cambridge)
"Generating nonlocal quantum correlations between distant quantum-dot spins via optical measurement"
- 10:00-10:30 Tu02 **Peter Lodahl** (Niels Bohr Institute, University of Copenhagen)
"Single-photon quantum technology with quantum dots"
- 10:30-11:00 Coffee Break
- CHAIR Pedram Roushan
- 11:00-11:30 Tu03 **Andreas Wallraff** (ETH Zurich)
"Deterministic generation of remote entanglement with microwave photons"
- 11:30-12:00 Tu04 **Fumiki Yoshihara** (NICT)
"Inversion of qubit energy levels in deep-strongly-coupled qubit-oscillator circuits"

- 12:00-12:30 Tu05 **Aashish Clerk** (The University of Chicago)
"Exploiting two-photon driving in circuit QED: synthetic strong coupling and entangled cat states"
- 12:30-14:00 Lunch
- CHAIR Takis Kontos
- 14:00-14:30 Tu06 **Andrea Morello** (UNSW)
"Scaling up single-atom spin qubits in silicon"
- 14:30-15:00 Tu07 **Thaddeus Ladd** (HRL Laboratories)
"Isotopically enhanced triple-dot qubits in SiGe"
- 15:00-15:30 Tu08 **Takashi Nakajima** (RIKEN CEMS)
"Rapid single and two-qubit manipulations of electron spins in a GaAs triple quantum dot"
- 15:30-16:00 Photo & Coffee Break
- 16:00-17:30 Poster Session (Even-number presenters)
- CHAIR Andreas Wallraff
- 17:30-18:00 Tu09 **Blake Johnson** (Rigetti Computing)
"Scaling up a superconducting qubit lattice with parametric gates"
- 18:00-18:30 Tu10 **Pedram Roushan** (Google Inc.)
"Spectral signatures of many-body localization of interacting photons"
- 18:30-20:30 Banquet

WEDNESDAY, 17 JANUARY 2018

- CHAIR Thaddeus Ladd
- 09:30-10:00 We01 **Toshimasa Fujisawa** (Tokyo Institute of Technology)
"Non-equilibrium dynamics in a quantum-Hall Tomonaga-Luttinger liquid"
- 10:00-10:30 We02 **Makoto Negoro** (Osaka University)
"NMR implementation of quantum reservoir computing"

- 10:30-11:00 Coffee Break
- CHAIR Harald Schwefel
- 11:00-11:30 We03 **Jungsang Kim** (Duke University)
"Progress towards a trapped ion quantum computer"
- 11:30-12:00 We04 **Shuntaro Takeda** (The University of Tokyo)
"Optical hybrid quantum teleportation and its application to large-scale quantum computing"
- 12:00-12:30 We05 **Gerhard Rempe** (Max Planck Institute of Quantum Optics)
"Quantum nonlinear optics with distinguishable and indistinguishable photons"
- 12:30-14:00 Lunch
- CHAIR Koji Ishibashi
- 14:00-14:30 We06 **Amir Yacoby** (Harvard University)
"Singlet triplet spin qubits in the rotating frame"
- 14:30-15:00 We07 **Takis Kontos** (ENS Paris)
"Synthetic spin orbit interaction for Majorana devices"
- 15:00-15:30 We08 **Charles Marcus** (Niels Bohr Institute)
"The experimental status of Majorana zero modes in semiconductor-superconductor hybrids"
- 15:30-16:00 Coffee Break
- CHAIR Seigo Tarucha
- 16:00-16:30 We09 **Tim Taminiau** (QuTech)
"Diamond quantum networks for distributed quantum computation"
- 16:30-17:00 We10 **Hideo Kosaka** (Yokohama National University)
"Holonomic quantum manipulation of diamond qubits"
- 17:00-17:30 Closing & Departure