

THURSDAY, 31 MAY 2018

07:00 – 08:30 *Breakfast*

SESSION XII, CHAIR: LUKAS NOVOTNY

09:00 – 09:40 **Coherent Coupling of a Single Spin to a Single Photon**

Jason Petta (Princeton University, USA)

09:40 – 10:20 **Generation and manipulation of quantum light with semiconductor quantum dots**

Pascale Senellart (CNRS – Center for Nanoscience and Nanotechnology, France)

30' *Coffee Break*

SESSION XIII, CHAIR: CHRISTIAN DEGEN

10:50 – 11:30 **Majorana zero modes in InAs/Al two-dimensional heterostructures**

Fabrizio Nichele (IBM Research – Zurich, Switzerland)

11:30 – 12:10 **Template-Assisted Scalable Nanowire Networks**

Anna Fontcuberta i Morral (EPF Lausanne, Switzerland)

12:30 *Lunch*

SESSION XIV, CHAIR: PATRICK MALETINSKY

16:00 – 16:40 **Coherent control and precision measurements of a single molecular ion**

James Chin-wen Chou (NIST, Boulder, USA)

16:40 – 17:20 **An encoded qubit in a trapped-ion oscillator**

Christa Flühmann (ETH Zurich, Switzerland)

30' *Coffee Break*

SESSION XV, CHAIR: GIACOMO SCALARI

17:50 – 18:30 **Emergent phases of light in driven-dissipative lattices**

Matteo Biondi (ETH Zurich, Switzerland)

18:30 – 19:10 **Quantum electrodynamics with many-body states in confined systems**

Angela Vasanelli (Université Paris-Diderot, Paris, France)

19:30 *Dinner*

21:00 *Poster Session*

FRIDAY, 1 JUNE 2018

07:00 – 08:30 *Breakfast*
Checkout in the Hotel Monte Verità;
afterwards

SESSION XVI, CHAIR: JANET ANDERS

09:00 – 09:40 **Machine learning and the renormalisation group**

Maciek Koch-Janusz (ETH Zurich, Switzerland)

09:40 – 10:20 **Topological lattices of microcavity polaritons**

Alberto Amo (CNRS – Laboratoire PhLAM, France)

30' *Coffee Break*

SESSION XVII, CHAIR: GIAN SALIS

10:50 – 11:30 **Quantum error correction for sensing**

Paola Cappellaro (MIT, USA)

11:30 – 12:10 **Optical clock spectroscopy in correlated sub-spaces**

Roei Ozeri (The Weizmann Institute of Science, Israel)

12:10 – 12:20 **CSF Award and Closing Address:**

Chiara Cometta, Gianni Blatter

12:30 *Lunch; afterwards Departure*

The schedule of the shuttle bus between Monte Verità and Locarno mainstation will be announced during the conference.

Abstracts see:

www.nccr-qsit.ethz.ch/news/conferences-events/monte-verita-2018/program

INTERNATIONAL CONFERENCE
27 MAI – 1 JUNE 2018

QUANTUM SYSTEMS AND TECHNOLOGY



SUNDAY, 27 MAY 2018

17:50 – 18:30 *Registration*
18:30 – 19:10 *Welcome Apéro*
19:30 *Dinner*

MONDAY, 28 MAY 2018

07:00 – 08:30 *Breakfast*
08:50 **Welcome Address**
Gianni Blatter (ETH), Chiara Cometta (CSF)

SESSION I, CHAIR: GERHARD REMPE

09:00 – 09:40 **Quantum gas microscopy of atomic Fermi-Hubbard systems**
Waseem Bakr (Princeton University, USA)
09:40 – 10:20 **Quantum liquid droplets in a mixture of Bose-Einstein condensates**
Leticia Tarruell (ICFO, Spain)
30' *Coffee Break*

SESSION II, CHAIR: TRACY NORTHUP

10:50 – 11:30 **TBA**
tba
11:30 – 12:10 **Quantum sensing with a SQUID-on-tip scanning probe**
Martino Poggio (University of Basel, Switzerland)
12:30 *Lunch*

SESSION III, CHAIR: RENATO RENNER

16:00 – 16:40 **Ten Years of Blind Quantum Computing**
Anne Broadbent (University of Ottawa, Canada)
16:40 – 17:20 **Observing a Quantum Maxwell Demon at Work**
Janet Anders (University of Exeter, United Kingdom)
30' *Coffee Break*

SESSION IV, CHAIR: ALEXANDRA OLAYA-CASTRO

17:50 – 18:30 **Neural networks discovering quantum feedback strategies from scratch**
Florian Marquardt (Max Planck Institute for the Science of Light, Erlangen, Germany)
18:30 – 19:10 **Realizing high-dimensional topology using systems with synthetic dimensions**
Oded Zilberberg (ETH Zurich, Switzerland)
19:30 *Dinner*
21:00 – 23:00 *Poster Session*



TUESDAY, 29 MAY 2018

07:00 – 08:30 *Breakfast*

SESSION V, CHAIR: ODED ZILBERBERG

09:00 – 09:40 **Subjectivity in quantum thermodynamics**
Lidia del Rio (ETH Zurich, Switzerland)
09:40 – 10:20 **TBA**
Leonardo Fallani (LENS, University of Florence, Italy)
30' *Coffee Break*

SESSION VI, CHAIR: TILMAN ESSLINGER

10:50 – 11:30 **Quantum state transfer for ion-based quantum networks**
Tracy Northup (Universität Innsbruck, Austria)
11:30 – 12:10 **Polyatomic Molecules: The New Quantum Frontier**
Gerhard Rempe (MPI of Quantum Optics, Garching, Germany)
12:30 *Lunch*

SESSION VII, CHAIR: CLEMENS MÜLLER

16:00 – 16:40 **Bridging quantum science and biology**
Alexandra Olaya-Castro (University College London, United Kingdom)
16:40 – 17:20 **Studying Light-Harvesting Models with Superconducting Circuits**
Anton Potocnik (ETH Zurich, Switzerland)
30' *Coffee Break*

SESSION VIII, CHAIR: JOE RENES

17:50 – 18:30 **A software stack for quantum computing**
Bettina Heim (Microsoft, USA)
18:30 – 19:10 **ProjectQ – Software for Quantum Computing**
Damian Steiger (ETH Zurich, Switzerland)
19:30 *Dinner*
21:00 – 23:00 *Poster Session*

WEDNESDAY, 30 MAY 2018

07:00 – 08:30 *Breakfast*

SESSION IX, CHAIR: KLAUS ENSSLIN

09:00 – 09:40 **A “Spins-inside” Quantum Processor**
Lieven Vandersypen (QuTech & Kavli Institute of Nanoscience Delft, The Netherlands)
09:40 – 10:20 **Using Topology to Build a Better Qubit**
Charles M. Marcus (Microsoft, USA & University of Copenhagen, Denmark)
30' *Coffee Break*

SESSION X, CHAIR: ANDREAS WALLRAFF

10:50 – 11:30 **Quantum supremacy: checking a quantum computer with a classical supercomputer**
John Martinis (UC Santa Barbara & Google, USA)
11:30 – 12:10 **The quantum future of computation**
Matthias Troyer (Microsoft, USA & ETH Zurich, Switzerland)
12:30 *Lunch*

SESSION XI, CHAIR: JONATHAN HOME

14:30 – 15:10 **Quantum Computing at IBM**
Sheldon, Sarah (IBM T.J. Watson Research Center, USA)
15:10 – 15:50 **Hybrid quantum computing with near-term hardware**
Blake Johnson (Rigetti, USA)
15:50 – 16:30 **Quantum Computing with Trapped Ions**
Christopher Monroe (University of Maryland & IonQ, USA)
30' *Coffee Break*
17:00 – 18:30 **Panel Discussion**
Chair: Luke Fleet (Nature Research)

19:00 *Departure by bus from Monte Verità to Losone*
19:30 *Conference Dinner in Losone*
23:00 *Bus back from Losone via Ascona to Monte Verità*

