

## SCIENTIFIC PROGRAM

### Tuesday September 18

- 8.30-9.00 Registration
- 9.00-9.10 Welcome
- Session I, Chair: Albert Schliesser**
- 9.10- 9.50 **Darrick Chang, ICFO, Barcelona**  
*Quantum optics using atomic arrays*
- 9.50-10.30 **Tracy Northup, Universität Innsbruck**  
*Quantum networks and quantum optomechanics with trapped ions*
- 10.30-11.00 Coffee break
- 11.00-11.40 **Tobias Kippenberg, EPFL - Ecole Polytechnique Fédérale de Lausanne**  
*Quantum effects in interferometric position measurements of nanomechanical oscillators*
- 11.40-12.00 **Sebastian Hofferberth, University of Southern Denmark**  
*Free-Space Quantum Electrodynamics with Rydberg Superatoms*
- 12.00-12.20 **Stefan Kröll, Lund University**  
*Quantum computing in rare earth ion doped crystals*
- 12.20-13.30 Lunch
- Session II, Chair: Nir Rotenberg**
- 13.40-14.00 **David Mason, University of Copenhagen**  
*Quantum Measurement and Control of a Mechanical Resonator*
- 14.00-14.40 **Stephanie Wehner, Delft University of Technology**  
*Towards a full network stack for a quantum internet*
- 14.40-15.00 **Johannes Borregaard, University of Copenhagen**  
*One-way quantum repeaters with photonic tree clusters*
- 15.00-15.20 **Stephan Goetzinger, Friedrich Alexander University**  
*Close to perfect coupling of photons to a single molecule in a microcavity*
- 15.30-16.00 Coffee break
- 16.00-16.20 **Klemens Hammerer, Leibniz Universität, Hannover**  
*Superradiance in continuously pumped and probed Alkali vapors*
- 16.20-16.40 **Hannes Pichler, Harvard University**  
*Quantum Optimization with arrays of Rydberg Atoms*
- 16.40-17.20 **Hugues de Riedmatten, ICFO Barcelona**  
*Linking Hybrid Quantum Nodes with Single Photons*
- 17.30- 19.00 Poster session
- 19.00- 21.30 Dinner

## Wednesday September 19

- 9.00-9.40 **Session III, Chair: Hanna Le Jeannic**  
**Mikhail (Misha) Lukin: Harvard University**  
*Quantum networks with neutral atoms and atom-like systems*
- 9.40-10.20 **Richard Warburton: University of Basel**  
*A charge-tunable quantum dot deep in the strong coupling regime of cavity QED*
- 10.20-10.50 Coffee break
- 10.50-11.30 **Mete Atatüre: University of Cambridge**  
*Optical Control of Quantum-Dot Nuclei: en route to a local register*
- 11.30-11.50 **Martijn Wubs: Technical University of Denmark**  
*Coherent perfect absorption with quantum states of light*
- 11.50-12.20 Group Photo
- 12.20-13.30 Lunch
- 13.30-14.10 **Session IV, Chair: Tim Schröder**  
**Klaus Mølmer: University of Aarhus**  
*Precision measurements – the noisier the better!*
- 14.10-14.50 **Florian Marquardt: Max Planck Institute for the Science of Light**  
*Neural networks discovering quantum feedback strategies*
- 14.50-15.10 **Leonardo Midolo: University of Copenhagen**  
*Active routing of single photons from quantum dots in photonic integrated circuits*
- 15.10-15.30 **Jürgen Appel: University of Copenhagen**  
*Nanofiber-trapped atomic ensemble interfaces: Changes and Challenges*
- 15.30-16.00 Coffee break
- 16.00-16.40 **Eugene Polzik: University of Copenhagen**  
*Quantum mechanics in the negative mass reference frame*
- 16.40-17.00 **Sumantha Kumar Das: University of Copenhagen**  
*Hybrid quantum interfaces for future quantum technologies*
- 17.00-17.10 Closing remarks
- 17.30- 20.00 Buffet and goodbye

## POSTER PRESENTATIONS

The poster area is located at 3<sup>rd</sup> Floor in the dining hall. Posters will be displayed during the entire meeting.

No	Name	Title
1	Vitaly Shumeiko, Chalmers University of Technology	Integrated acousto-optic transducer for superconducting qubits
2	Thomas Gisler, ETH Zürich	Development of a membrane-based AFM
3	Luca Dellantonio, University of Copenhagen	Quantum Nondemolition measurement of mechanical motion quanta
4	Moritz Fischer, Technical University of Denmark	Phonon-electron coupling in luminescent defects in hexagonal boron nitride
5	Karsten Bjerrum Dideriksen, University of Copenhagen	Long-lived non-classical correlations for scalable quantum repeaters at room temperature
6	Yeghische Tsaturyan, University of Copenhagen	Towards heralded single-phonon state generation of an ultracoherent nanomechanical resonator
7	Christoffer Østfeldt, University of Copenhagen	Towards entanglement in a hybrid negative-mass spin-mechanical system
8	Johann Sebastian Kollath-Bönig, University of Copenhagen	Cavity-based quantum memory for light with inhomogeneously coupled atoms
9	Rikizo Ikuta, Osaka University	Polarization insensitive frequency conversion for an atom-photon entanglement distribution via a telecom network
10	Yannick Seis, University of Copenhagen	Hybrid quantum systems with ultra coherent mechanical resonators
11	Massimiliano Rossi, University of Copenhagen	Sub-SQL measurement and single quantum trajectories of a mechanical resonator
12	Emil Zeuthen, University of Copenhagen	Unconditional steady-state entanglement in macroscopic hybrid systems by coherent noise cancellation
13	Tommaso Pregnolato, University of Copenhagen	Deterministic nanofabrication of quantum photonics devices
14	Xiaoyan Zhou, University of Copenhagen	Reconfigurable photonic integrated circuits on gallium arsenide platform for quantum applications
15	Hanna Le Jeannic, University of Copenhagen	Non-linearities of single quantum dots in photonic waveguides
16	Martin Appel, University of Copenhagen	Towards on-chip entangled photon generation for quantum communications applications
17	Thomas Hummel, University of Copenhagen	Single photons, from generation to application