

# ErBeStA International Workshop

May 4<sup>th</sup> & 5<sup>th</sup>, 2021 (online)  
Zoom meeting ID: , Meeting password:

Tuesday, May 4<sup>th</sup>

08:45		<b>Connect &amp; Informal online chat</b>
09:00 – 09:15		<b>Welcome</b>
09:15 – 10:00	<b>Antoine Browaeys</b>	Collective light scattering in dense atomic ensembles: sub- and super-radiance
10:00 – 10:30	<b>Elisa Will, Philipp Schneeweiss</b>	Trapping single atoms at a WGM resonator, Non-reciprocal Raman amplification of light
10:30 – 11:00	<b>Thomas Pohl</b>	Quantum Nonlinear Optics with Atomic Arrays
11:00 – 11:15		<b>Coffee break</b>
11:15 – 12:00	<b>Anders Sørensen</b>	Dynamics of photon bound states
12:00 – 12:30	<b>Sebastian Hofferberth</b>	N-Photon subtraction in a 1d chain of Rydberg superatoms
12:30 – 14:00		<b>Lunch break</b>
14:00 – 14:45	<b>Christine Silberhorn</b>	Non-linear integrated quantum optics for quantum networks
14:45 – 15:15	<b>Philip Walther</b>	Photonic Quantum Machine Learning
15:15 – 15:30		<b>Coffee break</b>
15:30 – 16:15	<b>Gerhard Rempe</b>	Photon Nondemolition Quantum Networks
16:15 – 16:45	<b>Alexander Szameit</b>	Realizing three-dimensional quantum walks using polarization encoding

Organizers: Arno Rauschenbeutel & Philipp Schneeweiss

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Wednesday, May 5<sup>th</sup>

09:00		<b>Connect &amp; Informal online chat</b>
09:15 – 10:00	<b>Wolfram Pernice</b>	Integrated photonic computing
10:00 – 10:30	<b>Sarah Skoff</b>	Quantum Optics with Solid-State Quantum Emitters and Waveguides
10:30 – 11:00	<b>Igor Lesanovsky</b>	Time-crystal phase transition, fluctuations and quantum correlations in an emitter-waveguide system with feedback
11:00 – 11:15		<b>Coffee break</b>
11:15 – 12:00	<b>Darrick Chang</b>	Photonic quantum information processing using atomic arrays
12:00 – 12:30	<b>Lucia Hackermueller</b>	Atoms in an intersected optical waveguide: towards EIT and 4-wave-mixing
12:30 – 14:00		<b>Lunch break</b>
14:00 – 14:45	<b>Janne Ruostekoski</b>	Cooperative quantum optics with atomic arrays: From dipole blockade and non-classical light emission to optical magnetism without metamaterials
14:45 – 15:15	<b>Jan Schlegel</b>	Process technology for the fabrication of passive optical microstructures on chips
15:15 – 15:30		<b>Coffee break</b>
15:30 – 16:15	<b>Charles Adams</b>	Photonic qubits and qutrits using Rydberg polaritons
16:15 – ...		<b>Internal ErBeStA Project Meeting</b>

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