

Monday, August 8

8:30 - 11:55 Session 1: 2D Materials

Chair: Stéphane Kéna Cohen

- 8:30** Hui Deng (Invited Talk)
Coherent light-matter interactions in 2D semiconductors
- 9:15** Alexander Tartakovskii (Invited Talk)
Novel nonlinear polariton phenomena in atomically thin semiconductors
- 10:00** Biswajit Datta (Contributed talk)
Highly non-linear interlayer exciton-polaritons in bilayer MoS₂
- 10:20** Coffee break
- 10:30** Matthias Wurdack (Contributed talk)
Properties and dynamics of exciton polaritons in atomically-thin WS₂ crystals
- 10:50** Eliezer Estrecho (Contributed talk)
Inverted dispersion and negative-mass dynamics of non-Hermitian exciton polaritons in atomically thin semiconductor
- 11:10** Christian Schneider (Invited Talk)
Coherence of Exciton-Polaritons in microcavities loaded with atomically thin crystals

13:30 - 16:45 Session 2: Computation

Chair: Christian Schneider

- 13:30** Michał Matuszewski (Invited Talk)
Efficiency and scalability of optical neural networks
- 14:15** Helgi Sigurdsson (Contributed talk)
Applying quantum computing minor embedding architectures in oscillatory networks of polariton condensates for max-3-cut solving
- 14:35** Paul Eastham (Contributed talk)
Coherence and synchronization for driven-dissipative condensates in a random potential
- 15:00** Coffee break
- 15:15** Dario Ballarini (Invited Talk)
Polariton lattices as neuromorphic accelerators: from reservoir computing to backpropagation
- 16:00** Barbara Pietka (Invited Talk)
Ultrafast time-delayed effects in exciton-polaritons for optical spike processing

17:30 - 19:00 Poster Session

Hors d'oeuvres and wine and beer will be served. Sponsored by Light Conversion.

Tuesday, August 9

8:30 - 11:55 AM Session 3: Polariton condensates in III-V system

Chair: Dario Ballarini

- 8:30** David Snoke (Tutorial)
How to think about polaritons, composite bosons, and condensates
- 9:40** Paul Walker (Contributed talk)
Few-photon all-optical phase rotation in a quantum-well micropillar cavity
- 10:00** Tommi Isoniemi (Contributed talk)
Exciton-polaritons in GaAs-based slab waveguide photonic crystals
- 10:20** Coffee break
- 10:30** Qi Yao (Contributed talk)
Steady-State theory and experimental observation of electron drag on polariton condensate
- 10:50** Hassan Alnatah (Contributed talk)
Bose-Einstein condensation of microcavity exciton-polaritons in thermal equilibrium
- 11:10** Sylvain Ravets (Invited Talk)
Kardar-Parisi-Zhang universality in a one-dimensional polariton condensate

1:30 - 5:05 PM Session 4: Polariton condensates in III-V system (contd)

Chair: Hui Deng

- 13:30** Daniele Sanvitto (Invited Talk)
Polariton condensates in a symmetry protected state
- 14:15** Nina Voronova (Contributed talk)
Anisotropic elementary excitations of bound-in-the-continuum exciton polaritons
- 14:35** Paolo Comaron (Contributed talk)
Emergence of 2D quantum turbulence and onset of vortex clustering in a polariton fluid
- 15:00** Coffee break
- 15:15** Alberto Bramati (Invited Talk)
Spectroscopy study of out of thermal equilibrium polariton fluids
- 16:00** Rolf Binder (Invited Talk)
Exceptional points in the fluctuation modes of a polariton laser

CONFERENCE PROGRAM



Wednesday, August 10

8:30 - 11:55 Session 5: Cold Atoms and novel solid state polaritons

Chair: Barbara Pietka

- 8:30** Gretchen Campbell (Invited Talk)
Hubble friction and amplification in expanding ring condensates
- 9:15** Philipp Kunkel (Invited Talk)
Engineering multimode entanglement among atomic ensembles
- 10:00** Yago del Valle Inclan Redondo (Contributed talk)
Dynamic optical lattices of exciton-polariton condensates
- 10:20** Coffee break
- 10:30** Jesper Levinsen (Contributed talk)
Rydberg exciton-polaritons in a magnetic field
- 10:50** Maxim Makhonin (Contributed talk)
Nonlinear Rydberg exciton-polaritons in microcavities with embedded thin films of Cu₂O
- 11:10** Martin Weitz (Invited Talk)
Observation of a non-Hermitian phase transition in an optical quantum gas

13:30 - 16:45 Session 6: Theory and Excitons in 2D materials

Chair: Rolf Binder

- 13:30** Meera Parish (Invited Talk)
Exciton-polaron dynamics and interactions
- 14:15** Saroj Chand (Contributed talk)
Dark excitons in 2D semiconductor for ultra-sensitive strain sensors
- 14:35** Kenneth Lin (Contributed talk)
Emerging interlayer phase coherence in twist-controlled graphene double layers
- 15:00** Coffee break
- 15:15** You Zhou (Invited Talk)
Probing correlated electronic states using excitons in 2D heterostructures
- 16:00** Simone de Liberato (Invited Talk)
Sculpting electronic and photonic wavefunctions using light-matter hybridisation

17:30 - 19:00 Conference Dinner and Lake Champlain Cruise

On the Spirit of Ethan Allen. Sponsored by Teledyne Princeton Instruments

Thursday, August 11

8:30 - 11:55 Session 7: Organic exciton-polaritons

Chair: Simone de Liberato

- 8:30** Joel Yuen-Zhou (Invited Talk)
Driving chemical reactions with polariton condensates
- 9:15** Wei Xiong (Invited Talk)
Molecular vibrational polaritons for chemistry and quantum technology
- 10:00** Sitakanta Satapathy (Contributed talk)
Smart host-guest system for room temperature polariton condensation
- 10:20** Coffee break
- 10:30** Tomohiro Ishii (Contributed talk)
Low-threshold exciton-polariton condensation via fast polariton relaxation in an organic microcavity
- 10:50** Marcin Muszynski (Contributed talk)
The room-temperature persistent spin-helix lasing and the spin coherence in the dye-doped liquid crystal optical microcavity
- 11:10** Wei Bao (Invited Talk)
Exciton-polaritons with halide perovskites

13:30 - 14:15 Session 8: Organic exciton-polaritons and other systems

Chair: Vinod Menon

- 13:30** Stéphane Kéna Cohen (Invited Talk)
Modifying molecular photophysics through strong light-matter coupling
- 14:15** Tamsin Cookson (Contributed talk)
Giant vorticity in geometrically frustrated polygons of polariton condensates
- 14:35** Closing Remarks