

Excitronics and Polaritronics International Conference (EPIC 2023)

Time	MONDAY 27-Nov	TUESDAY 28-Nov PARKROYAL	WEDNESDAY 29-NOV PARKROYAL	THURSDAY 30-Nov PARKROYAL	FRIDAY 01-DEC SINGAPORE BOTANIC GARDENS				
08:20-08:50		Registration			Bus transfer (08:15-08:45)				
08:50-09:00		Opening							
09:00-09:20		Natalia Berloff	Tim Liew	Carole Diederichs	Jesus Zuniga Pérez	David Snoke	Jacek Szczytko	Meera Parish	David Snoke
09:20-09:40		Pavlos Lagoudakis		Cesare Soci		Jesus Zuniga-Perez		Luis Vina	
09:40-10:00		Kai Chang		Rui Su		Xinfeng Liu		Martin Weitz	
10:00-10:20		Yong-Hoon Cho		Barbara Pietka		Peining Li		Shunping Zhang	
10:20-10:40		Oleksandr Kyriienko		Jacek Szczytko		Ronen Rapaport		Dario Gerace	
10:40-11:20		COFFEE BREAK							
11:20-11:40		Sven Höfling	Qihua Xiong	Michal Matuszewski	Oleksandr Kyriienko	Guillaume Malpuech	Ivan Savenko	Huawen Xu	Nina Voronova
11:40-12:00		Pavlos Savvidis		Sanjib Ghosh		Alexander Poddubny			
12:00-12:10		Jiaxin Zhao		Andrzej Opala		Paolo Comaron			
12:10-12:20		Jesper Levinsen		Mateusz Kedziora		Olivier Bleu			
12:20-12:30		Hai Hu		Wouter Verstraelen		Marcin Muszynski			
12:30-12:40		Yuan Luo		Ying Shi		Yuzhong Chen			
12:40-12:50		Amir Rahmani		Mathias Federolf		Kevin Dini			
12:50-13:00		Jinqi Wu		Nathan Seet		Ruiqi Bao			
13:00-14:30		LUNCH							
14:30-14:50		Junichiro Kono	Pavlos Lagoudakis	Marzena Szymanska	Dmitry Krizhanovskii	Michiel Wouters	Marzena Szymanska	Qing Zhang	Su Rui
14:50-15:10		Alberto Bramati		Christian Schneider		Nina Voronova		Xuewen Chen	
15:10-15:30		Zhanghai Chen		Sebastian Klemmt		Simone De Liberato		Feng Li	
15:30-15:50		Maxime Richard		Eliezer Estrecho		Xuekai Ma		Sylvain Ravets	
15:50-16:30	COFFEE BREAK								
16:30-16:50	Dmitry Krizhanovskii	Kai Chang	Ivan Savenko	Natalia Berloff	Choi Hyoungsoon	Luis Vina	Visit to National Orchid Centre (16:30-17:30)		
16:50-17:10	Zheng Sun		Anton Nalitov		Said Rodriguez				
17:30-18:00	Welcome reception at Level 33 Rooftop Sky Bar (17:30-21:30)	Short walk 10 mins					Bus transfer (17:45-18:15)		
18:00-18:30		Singapore River Cruise (18:00-18:45)							
18:30-19:00		Short walk 2 mins							
19:00-21:00		Dinner at Makansutra Food Court (19:00-21:00)					Dinner at True Blue Restaurant (18:30-21:00)		

Presentations by the invited speakers 20 mins	Contributed talks 10 mins	Chair of the session
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Day 2 - EPIC 2023 - TUESDAY, 28 November 2023

08:20-08:50	Registration			
08:50-09:00	EPIC 2023 Official Opening			
Time	Presentation Title	Presenter	Affiliation	Chair
09:00-09:20	Harnessing optical neural networks for efficient computation and subnetwork identification	Natalia Berloff	University of Cambridge	Tim Liew
09:20-09:40	Unconventional computing with quantum fluids of light	Pavlos Lagoudakis	Skoltech	
09:40-10:00	Topological exciton density waves in 2D materials	Kai Chang	SKLSM, Institute of Semiconductors, CAS	
10:00-10:20	Non-hermitian polaritonic system with single GaN hexagonal microcavity operating at room temperature	Yong-Hoon Cho	Korea Advanced Institute of Science and Technology	
10:20-10:40	Nonlinear optical saturation in polaritonic systems	Oleksandr Kyriienko	University of Exeter	
10:40-11:20	COFFEE BREAK			
11:20-11:40	Polariton lasers in tailored organic microcavities and directed excitons in atomically thin 2D materials	Sven Höfling	University of Würzburg	Qihua Xiong
11:40-12:00	Prototype polariton superfluid qubit analog in an annular trap	Pavlos Savvidis	Westlake University	
12:00-12:10	Exciton polariton interactions in Van der Waals superlattices at room temperature	Jiaxin Zhao	Nanyang Technological University	
12:10-12:20	Fermi polarons in doped two-dimensional semiconductors	Jesper Levinsen	Monash University	
12:20-12:30	TBC	Hai Hu	National Center for Nanoscience and Technology	
12:30-12:40	Manipulating nonlinear exciton polaritons in an atomically- thin semiconductor with artificial potential landscapes	Yuan Luo	Tsinghua University	
12:40-12:50	Non-hermitian synthetic lattices with light-matter coupling	Amir Rahmani	Polish Academy of Sciences Institute of Physics	
12:50-13:00	Higher order topological polariton corner state lasing	Jinqi Wu	Nanyang Technological University	
13:00-14:30	LUNCH			
14:30-14:50	Quantum vacuum dressed materials in terahertz cavities	Junichiro Kono	Rice University	Pavlos Lagoudakis
14:50-15:10	Polariton quantum fluids from out of equilibrium phase transitions to analogue black holes	Alberto Bramati	Sorbonne University - Laboratoire Kastler Brossel	
15:10-15:30	Manipulation of Van der Waals exciton polaritons	Zhanghai Chen	Xiamen University	
15:30-15:50	Physics of Bogoliubov excitations in quantum fluids of light embedded in solid-state lattices	Maxime Richard	Majulab CNRS and Centre for Quantum Technologies NUS	
16:00-16:30	COFFEE BREAK			
16:30-16:50	Linear and nonlinear optical properties of polaritons in modulated microresonators and slab waveguide systems	Dmitry Krizhanovskii	University of Sheffield	Kai Chang
16:50-17:10	Bose condensation of upper-branch exciton-polaritons in a transferrable microcavity	Zheng Sun	East China Normal University	
17:30-18:00	Short walk (10 mins)			
18:00-18:45	Singapore River Cruise			
18:45-19:00	Short walk (2 mins)			
19:00- 21:00	Dinner at Makansutra Food Court			

Day 3 - EPIC 2023 - WEDNESDAY, 29 November 2023

Time	Presentation Title	Presenter	Affiliation	Chair
09:00-09:20	Individual perovskite nanocrystals for quantum light emission	Carole Diederichs	Sorbonne University	Jesus Zúñiga Pérez
09:20-09:40	TBC	Cesare Soci	Nanyang Technological University	
09:40-10:00	Topological exciton polaritons in perovskite lattices	Rui Su	Nanyang Technological University	
10:00-10:20	Large-scale perovskite microwires of arbitrarily shape for room temperature polaritonic circuitry	Barbara Pietka	University of Warsaw	
10:20-10:40	Inseparable photonic states, spin-orbit coupling, and non-hermitian physics in liquid crystal microcavities	Jacek Szczytko	University of Warsaw	
10:40-11:20	COFFEE BREAK			
11:20-11:40	Topological states in spin-orbit coupled anisotropic microcavities	Michał Matuszewski	Polish Academy of Sciences	Oleksandr Kyrienko
11:40-12:00	Room temperature exciton polaritons for classical and quantum devices	Sanjib Ghosh	Beijing Academy of Quantum Information Sciences	
12:00-12:10	Natural exceptional points in the excitation spectrum of a light-matter system	Andrzej Opala	University of Warsaw	
12:10-12:20	Polariton dispersion with multiple inflection points in a birefringent perovskite double cavity	Mateusz Kedziora	University of Warsaw	
12:20-12:30	Flexible polariton simulators with quantum advantage	Wouter Verstraelen	Majulab, Nanyang Technological University	
12:30-12:40	Coherent optical spin hall transport for spin-optonics at room temperature	Ying Shi	Tsinghua University	
12:40-12:50	Manipulation of hybrid interlayer excitons in 2D materials	Mathias Federolf	University of Würzburg	
12:50-13:00	Associative Memory in Photonic Lattices	Nathan Seet	Nanyang Technological University	
13:00-14:30	LUNCH			
14:30-14:50	Multicomponent and spinor driven-dissipative quantum fluids: unconventional bkt, full and fractional defects	Marzena Szymanska	University College London	Dmitry Krizhanovskii
14:50-15:10	Controlling excitons in Van der Waals materials in tunable optical cavities	Christian Schneider	University of Oldenburg	
15:10-15:30	Topological edge and corner modes in polariton lattices	Sebastian Klemmt	University of Würzburg	
15:30-15:50	Spatial coherence of trapped exciton-polariton condensates	Eliezer Estrecho	The Australian National University	
16:00-16:30	COFFEE BREAK			
16:30-16:50	Photoinduced hall effect in 2D superconductors	Ivan Savenko	Guangdong Technion - Israel Institute of Technology	Natalia Berloff
16:50-17:10	Spinning vortices in optically trapped polariton condensates	Anton Nalitov	University of Wolvehampton	

Day 4 - EPIC 2023 - THURSDAY, 30 November 2023

Time	Presentation Title	Presenter	Affiliation	Chair
09:00-09:20	Polaritons in high-Q cavities as a textbook Bose condensate	David Snoke	University of Pittsburgh	Jacek Szczytko
09:20-09:40	Transition from CW polariton lasing to pulsed polariton lasing in a GaN waveguide cavity	Jesus Zuniga-Perez	NTU, CNRS-Majulab	
09:40-10:00	Bridging the miro-region ultrafast spectroscopy with macro-physical properties	Xinfeng Liu	National Center for Nanoscience and Technology	
10:00-10:20	Near-field spacetime imaging of hyperbolic polariton propagation	Peining Li	Huazhong University of Science and Technology	
10:20-10:40	Interacting dipolar excitons and polaritons: from new manybody quantum phases to optical transistors based on slow dipolar photons	Ronen Rapaport	Hebrew University of Jerusalem	
10:40-11:20	COFFEE BREAK			
11:20-11:40	Hermitian and non-hermitian topological physics using planar microcavities	Guillaume Malpuech	Institut Pascal, CNRS and University Clermont Auvergne	Ivan Savenko
11:40-12:00	Quantum vortices of interacting rydberg polaritons	Alexander Poddubny	Weizmann Institute of Science	
12:00-12:10	Density fluctuations near the condensate transition of a trapped polariton condensate	Paolo Comaron	University College London	
12:10-12:20	Effective dissipative light-matter coupling in nonideal cavities	Olivier Bleu	Monash University	
12:20-12:30	Nonlinear emission of spin-orbit-coupled tunable band structures in self-assembled photonic potential embedded in optical microcavity	Marcin Muszynski	University of Warsaw	
12:30-12:40	Ultrafast coherent dynamics of exciton polariton propagation at room temperature	Yuzhong Chen	Beijing Academy of Quantum Information Sciences	
12:40-12:50	Nonlinear finite-difference time-domain method for exciton-polaritons	Kevin Dini	Nanyang Technological University	
12:50-13:00	Topological enhancement of exciton-polariton coherence with non-Hermitian morphing	Ruiqi Bao	Nanyang Technological University	
13:00-14:30	LUNCH			
14:30-14:50	Nonequilibrium aspects of photonic Bose-Einstein condensates	Michiel Wouters	University of Antwerp	Marzena Szymanska
14:50-15:10	Dipolar exciton BEC – dipolariton BEC tunable first-order phase transition in crossed fields	Nina Voronova	Moscow Engineering Physics Institute	
15:10-15:30	Weaving quantum materials with light	Simone De Liberato	University of Southampton	
15:30-15:50	Electric control of polariton condensates with spin-orbit coupling	Xuekai Ma	Universität Paderborn	
16:00-16:30	COFFEE BREAK			
16:30-16:50	Controlling exciton-polariton vortices with orbital angular momentum of light	Choi Hyoungsoon	KAIST	Luis Vina
16:50-17:10	Photon Superfluidity through Dissipation	Said Rodriguez	AMOLF	

Day 5 - EPIC 2023 - FRIDAY, 1 December 2023

08:15	Bus transfer from the PARKROYAL hotel, Pickering to the Villa at Singapore Botanic Gardens			
Time	Presentation Title	Presenter	Affiliation	Chair
09:00-09:20	Polariton polaronic quasiparticles in a dark excitonic medium	Meera Parish	Monash University	David Snoke
09:20-09:40	Polariton condensates in wave-guide-microcavities couplers	Luis Vina	Universidad Autonoma de Madrid	
09:40-10:00	Dissipative phases of a Bose-Einstein condensate of photons	Martin Weitz	University of Bonn	
10:00-10:20	Strong plasmon-exciton coupling in nanocavity: strong nonlinearity	Shunping Zhang	Wuhan University	
10:20-10:40	Quantum polariton interferometry	Dario Gerace	University of Pavia	
10:40-11:20	COFFEE BREAK			
11:20-11:30	Quantum theory of polariton weak lasing and polarization bifurcations	Huawen Xu	Nanyang Technological University	Nina Voronova
11:30-13:00	Poster Session			
13:00-14:30	LUNCH			
14:30-14:50	Exciton-polaritons of single-crystalline perovskite nanostructures: towards low-threshold continuous-wave lasing	Qing Zhang	Peking University	Su Rui
14:50-15:10	Ultrabright upconversion nano-emitters	Xuewen Chen	Huazhong University of Science and Technology	
15:10-15:30	Nontrivial band geometry and divergent quantum metric in an anisotropic organic microcavity	Feng Li	Xi'an Jiaotong University	
15:30-15:50	Eigenstate tomography of polariton lattices	Sylvain Ravets	Université Paris-Saclay, CNRS	
16:00-16:30	COFFEE BREAK			
16:30-17:30	Visit to National Orchid Centre			
17:45-18:15	Bus transfer from the Villa to the True Blue Restaurant			
18:30- 21:00	Dinner at True Blue Restaurant			