ToEQPL
Quantum Photonics

International Conference on Quantum Photonics Development in Baltic Region

Conference program

11-13 February 2026

Riga Technical University «The Moon» hall, Riga, Ķīpsalas iela 6A

Wednesday, February 11th , 2026

ToEQPL
Quantum Photonics

Time	Speaker / Event	Topic	Chair
8:30 – 9:00	**Registration**		
9:00 – 9:10	**Conference opening**		
9:10 – 9:30	Aivars Vembris	ToEQPL project	
9:30 – 10:50	**Presentation session: Quantum photonics materials and technologies**		**Aivars Vembris**
9:30 – 10:05	Maja Colautti	Enhanced control of organic molecules for quantum photonic technologies	
10:05 – 10:40	Ruth Oulton	Quantum Dots for Second Generation Quantum Computing	
10:40 – 11:10	**Coffee break**		
11:10 – 13:15	**Presentation session: Quantum photonics materials and technologies**		**Aivars Vembris**
11:10 – 11:45	Eugenio Maggiolini	Quantum nonlinear optics in exciton-polariton circuits	
11:45 – 12:20	Artūrs Medvids	Quantum Cone - Nano Source of Light with Dispersive Spectrum: Technology and Properties	
12:20 – 12:55	Ilya Goykhman	Exciton manipulation and confinement in 2D semiconductors	
12:55 – 13:15	Lorenzo Pavesi	Spectrally Separated Twin Photons on Silicon for Ghost and Undetected-Photon Sensing	
13:15 – 14:15	**Lunch**		
14:15 – 16:20	**Presentation session: Integrated Quantum Photonics**		**Lorenzo Pavesi**
14:15 – 14:50	Philip Walther	Quantum Photonics for Quantum Computing and Machine Learning	
14:50 – 15:25	Tadas Paulauskas	hBN Emitters and SPDC Sources for Integrated Quantum Photonics	
15:25 – 15:45	Homa Zarebidaki	Silicon Carbide-on-Insulator as an Emerging Platform for Scalable Quantum Photonic Integrated Circuits	
15:45 – 16:05	Arturs Bundulis	Heterogeneous integration of highly nonlinear host-guest organic systems for nonlinear optical applications	
16:05 – 17:30	**Poster session/coffee break**		

Thursday, February 12th , 2026

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Time	Speaker / Event	Topic	Chair
8:30 – 9:00	**Registration**		
9:00 – 10:50	**Presentation session/Quantum Communication & Networks**		Stefano Azzini
9:00-9:35	Christoph Becher	Telecom interfaces for color centers in diamond	
9:35-10:10	Jacopo Secco	Chaotic low power implementations for encryption applications	
10:10-10:30	Alexandr Belosludtsev	Silver-Aluminium High Mirrors for Space Communication Applications	
10:30-10:50	Aleksandrs Gorbunovs	Quantum Technology to Form a New Warfare Domain	
10:50 – 11:20	**Coffee break**		
11:20 – 13:10	**Presentation session/Integrated Quantum Photonics**		Arturs Bundulis
11:20-11:55	Rihards Mūrnieks	Realization of Long-Distance Quantum-Memory Enhanced Entanglement Distribution Network in Latvia	
11:55-12:30	Janis Alnis	Optical, electrodynamic and magnetic levitation of microspheres and microdroplets as candidates for whispering gallery mode resonators	
12:30-12:50	Stefano Azzini	CMOS-compatible integrated single-photon sources in the visible to near-infrared spectral region	
12:50-13:10	Alessio Baldazzi	A quantum variational silicon photonic solver	
13:10 – 14:10	**Lunch**		
14:10 – 16:00	**Presentation session/Quantum Sensing & Metrology**		Kaspars Traskovskis
14:10-14:45	Pavel Ginzburg	Theranostic Metamaterials with Quantum Sensors	
14:45-:15:20	Hani Barhum	Birefringent Spherulite Optomechanics for Dual Quantum pH and Magnetic Bio-Sensing	
15:20-15:40	Elias Sfeir	Room-Temperature Magnetic Vortices in the van der Waals Magnet $Fe5GeTe2$.	
15:40-16:00	Mona Jani	Microwave-Free Detection of magnetic nanostructures using zero-field cross-relaxation feature of nitrogen-vacancy centers in nanodiamond	
18:00 – 21:00	**Conference diner**		

Friday, February 13th , 2026

ToEQPL Quantum Photonics

Time	Speaker / Event	Topic	Chair
8:50 – 9:00	**Registration**		
9:00 – 10:30	**Presentation session/Quantum Communication & Networks**		Christophe Couteau
9:00-9:35	Dmytro Vovchuk	Post-Quantum Chaos Synchronization-based Protocol for Secure Communication	
9:35-10:10	Anna Baldycheva	From Materials to Devices: Graphene and 2D Materials for Photonic Platforms	
10:10-10:45	Svitlana Matsenko	ML-Enabled Mode Mismatch Mitigation in CV-QKD under DSP Constraints	
10:45 – 11:15	**Coffee break**		
11:00 – 12:20	**Presentation session/Quantum photonics materials and technologies**		Aivars Vembris
11:15-11:50	Juan Loredo	Deterministic quantum dot based photon-emitter technology	
11:50-12:10	Dharma Permana	Spin-orbit dynamics of optical vector vortices in coherently prepared atomic media with Λ and tripod configuration	
12:10-12:30	Christophe Couteau	Quantum optics using colour centres in diamond	
12:30 – 13:30	**Lunch**		
13:30 – 14:00	**Conference closing**		

Poster session

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	Wednesday, February 11th 16:05 – 17:30	
	Poster presenter	**Topic**
P1	Fatima Zohra Boudjenane	Structural, Electronic, and Nonlinear Optical Properties of Bis(L-Proline) Cadmium Iodide Single Crystal: A Combined XRD and DFT Study
P2	Anete Sapne	Development of host-guest polymer photonic element fabrication for integrated quantum photonics
P3	Gustas Liaugminas	Fiber-Based Source for Polarization-Entangled Photon Pair Generation at Hybrid Network Wavelengths
P4	Kirills Dmitrijevs	Synthesis and Characterization of Organic NLO Chromophores for Integrated Photonics
P5	Lāse Mīlgrāve	Long-term stability of integrated SU-8 polymer ring resonators
P6	Miroslavs Mališko	The analysis of possible quantum technology applications onboard modern ships
P7	Margarita Zommere	Polymeric Pillar Microcavities for Enhanced Single-Photon Emission from Organic Molecules
P8	Kristians Draguns	Tantalum pentoxide microring resonators
P9	Armands Ruduss	Deuteration Strategies for Single-Photon Emitter Molecules
P10	Reinis Lazda	Quantum imaging with undetected infrared light generated by spontaneous parametric down-conversion in nonlinear crystals
P11	Šarūnas Meškinis	Direct Synthesis and Characterization of Graphene/h-BN Layers and Heterostructures for Quantum Applications
P12	Artūrs Mozers	High-order coherences for magnetic field sensing beyond low-field limits
P13	Ziad Abi Akar	NV-Based Spin–Photon Optical Communication