TECHNICAL PROGRAM

PHOTONICS FOR QUANTUM

SPIE. RIT | Rochester Institute of Technology

17–20 June 2024
Waterloo, Ontario, Canada

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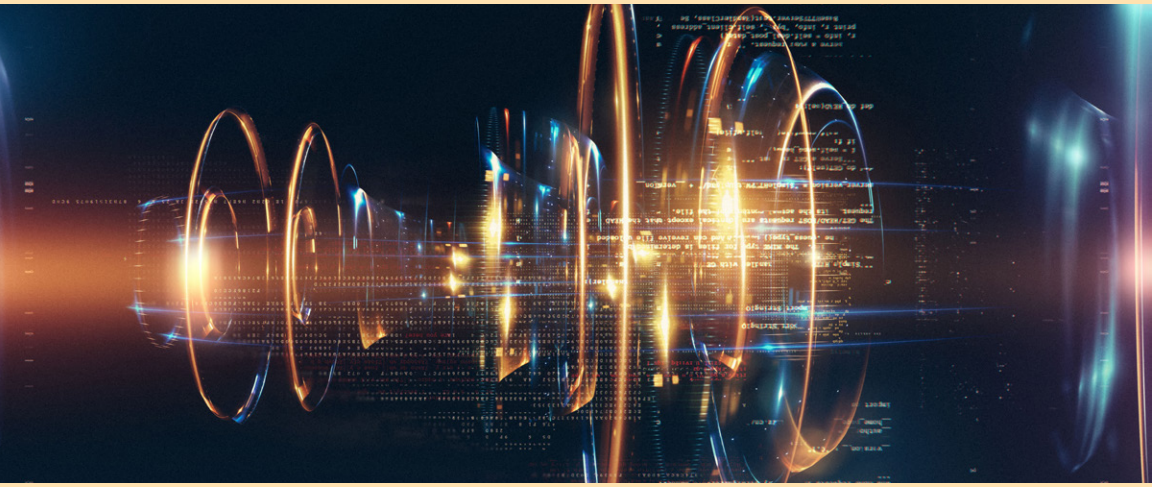

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Welcome to Photonics for Quantum

Get ready to enjoy real conversations, hear the latest breakthroughs that address the central role photonics plays in advancing quantum technologies — from the fundamental stages of research through the work being done to deliver a commercial quantum infrastructure. Attend technical presentations, invited talks, poster session, lab tours, and a variety of networking activities for learning and professional advancement opportunities.

Welcome Reception and Poster Viewing

17 June 2024 • 5:15 PM–6:30 PM | Univ. of Waterloo, QNC Atrium

Conference attendees are invited to attend this Monday evening welcome reception and poster session. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field.

Poster Setup: Monday 10:00 AM–5:00 PM

Poster authors, view poster presentation guidelines and set-up instructions at: https://spie.org/PFQ/Poster-Guidelines

Networking Lunch

17 June 2024 • 12:20 PM–2:20 PM | Univ. of Waterloo, QNC Atrium
18 June 2024 • 12:40 PM–2:10 PM | Univ. of Waterloo, QNC Atrium
19 June 2024 • 12:30 PM–2:00 PM | Univ. of Waterloo, QNC Atrium
20 June 2024 • 12:50 PM–2:20 PM | Univ. of Waterloo, QNC Atrium

Join your colleagues for an informal networking lunch.

Lab Tours of the University of Waterloo

20 June 2024 • 2:20 PM–4:45 PM | Univ. of Waterloo, QNC Atrium

Photonics for Quantum attendees are invited tour the labs at the University of Waterloo. Shuttles provided.

Quantum Photonic Devices Lab
QuantumIon Lab
Quantum Photonics Lab
Quantum Simulation and Metrology Lab
Quantum-Nano Fabrication and Characterization Facility

CONFERENCE 13106

2024 CONFERENCE CHAIRS

Michael Reimer
Univ. of Waterloo (Canada)

Nir Rotenberg
Queen's Univ. (Canada)

Donald F. Figer
Rochester Institute of Technology (USA)

PROGRAM COMMITTEE

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Philip Walther, Univ. Wien (Austria)

TIME	17 JUNE 2024
9:10 AM - 9:20 AM	**OPENING REMARKS** • Session Chair: **Michael E. Reimer,** Univ. of Waterloo (Canada)
9:20 AM - 10:40	**SESSION 1: Quantum Networks and Communication** Session Chair: **Lindsay LeBlanc,** Univ. of Alberta (Canada)
	13106-13 • Keynote Presentation **Exploring quantum computing frontier with reconfigurable atom arrays and optical controls,** Mikhail Lukin, Harvard Univ. (United States)
	13106-14 • **Hybrid quantum-classical photonic neural networks,** Tristan Austin, Bhavin Shastri, Nir Rotenberg, Queen's Univ. (Canada); Simon Bilodeau, Princeton Univ. (United States); Andrew Hayman, Queen's Univ. (Canada)
	13106-15 • **Quantum frequency conversion for use in quantum repeaters,** William Losin, Sai Sreesh Venuturumilli, Michael E. Reimer, Rubayet Al Maruf, Paul Anderson, Michael Li, Behrooz Semnani, Univ. of Waterloo (Canada); Philip J. Poole, Dan Dalacu, National Research Council Canada (Canada); Michal Bajcsy, Univ. of Waterloo (Canada)
10:40 AM	**Coffee Break**
11:10 AM - 12:20 PM	**SESSION 2: Satellite Quantum Key Distribution** • Session Chair: **Raffi Budakian,** Univ. of Waterloo (United States)
	13106-16 • Invited Paper **QEYSSat: Canada's first quantum communication satellite,** Thomas Jennewein, Univ. of Waterloo (Canada)
	13106-17 • **Phase correction using deep learning for satellite-to-ground CV-QKD**, Nathan K. Long, Robert Malaney, The Univ. of New South Wales (Australia); Kenneth J. Grant, Defence Science and Technology Group (Australia)
	13106-18 • **A reconfigurable multi-user quantum network with ground to space link,** Stephane Vinet, Thomas Jennewein, Ramy Tannous, Institute for Quantum Computing, Univ. of Waterloo (Canada)
12:20 PM	**Networking Lunch**
2:20 PM - 3:50 PM	**SESSION 3: Entangled Photons** • Session Chair: **Stephen Hughes**, Queen's Univ. (Canada)
	13106-7 • Invited Paper **Periodically-poled silica fiber as a versatile quantum source,** Li Qian, Univ. of Toronto (Canada)
	13106-8 • **Liquid crystals as new tunable sources of entangled photon pairs,** Aljaž Kavcic, Jožef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia); Matjaž Humar, Jožef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia), Ctr. of Excellence for Nanoscience and Nanotechnology (Slovenia); Vitaliy Sultanov, Maria V. Chekhova, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); Manolis Kokkinakis, Univ. of Crete (Greece); Nerea Sebastian, Jožef Stefan Institute (Slovenia)
	13106-9 • **The effect of phase-matching conditions on transverse spatial mode entanglement in high-gain SPDC,** Yang Xu, Luchang Niu, Univ. of Rochester (United States); Girish Kulkarni, Indian Institute of Technology Ropar (India); Robert W. Boyd, Univ. of Rochester (United States), Univ. of Ottawa (Canada)

	13106-10 • **Generating correlated pairs of free electrons and waveguide photons,** Jan-Wilke Henke, Armin Feist, Max-Planck-Institut für Multidisziplinäre Naturwissenschaften (Germany), IV. Physikalisches Institut, Georg-August-Univ. Göttingen (Germany); Guanhao Huang, Institute of Physics, Ecole Polytechnique Fédérale de Lausanne (Switzerland), Ctr. for Quantum Science and Engineering, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Germaine Arend, Max-Planck-Institut für Multidisziplinäre Naturwissenschaften (Germany), IV. Physikalisches Institut, Georg-August-Univ. Göttingen (Germany); Yujia Yang, Arslan S. Raja, Institute of Physics, Ecole Polytechnique Fédérale de Lausanne (Switzerland), Ctr. for Quantum Science and Engineering, Ecole Polytechnique Fédérale de Lausanne (Switzerland); F. Jasmin Kappert, Max-Planck-Institut für Multidisziplinäre Naturwissenschaften (Germany), IV. Physikalisches Institut, Georg-August-Univ. Göttingen (Germany); Jiahe Pan, Institute of Physics, Ecole Polytechnique Fédérale de Lausanne (Switzerland), Ctr. for Quantum Science and Engineering, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Hugo Lourenco-Martins, Max-Planck-Institut für Multidisziplinäre Naturwissenschaften (Germany), IV. Physikalisches Institut, Georg-August-Univ. Göttingen (Germany); Zheru Qiu, Junqiu Liu, Institute of Physics, Ecole Polytechnique Fédérale de Lausanne (Switzerland), Ctr. for Quantum Science and Engineering, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Ofer Kfir, Max-Planck-Institut für Multidisziplinäre Naturwissenschaften (Germany), IV. Physikalisches Institut, Georg-August-Univ. Göttingen (Germany); Tobias J. Kippenberg, Institute of Physics, Ecole Polytechnique Fédérale de Lausanne (Switzerland), Ctr. for Quantum Science and Engineering, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Claus Ropers, Max-Planck-Institut für Multidisziplinäre Naturwissenschaften (Germany), IV. Physikalisches Institut, Georg-August-Univ. Göttingen (Germany)
3:50 PM	**Coffee Break**
4:20 PM - 4:50 PM	**SESSION 4: ATOMS AND PHOTONS** • Session Chair: **Crystal Senko,** Univ. of Waterloo (Canada)
	13106-11 • Invited Paper **Efficient broadband quantum memory using ultracold atoms**, Lindsay LeBlanc, Univ. of Alberta (Canada)
4:50 PM	**Coffee Break**
5:15 PM - 6:30 PM QNC Atrium	**WELCOME RECEPTION AND POSTER VIEWING** Poster Setup: Monday 10:00 AM–5:00 PM View poster presentation guidelines and set-up instructions at https://spie.org/PFQ/Poster-Guidelines
	13106-46 • **Microwave-assisted hybrid perovskite single crystal X-ray detector with carbon nanotube for ultrafast carrier mobility in imaging application,** Runkai Liu, The Univ. of Sydney (Australia)
	13106-47 • **Parameter estimation in quantum metrology technique for time series prediction,** Vaidik Avnish Sharma, Birla Institute of Technology and Science, Pilani (India); N. Madurai Meenachi, Balasubramanian Venkatraman, Indira Gandhi Ctr. for Atomic Research (India)
	13106-48 • **Universal photonic neural networks with quantum-free data reuploading,** Keisuke Kojima, Boston Quantum Photonics LLC (United States); Toshiaki Koike-Akino, Mitsubishi Electric Research Labs. (United States)
	13106-49 • **Floquet engineering the quantum Rabi model,** Kamran Akbari, Stephen Hughes, Queen's Univ. (Canada)
	13106-50 • **Demonstration and analysis of quantum key distribution with the ReFQ satellite quantum source,** Justin Schrier, Paul J. Godin, Brendon L. Higgins, Vinodh Raj Rajagopal Muthu, Nigar Sultana, Thomas Jennewein, Institute for Quantum Computing, Univ. of Waterloo (Canada)
	13106-51 • **Quantum coherent modulation of free electrons by integrated photonics,** Jan-Wilke Henke, Max-Planck-Institut für Multidisziplinäre Naturwissenschaften (Germany), IV. Physikalisches Institut, Georg-August-Univ. Göttingen (Germany); Arslan S. Raja, Institute of Physics, Ecole Polytechnique Fédérale de Lausanne (Switzerland), Ctr. for Quantum Science and Engineering, Ecole Polytechnique Fédérale de Lausanne (Switzerland); F. Jasmin Kappert, Max-Planck-Institut für Multidisziplinäre Naturwissenschaften (Germany), IV. Physikalisches Institut, Georg-August-Univ. Göttingen (Germany); Yujia Yang, Institute of Physics, Ecole Polytechnique Fédérale de Lausanne (Switzerland), Ctr. for Quantum Science and Engineering, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Armin Feist, Max-Planck-Institut für Multidisziplinäre Naturwissenschaften (Germany), IV. Physikalisches Institut, Georg-August-Univ. Göttingen (Germany); Guanhao Huang, Institute of Physics, Ecole Polytechnique Fédérale de Lausanne (Switzerland), Ctr. for Quantum Science and Engineering, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Germaine Arend, Max-Planck-Institut für Multidisziplinäre Naturwissenschaften (Germany), IV. Physikalisches Institut, Georg-August-Univ. Göttingen (Germany); Rui Ning Wang, Zheru Qiu, Institute of Physics, Ecole Polytechnique Fédérale de Lausanne (Switzerland), Ctr. for Quantum Science and Engineering, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Ofer Kfir, Max-Planck-Institut für Multidisziplinäre Naturwissenschaften (Germany), IV. Physikalisches Institut, Georg-August-Univ. Göttingen (Germany); Aleksandr Tusnin, Alexey Tikan, Institute of Physics, Ecole Polytechnique Fédérale de Lausanne (Switzerland), Ctr. for Quantum Science and Engineering, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Claus Ropers, Max-Planck-Institut für Multidisziplinäre Naturwissenschaften (Germany), IV. Physikalisches Institut, Georg-August-Univ. Göttingen (Germany); Tobias J. Kippenberg, Institute of Physics, Ecole Polytechnique Fédérale de Lausanne (Switzerland), Ctr. for Quantum Science and Engineering, Ecole Polytechnique Fédérale de Lausanne (Switzerland)

	13106-52 • **QEYSSat: space quantum key distribution,** Paul J. Godin, Thomas Jennewein, Brendon L. Higgins, Katanya Kuntz, Brian S. Moffat, Univ. of Waterloo (Canada)
	13106-53 • **Oscillating photonic Bell state from a semiconductor quantum dot for quantum key distribution,** Matteo Pennacchietti, Brady Cunard, Shlok Nahar, Univ. of Waterloo (Canada); Mohd Zeeshan, National Research Council Canada (Canada); Sayan Gangopadhyay, Univ. of Waterloo (Canada); Dan Dalacu, National Research Council Canada (Canada), Univ. of Ottawa (Canada); Philip J. Poole, National Research Council Canada (Canada); Andreas Fognini, Single Quantum B.V. (Netherlands); Klaus Jöns, Univ. Paderborn (Germany); Val Zwiller, KTH Royal Institute of Technology (Sweden); Thomas Jennewein, Norbert Lütkenhaus, Michael E. Reimer, Univ. of Waterloo (Canada)
	13106-65 • **Exploring advancements and prospects of laser technologies towards practical quantum advantage,** Siamak Dadras, TOPTICA Photonics, Inc. (United States)
	13106-68 • **Quantum annealing task mapping for heterogeneous computing systems,** Kenzie Ellenberger, Dylan Couch, Jeffrey Greer, Noah Gregory, Luis Sanchez, Kaleb Love, Yaroslav Koshka, Samee Khan, Mississippi State Univ. (United States)
	13106-25 • **Effects of atmospheric turbulence on polarization entanglement in free-space quantum communication links,** Vladimir V. Nikulin, Binghamton Univ. (United States); Vijit Bedi, Peter A. Ricci, John Heinig, Erin C. Sheridan, Christine A. Mathers, Kathy-Anne Soderberg, Robert DiMeo, William Lipe, John F. Perretta, Air Force Research Lab. (United States)
18 JUNE 2024	
9:40 AM - 10:40 AM QNC Room 0101	**SESSION 5: Quantum Detectors** • Session Chair: **Sasan Vosoogh-Grayli,** Univ. of Waterloo (Canada)
	13106-1 • Keynote Presentatioin **Sensing and information processing by using superconducting nanowires,** Karl K. Berggren, Massachusetts Institute of Technology (United States)
	13106-2 • **Broadband metamaterial-based single-photon detectors with near-unity absorption,** Sarah Odinotski, Burak Tekcan, Sasan Vosoogh-Grayli, Lin Tian, Tarun Patel, Institute for Quantum Computing, Univ. of Waterloo (Canada); Jean-Philippe Bourgoin, Single Quantum Systems Inc. (Canada); Zbigniew Wasilewski, Waterloo Institute for Nanotechnology, Univ. of Waterloo (Canada); Michael E. Reimer, Institute for Quantum Computing, Univ. of Waterloo (Canada)
10:40 AM	**Coffee Break**
11:10 AM - 12:40 PM	**SESSION 6: Quantum Sensing** • Session Chair: **Karl K. Berggren,** Massachusetts Institute of Technology (United States)
	13106-4 • Invited Paper **Hyperfine-enhanced gyroscope based on optically active solid-state spins,** Paola Cappellaro, Massachusetts Institute of Technology (United States)
	13106-5 • Invited Paper **State characterisation and quantum metrology with structured light,** Ebrahim Karimi, Univ. of Ottawa (Canada)
	13106-6 • Invited Paper **Novel approaches in NanoMRI for probing atomic-scale material structure,** Raffi Budakian, Univ. of Waterloo (United States)
12:40 PM	**Networking Lunch**
2:10 PM - 3:30 PM	**SESSION 7: Trapped Ion Quantum Networks** • Session Chair: **Daniel B. Higginbottom,** Simon Fraser Univ. (Canada)
	13106-19 • Invited Paper **Connecting qubits: classical and quantum interfaces,** Kathy-Anne Brickman-Soderberg, Air Force Research Lab. - Rome (United States)
	13106-21 • Invited Paper **Applications of photonics in trapped ion quantum computing,** Crystal Senko, Univ. of Waterloo (Canada)
	13106-67 • **Site-selective single-photon generation and tailor-made quantum photonic devices using nanoscale optical quenching technique,** Yong-Hoon Cho, KAIST (Republic of Korea)
3:30 PM	**Coffee Break**
4:00 PM - 5:00 PM	**SESSION 8: Quantum Key Distribution** • Session Chair: **Li Qian,** Univ. of Toronto (Canada)
	13106-22 • **A detailed model for PMD in broadband polarization-encoded QKD,** Vadim Rodimin, Konstantin Kravtsov, Technology Innovation Institute (United Arab Emirates); Rui Ming Chua, Technology Innovation Institute (United Arab Emirates), Ctr. for Quantum Technologies (Singapore); Gianluca De Santis, Alexei Ponasenko, Technology Innovation Institute (United Arab Emirates); Alexander Ling, Ctr. for Quantum Technologies (Singapore); James A. Grieve, Technology Innovation Institute (United Arab Emirates), Ctr. for Quantum Technologies, National Univ. of Singapore (Singapore)

	13106-24 • **Time-bin QKD free space field-trial link in the third telecommunication window,** Sebastiano Cocchi, Univ. degli Studi di Firenze (Italy); Domenico Ribezzo, Univ. degli Studi dell'Aquila (Italy), Istituto Nazionale di Ottica, Consiglio Nazionale delle Ricerche (Italy); Giulia Guarda, Univ. degli Studi di Firenze (Italy); Alessandro Zavatta, Istituto Nazionale di Ottica, Consiglio Nazionale delle Ricerche (Italy); Tommaso Occhipinti, QTI S.R.L. (Italy); Davide Bacco, Univ. degli Studi di Firenze (Italy), QTI S.R.L. (Italy)
	13106-69 • **Interference of photons and polarization-based quantum state tomography through emulated atmospheric turbulence,** Keith A. Wyman, Noah Everett, Anil Patnaik, Air Force Institute of Technology (United States)
19 JUNE 2024	
9:20 AM - 10:50 AM	**SESSION 9: Quantum Dot Entangled Photon Sources** • Session Chair: **Tim Schröder,** Humboldt-Univ. zu Berlin (Germany)
	13106-26 • Keynote Presentation **Quantum dot coherent control for quantum communication,** Gregor Weihs, Univ. Innsbruck (Austria)
	13106-27 • **Single photon frequency shifting and all-optic universal fine structure eraser for quantum dots,** Sonell Malik, Maeve Wentland, Institute for Quantum Computing, Univ. of Waterloo (Canada); Andreas Fognini, Single Quantum B.V. (Netherlands); Dan Dalacu, Philip J. Poole, National Research Council Canada (Canada); Val Zwiller, KTH Royal Institute of Technology (Sweden); Michael E. E. Reimer, Institute for Quantum Computing, Univ. of Waterloo (Canada)
	13106-28 • Invited Paper **Dynamical resonance florescence in cavity and waveguide QED,** Stephen Hughes, Queen's Univ. (Canada)
10:50 AM	**Coffee Break**
11:20 AM - 12:30 PM	**SESSION 10: Quantum Dot Single-Photon Sources** • Session Chair: **Ivan Iorsh,** Queen's Univ. (Canada)
	13106-29 • Invited Paper **Nanowires as a single photon source for quantum photonic integrated circuit,** David B. Northeast, National Research Council Canada (Canada); Edith Yeung, Univ. of Ottawa (Canada); Khaled Mnaymneh, Mohd Zeeshan, Sofiane Haffouz, Jean Lapointe, Philip J. Poole, Dan Dalacu, Robin L. Williams, Lingxi Yu, National Research Council Canada (Canada)
	13106-30 • **Quantum-dot single photon source performance with quasi-coherent excited state preparation schemes,** Gavin Crowder, Lora Ramunno, Univ. of Ottawa (Canada); Stephen Hughes, Queen's Univ. (Canada)
	13106-31 • **Single photon emission in the telecom C-band from nanowire-based quantum dots,** Andrew N. Wakileh, Queen's Univ. (Canada), National Research Council Canada (Canada); Lingxi Yu, Doga Dokuz, National Research Council Canada (Canada), Univ. of Ottawa (Canada); Sofiane Haffouz, Xiaohua Wu, Jean Lapointe, David B. Northeast, Robin L. Williams, National Research Council Canada (Canada); Nir Rotenberg, Queen's Univ. (Canada); Philip J. Poole, National Research Council Canada (Canada); Dan Dalacu, National Research Council Canada (Canada), Queen's Univ. (Canada), Univ. of Ottawa (Canada)
12:30 PM	**Networking Lunch**
2:00 PM - 3:30 PM	**SESSION 11: Quantum Nonlinear Optics** • Session Chair: **Gregor Weihs,** Univ. Innsbruck (Austria)
	13106-32 • Invited Paper **Correlating photons using the collective nonlinear response of atoms weakly coupled to an optical mode,** Arno Rauschenbeutel, Humboldt-Univ. zu Berlin (Germany)
	13106-33 • **Quantum nonlinear response of few photon Fock-state pulses to a chiral-emitter waveguide-QED system,** Sofia Arranz Regidor, Jacob Ewaniuk, Nir Rotenberg, Stephen Hughes, Queen's Univ. (Canada)
	13106-34 • **Towards scalable deterministic quantum photonic information processing with quantum dot phase shifters,** Jacob Ewaniuk, Adam McCaw, Sofia A. Regidor, Stephen Hughes, Bhavin Shastri, Nir Rotenberg, Queen's Univ. (Canada)
	13106-35 • **Purcell factors and spontaneous emission decay rates in a linear gain medium,** Juanjuan Ren, Queen's Univ. (Canada); Sebastian Franke, Queen's Univ. (Canada), Technische Univ. Berlin (Germany); Becca VanDrunen, Stephen Hughes, Queen's Univ. (Canada)
3:30 PM	**Coffee Break**
4:00 PM - 5:10 PM	**SESSION 12: Diamond Devices and 2D Materials** • Session Chair: **Tarun Patel,** Univ. of Waterloo (Canada)
	13106-36 • Invited Paper **AlGaN photonic circuits with integrated diamond nanophotonic quantum devices,** Tim Schröder, Humboldt-Univ. zu Berlin (Germany)
	13106-37 • **Heterogeneous integration of optically-active quantum systems with silicon foundry microelectronics,** Joe A. Smith, Univ. of Bristol (United Kingdom)
	13106-38 • **Photoluminescence imaging of single photon emitters in monolayer WSe2,** Ivan Iorsh, Queen's Univ. (Canada); Vasily Kravtsov, Artem Abramov, Igor Chestnov, ITMO Univ. (Russian Federation); Dmitrii Krizhanovskii, The Univ. of Sheffield (United Kingdom)

20 JUNE 2024	
9:20 AM - 10:50 AM	**SESSION 13: Photonic Quantum Computing: Industry** • Session Chair: **Ebrahim Karimi,** Univ. of Ottawa (Canada)
	13106-39 • Keynote Presentation **Building quantum computing systems,** Heike Riel, IBM Research - Zürich (Switzerland)
	13106-40 • Invited Paper **Fault-tolerant integrated photonic quantum computin,** Jonathan Lavoie, Xanadu Quantum Technologies Inc. (Canada)
	13106-41 • **Fabricating high performance silicon nitride waveguides for photonic quantum computing,** Yogee Ganesan, PsiQuantum Corp. (United States)
10:50 AM	**Coffee Break**
11:20 AM - 12:50 PM	**SESSION 14: Photonic Quantum Computing** • Session Chair: **Heike Riel,** IBM Research - Zürich (Switzerland)
	13106-42 • Invited Paper **Networking silicon qubits,** Daniel B. Higginbottom, Simon Fraser Univ. (Canada)
	13106-43 • **Color centers in silicon: generation and control of optical properties,** Hugo Quard, Institut National des Sciences Appliquées de Lyon (France); Mario Khoury, Institut Matériaux Microélectronique Nanosciences de Provence, Aix-Marseille Univ. (France); Adong Wang, Univ. of Oxford (United Kingdom); Tobias Herzig, Jan Meijer, Sébastien Pezzagna, Felix-Bloch-Institut für Festkörperphysik, Univ. Leipzig (Germany); Sébastien Cueff, Institut des Nanotechnologies de Lyon (France); David Grojo, Lab. Lasers, Plasmas et Procédés Photoniques, Aix-Marseille Univ. (France); Marco Abbarchi, Aix-Marseille Univ. (France); Hai Son Nguyen, Nicolas Chauvin, Thomas Wood, Institut des Nanotechnologies de Lyon (France)
	13106-45 • **Optimization of deterministic generation of photonic graph states via local operations,** Sobhan Ghanbari, Univ. of Toronto (Canada), Quantum Bridge Technologies Inc. (Canada); Jie Lin, Quantum Bridge Technologies Inc. (Canada), Univ. of Toronto (Canada); Benjamin MacLellan, Institute for Quantum Computing, Univ. of Waterloo (Canada); Luc Robichaud, Quantum Bridge Technologies Inc. (Canada), Univ. of Toronto (Canada); Piotr Roztocki, Ki3 Photonics Technologies Inc. (Canada); Hoi-Kwong Lo, Univ. of Toronto (Canada), Quantum Bridge Technologies Inc. (Canada)
	13106-70 • **Demonstration of a quantum anomaly induced by borders on photonic chip,** Lianao Wu, IKERBASQUE, Basque Foundation for Science, Univ. del País Vasco (Spain)
12:50 PM	**Lunch Break**
2:20 PM - 4:45 PM	**LAB TOURS**