

Monday (May 26): Quantum Foundations

8:30 – 9:00	Breakfast
9:00 – 9:10	Opening Remarks
9:10 – 10:00	Keynote: Prof. Sir Michael Berry – Quantum trajectories, quantum potential, superoscillations: Madelung, de Broglie, Newton
10:00 – 10:35	Invited: Prof. Eli Cohen – Relativistic independence – theory, applications and experiments
10:35 – 11:05	Coffee Break
11:05 – 11:40	Prof. Stefan Scheel – Non-Abelian geometric phases in integrated photonic waveguide structures
11:40 – 12:15	Invited: Prof. Ofer Kfir – Quantum vs. Classical Effects in Electron-Photon Entanglement and a Case for Fully Diffractive Bell Test
12:15 – 12:30	Contributed: Joab Rosenberg – Foundations of QM
12:30 – 14:00	Lunch
14:00 – 14:50	Keynote: Prof. Lev Vaidman – What can we learn from asking where a particle was inside an interferometer?
14:50 – 15:25	Invited: Prof. Yuval Gefen – Quantum steering, unsteerable states, and unsteerable states that can be steered
15:25 – 15:55	Coffee Break
15:55 – 16:30	Invited: Prof. Justin Dressel – Continuous Monitoring and Feedback Control of Superconducting Qubit
16:30 – 16:45	Contributed: A. Z. Goldberg – Measuring impossible parameters with indefinite causal order
16:45 – 17:00	Contributed: Alessandro Tosini – Disentangling signalling and causal influence
17:00 – 17:15	Contributed: Anaëlle Hertz – Entanglement, loss, and quantumness: When balanced beam splitters are best

Tuesday (May 27): High-Harmonic Generation (HHG) and Strong-Field Quantum Optics

8:30 – 9:00	Breakfast
9:00 – 9:50	Keynote: Prof. Paul Corkum – High-Harmonic Generation — A Universal Response of Matter to Intense Light
9:50 – 10:25	Invited: Prof. André Staudte – High-Harmonic Generation
10:25 – 10:55	Coffee Break
10:55 – 11:30	Invited: Prof. Peter Dombi
11:30 – 12:05	Invited: Jakob Andreasson
12:05 – 12:20	Contributed: Siddhant Midha – Unravelling the intertwined atomic and bulk nature of localised excitons by attosecond spectroscopy
12:30 – 14:00	Lunch
14:00 – 14:50	Keynote: Prof. Maria Chekhova – Squeezed light
14:50 – 15:25	Invited: Prof. Ido Kaminer – Strong-Field Quantum Optics
15:25 – 15:55	Coffee Break
15:55 – 16:30	Invited: Prof. Hanieh Fattahi – Femtosecond Fieldoscopy
16:30 – 16:45	Contributed: Alok Nath Singh – Capturing an Electron in the Virtual State
16:45 – 17:00	Contributed: Marco S. Kirsch – Observation of Joule-Thomson expansion of light

Wednesday (May 28): Quantum Imaging and Related Applications

8:30 – 9:00	Breakfast
9:00 – 9:50	Keynote: Prof. Robert Boyd – Nonlinear Optics and Quantum Imaging

9:50 – 10:25	Invited: Prof. Ben Sussman – TBA
10:25 – 10:55	Coffee Break
10:55 – 11:30	Invited: Prof. Andrew Jordan – TBA
11:30 – 12:05	Invited: Prof. Sharon Shwartz – TBA
12:05 – 12:20	Contributed: Yingwen Zhang – Light-field microscope with quantum correlated photons
12:20 – 12:35	Contributed: Alessio D'Errico – Spatial characterization of diffracting biphotons
12:35 – 14:00	Lunch
14:00 – 14:50	Keynote: Prof. Miles Padgett – 3D imaging through a single flexible fibre: An endoscope the thickness of a human hair
14:50 – 15:05	Contributed: Edward Sergio Santini – On a novel approach to the two-slit interference experiment with electrons
15:05 – 15:20	Contributed: Georgi Gary Rozenman – Macroscopic Quantum Analogues: From Wave-Particle Duality to Black Holes and the Aharonov-Bohm Effect
15:20 – 15:30	Group Photo
15:30 – 17:15	Poster Session

Thursday (May 29): Quantum Information and Communication

8:30 – 9:00	Breakfast
9:00 – 9:50	Keynote: Prof. Ady Arie – Generation and applications of quantum light using structured nonlinear crystals and shaped pump beams
9:50 – 10:25	Prof. Marco Genovese – Single pair test of CHSH and relativistic independence test through sequential weak measurements

10:25 – 10:55	Coffee Break
10:55 – 11:30	Invited: Prof. Yaron Bromberg – TBA
11:30 – 12:05	Invited: Prof. Hagai Eisenberg – TBA
12:05 – 12:20	Contributed: Ariel Ashkenazy – Single-photon Raman interaction for realizing the photon-number splitting attack
12:20 – 12:35	Contributed: K. M. Jordan – Enhancing Spectroscopic Precision Using Two-Photon Interference
12:30 – 14:00	Lunch
14:00 – 14:35	Invited: Prof. Haim Suchowski – Robust quantum integrated photonics
14:35 – 15:05	Invited: Prof. Avi Pe'er – Detection of Entanglement by Stimulated Disentanglement
15:05 – 15:35	Coffee Break
15:35 – 16:05	Invited: Prof. Stefanie Czischek – Chatting with Qubits: Large Language Models for Quantum Many-Body Systems
16:05 – 16:40	Invited: Prof. Ksenia Dolgaleva – Integrated photonics platforms for quantum information
16:40 – 16:55	Contributed: Max Ehrhardt – Birefringence-induced topological effects in laser-written quantum photonics
16:55 – 17:10	Contributed: Farid Ghobadi – Quantum Walks over Different Topologies

Friday (May 30): Novel Quantum Optics and Quantum Control

8:30 – 9:00	Breakfast
9:00 – 9:50	Keynote: Prof. Halina Rubinsztein-Dunlop – Quantum Biotechnology – how and why?
9:50 – 10:25	Invited: Prof. Yoav Sagi – Harnessing quantum tunnelling: spatial transport and interferometry of ultracold atoms in optical tweezers

10:25 – 10:55	Coffee Break
10:55 – 11:30	Invited: Friedemann Reinhard – Planar scanning probe microscopy – how to bring large quantum sensors close to small samples?
11:30 – 12:05	Invited: Prof. Lora Ramunno – Modelling complex laser-matter interactions on the nanoscale
11:05 – 12:40	Invited: Prof. Ravi Bhardwaj – Beyond standard light-matter interactions
12:30 – 14:00	Lunch
14:00 – 14:35	Invited: Prof. Anne Broadbent – Recent Advances in Verifiable Delegated Quantum Computations
14:35 – 15:05	Invited: Prof. Khabat Heshami – High-dimensional Quantum Key Distribution
15:05 – 15:35	Concluding Remarks and Award Ceremony

Registration and Contact Information

Registration (LINK): The registration fee for this event is **200 CAD** per attendee (does not apply to invited speakers). Due to limited seating, we you to register as soon as possible using the link provided below.

*Limited financial support is available for non-local students to assist with local expenses such as accommodation. Priority for this support will be to **graduate students**.*

Contact Us: For inquiries about the program, venue, or sponsorship opportunities, please email us at nextq-nextq@uottawa.ca.