

2022 Quanta CREATE Student Symposium

August 7-9, 2022

Lister Centre, Maple Leaf Room
University of Alberta, Edmonton, Alberta

Sunday

- 12:00 - 16:00 | Travel from Calgary to Edmonton & check in
Bus leaves at 12:00 from ICT Loop, 622 Collegiate PI NW, Calgary, AB T2N 4V8
Check in: 1-042 Lister Centre (From the front doors, go down the stairs and turn left. The Front Desk is on the left.)
- 17:00 - 20:00 | Welcome Reception
MKT Fresh Food | Beer Market, 8101 Gateway Blvd NW, Edmonton, AB T6E 3X8

Monday

- 07:30 - 08:30 | Breakfast
- 08:30 - 08:45 | Welcoming/Administrative Remarks
- 08:45 - 09:00 | Remarks, **John Davis**, University of Alberta, "*The Vision of Quanta*"
- 09:00 - 10:00 | Invited Talk, **Shabir Barzanjeh**, University of Calgary
- 10:00 - 10:20 | Contributed Talk, **Natalia Carvalho**, "*Low temperature optomechanics*"
- 10:20 - 10:40 | Contributed Talk, **Clinton Potts**, "*Dynamical Backaction Magnomechanics*"
- 10:40 - 11:00 | Contributed Talk, **Prasoon Shandilya**, "*Optomechanical spin-photon interface in diamond*"
- 11:00 - 11:15 | Coffee Break

11:15 - 12:15 | Invited Talk, **Hugh Ramp**, D-Wave Systems Inc, “*An Introduction to the D-Wave Quantum Annealing Hardware*”.

12:15 - 12:35 | Contributed Talk, **Marvin Hirschel**, “*Superfluid Helium Gravitational wave/Dark Matter Detector*”

12:35 - 12:55 | Contributed Talk, **Pramodh Senarath Yapa**, “*Theory of a 2D Spatially-Modulated Phase in Superfluid Helium-3 under Confinement*”

12:55 - 13:15 | Contributed Talk, **Rishabh**, “*Quantum Neuroscience: Radical pair mechanism may explain hypomagnetic field effects on neurogenesis*”

13:15 - 13:20 | Administrative Remarks

13:20 - 14:15 | Lunch

14:15 - 16:30 | Quantum Computing Exploration Challenges
L1-270 computer lab, Edmonton Clinic Health Academy (ECHA), 11405 87 Ave NW, Edmonton, AB T6G 1C9

16:30 - 18:30 | Poster Session

18:30 - 21:00 | Networking BBQ & Group Picture at Hawrelak Park
Hawrelak Park, 9330 Groat Rd NW, Edmonton, AB T6G 2A8 (Site #2)

Tuesday

07:30 - 08:30 | Breakfast

08:30 - 09:00 | Administrative Remarks

09:00 - 10:00 | Invited Talk (Remote), **Rafal Janik**, Xanadu Quantum Technologies

10:00 - 10:20 | Invited Talk, **Alexis Milinusic**, Government of Alberta, Director of Technology Relations, “*Alberta technology and innovation strategy (ATIS): strengthening Alberta’s technology and innovation sector*”

10:20 - 10:40 | Contributed Talk, **Snehasis Addy**, “*Information reconciliation in quantum key distribution*”

10:40 - 11:00 | Contributed Talk, **Logan Cooke**, “*Holonomic quantum computing in ultracold neutral atoms via Floquet engineering*”

11:00 - 11:15 | Coffee Break

11:15 - 12:15 | Invited Talk, **Daniel Higgenbottom**, Photonic, Inc.

12:15 - 12:35 | Contributed Talk, **Leli Esmaeilifar**, “*Multipartite time-bin GHz-state generation in a photonic system*”

12:35 - 12:55 | Contributed Talk, **Anindya Rastogi**, “*Superradiance effect for broadband light storage in cold atoms*”

12:55 - 13:55 | Lunch

13:55 - 14:00 | Administrative Remarks

14:00 - 14:20 | Contributed Talk, **Sigurd Flagan**, “*A widely tunable platform for nonlinear optics*”

14:20 - 14:40 | Contributed Talk, **Farhad Rasekh**, “*Erbium-doped silica fiber spectroscopy at low temperature*”

14:40 - 15:40 | Industry Panel Discussion, Chair: John Davis

- **Hugh Ramp**, D-Wave Systems Inc
- **Daniel Higgenbottom**, Photonic, Inc.
- **Paul Kim**, Zero Point Cryogenics

15:40 - 15:50 | Administrative Remarks

15:50 - 17:15 | Poster Session

17:15 - 17:45 | Administrative Remarks, Gifts, & Awards

18:30 - 22:00 | Return Travel to Calgary

Bus leaves at 18:30