INTRIQ Student Conference 2012 Schedule

January 11-13, Orford, QC

Wednesday, January 11

7:00 Arrival and dinner

Thursday, January 12

7:30 - 8:30 Breakfast

Quantum Dots I

8:30 - 8:40 Welcoming remarks

8:40 - 9:15 Chloé Bureau-Oxton (Sherbrooke) - *Introduction To Spin Qubits In Lateral Quantum Dots*

9:15 - 9:35 Patrick Harvey-Collard (Sherbrooke) - *Fabrication of silicon quantum dots for quantum information*

9:35 - 9:55 Gabriel Droulers (Sherbrooke) - *Quantum Cellular Automata: From Concept To Fabrication*

9:55- 10:15 Break

10:15 - 10:35 Xiaoya (Judy) Wang (McGill) - *Theory Of Heavy-Hole Spin-Echo Decay*

Topological Quantum Computing

10:35 - 10:55 Benjamin Schmidt (McGill) - *Search for non-Abelian Anyons in the 5/2 fractional quantum hall state*

10:55 - 11:15 Michel Savard (McGill) - *Majorana Fermions In Semiconductor Heterostructures*

11:15 - 11:35 Olivier Landon-Cardinal (Sherbrooke) - *Practical Characterization Of Quantum Devices Without Tomography*

11:35 Lunch (bag lunch available for skiers)

Friday, January 13

7:30 - 8:30 Breakfast

Quantum Information

8:30 - 9:05 Benno Salwey (U de M) - *Characterizing Entanglement*

9:05 - 9:40 Ivan Savov (McGill) - *Coding For Classical-Quantum Channels*

9:40 - 9:55 Break

9:55 - 10:30 Artem Kaznatcheev (McGill) - *Quantum Query Complexity*

10:30 - 10:50 Paul Raymond-Robichaud (U de M) - *Guildenstern and Rosencrantz In Quantumland*

10:50 - 11:05 Break

Quantum Dots II

11:05 - 11:25 Julien Camirand-Lemyre (Sherbrooke) - *Large Magnetic Field Generation For Ultra-Fast Single Spin Rotations*

11:25 - 11:45 Sophie Rochette (Sherbrooke) - *Integration of micro-magnets to silicon double quantum dots for spin control*

11:45 - 12:05 Benjamin D'Anjou (McGill) - *Theory of Anomalous Magnetotransport In Triple Quantum Dots*

12:05 - 1:30 Lunch

Circuit QED

1:30 - 2:05 Maxime Boisson (Sherbrooke) - *Quantum Computing with Superconducting Circuits : an Introduction*

2:05 - 2:25 Félix Beaudoin (Sherbrooke) - *Quantum Gates By Qubit Frequency Modulation In Circuit Qed*

2:25 - 2:45 Kevin Lalumière (Sherbrooke) - *Quantum Optics In A Transmission Line*

2:45 - 3:05 Break

More Physical Implementations

3:05 - 3:25 Mohammed Harb (McGill) - *GPU Acceleration and an Application to Quantum Transport*

3:25 - 3:45 Guillaume Duclos-Cianci (Sherbrooke) - *Topological Decoding Through Artificial Confinement*

3:45 - 4:05 David Roy-Guay (Sherbrooke) - *High Sensitivity Magnetometry With Diamond*

4:05 - 4:25 Kevin Spahr (Sherbrooke) - *How Fast Can We Modulate Noise?*

4:25 - 4:45 Prizes and closing remarks