

Theory Canada 8 Schedule

Thursday 23 May

7.00-9.00 pm: **reception, registration, poster session** (cash bar available) Cleghorn Room (2nd Floor McGreer)

Friday 24 May

Bishop Williams Hall (Johnson 200)

8.40-9.00 am Opening remarks (LOC Chair, DTP Chair, VP Academic M. Childs)

Theoretical Condensed Matter

Chair: René Côté

9.00-9.30 André-Marie Tremblay - *A tale of two metals: How strong interactions can destroy an ordinary metal*

9.30-10.00 Adrian Del Maestro - *Superfluidity in low dimensional quantum fluids*

10.00-10.30 Coffee break

10.30-10.50 Zhigang Wu - *Dissipative dynamics of trapped atomic Bose-Einstein condensates*

10.50-11.10 Shunji Matsuura - *Phase transition in Renyi Entropy*

11.10-11.30 Wei Wu - *Phase Transitions and Single-Particle Dynamics of Hubbard Models on Honeycomb Lattice*

11.30-11.50 Maxime Charlebois - *Mott p-n junctions in layered materials*

12.00-1.30 pm -----
 Lunch

Gravitation and Cosmology

Chair: Edward Wilson-Ewing

1.30-2.00 Eric Poisson - *Gravitational self-force approach to extreme mass-ratio inspirals*

2.00-2.30 Robert Brandenberger - *Alternatives to Cosmological Inflation*

2.30-2.50 Evan McDonough - *The singularity problem, bouncing universes, and the CMB*

- 2.50-3.10 Oscar Hernandez - *How to see the dark: signatures of strings and other things in the 21 cm radiation from high-redshift hydrogen*
- 3.10-3.40 Coffee break
- 3.40-4.00 William Donnelly - *Entanglement entropy of gauge fields*
- 4.00-4.20 Nils Deppe - *Critical phenomena in higher dimensional Lovelock gravity*

Quantum Information

Chair: Gabor Kunstatter

- 4.30-5.00 Patrick Hayden - *Where and when can a qubit be?*
- 5.00-5.10 Group Photo

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- 6.00-8.00 pm **Banquet** (Cleghorn Room - 2nd Floor McGreer)
- 8.00 pm **Public Lecture** by Bjarni Tryggvason (Bishop Williams Hall - Johnson 200) –
Flying: High and Fast in Space; Low and Slow in a 100 Year Old Aircraft

Saturday 25 May

Bishop Williams Hall (Johnson 200)

Quantum Information (continued)

- 9.00-9.30 David Poulin - *Two dimensional quantum memories*
- 9.30-9.50 Olivier Landon-Cardinal - *Local topological order inhibits thermal stability in 2D*
- 9.50-10.10 Solomon Owerre - *Macroscopic quantum spin tunneling with two interacting spins*
- 10.10-10.40 Coffee break

Mathematical Physics

Chair: Tom Steele

- 10.40-11.10 Noah Graham - *Scattering theory calculations of Casimir energies*
- 11.10-11.30 Edward Wilson-Ewing - *Perturbations in Loop Quantum Cosmology*

11.30-11.50 Jonathan Ziprick - *Twisted flat-cell geometries in the loop gravity phase space*

12.00-1.30 pm

Lunch

Mathematical Physics (continued)

1.30-2.00 Luc Vinet - *Reflections on/in superintegrable models*

2.00-2.20 John Dixon - *BRST Cohomology of free massless theories gives rise to 'Extraordinary Invariants'*

2.20-2.40 Patrick Desrosiers - *Beta-ensembles of random matrices: dualities, perturbations, and phase transitions*

String Theory, Quantum Gravity, and Subatomic Theory

Chair: Patrick LaBelle

2.40-3.10 Cliff Burgess - *Walking the Planck with a String-Inflated Lifevest*

3.10-3.40 Amanda Peet - *Low-lying string state mixing in the D1-D5 orbifold CFT*

3.40-4.10 Coffee break

4.10-4.30 Wei Chen - *Mass spectrum of heavy quarkonium hybrids*

4.30-4.50 Bhubanjyoti Bhattacharya - *Searching for new interactions in the LHCb era*

4.50-5.10 Ruben Sandapen - *Testing AdS/QCD using diffraction and radiative B decays*

5.10-5.30 Matthew Williams – *Accidental supersymmetry and the renormalization of co-dimension 2 branes*

5.30-5.40 Concluding remarks

Poster Session

Location: Cleghorn Room

Thursday - Saturday

#1 Mohammad Bagher Askari - WITHDRAWN

#2 Andres Zambrano - *Evolving Apparent Horizons in the McVittie Spacetime*

- #3 Valerio Faraoni - *Dynamical apparent horizons in inhomogeneous Brans-Dicke universes*
- #4 Adamantia Zampeli - *Dirac fields in BTZ*
- #5 Vincent Genest - *The Clebsch-Gordan/Racah coefficients of $sl_{-1}(2)$ and orthogonal polynomials of the Bannai-Ito scheme*
- #6 Lorne Nelson - *Constraining theories of gravity using gravitational radiation reaction*
- #7 Mirabeau Saha - WITHDRAWN

***** All posters will be removed from the Cleghorn Room on Sunday afternoon *****