

# Quantum Computation with Topological Phases of Matter

Banff, July 20-25, 2008

## Monday

7:00 *Breakfast*

Topological phases and topological order. Chair: M. Oshikawa

9:00 "Topological order from quantum loops and nets" P. Fendley

10:00 "Topological phases at finite temperature" C. Castelnovo

10:30 *Coffee break*

11:00 "Classifying FQH states through pattern of zeros" X.-G. Wen

12:00 "Condensation induced transitions between topological phases" J. Slingerland

12:30 *Lunch*

13:30 Posters, free-form discussions

15:00 *Coffee break*

15:30 Posters, free-form discussions

18:00 *Dinner*

19:30 "Measurement-Only Topological Quantum Computation" P. Bonderson

## Tuesday

7:00 *Breakfast*

p-wave superconductors and superfluids, Topological insulators. Chair: M. Franz

9:00 "Is Sr<sub>2</sub>RuO<sub>4</sub> a chiral p-wave superconductor?" C. Kallin

10:00 "Creating stable p-wave atomic superfluids" V. Gurarie

10:30 *Coffee break*

11:00 "Topological insulators: overview and relevance to quantum computing" J. Moore

12:00 "Many-body generalization of the Z<sub>2</sub> invariant in the time reversal symmetric topological insulator" S.-S. Lee

12:30 *Lunch*

13:30 Posters, free-form discussions

15:00 *Coffee break*

15:30 Posters, free-form discussions

18:00 *Dinner*

19:30 "Adiabatic statistics, quasiparticle spin, and Hall viscosity in quantum Hall states and p<sub>x</sub>+ip<sub>y</sub> paired superfluids", N. Read

## **Wednesday**

7:00 *Breakfast*

Fractionalization of charge and statistics in FQHE and other systems, Chair: Y.-B. Kim

9:00 "Experimental Study of Mesoscopic Quantum Hall Interferometers" W. Kang

10:00 "Correlators and Fractional Statistics in the quantum Hall bulk" S. Vishveshwara

10:30 *Coffee break*

11:00 "Other Quantum Hall States, Hamiltonians, and Conformal Field Theories" S. Simon

12:00 "Zero modes and fractionalization in bilayer-graphene exciton condensate" B. Seradjeh

12:30 *Lunch*

13:30 *Free afternoon*

18:00 *Dinner*

## **Thursday**

7:00 *Breakfast*

FQH States, Chair: K. Shtengel

9:00 "Tunneling and edge transport in non-Abelian quantum Hall states" M. Fisher

10:00 "Non-abelian quantum Hall states: what can be learned from the thin-torus limit"  
E. Ardonne

10:30 *Coffee break*

11:00 "Edge State Heat Transport in the Quantum Hall Regime", J. Eisenstein

12:00 "Symmetries, dimensional reduction and topological quantum order", G. Ortiz

12:30 *Lunch*

13:30 Posters, free-form discussions

15:00 *Coffee break*

15:30 Posters, free-form discussions

18:00 *Dinner*

19:30 "Possible future experiments with non-abelian quantum Hall systems" A. Stern

## **Friday**

7:00 *Breakfast*

Interacting anyons etc. Chair: I. Klich

9:00 "Interacting anyons in topological quantum liquids: Things golden" S. Trebst

10:00 "Infinite randomness in the Golden chain" L. Fidkowski

10:30 *Coffee break*

11:00 "Exact demonstration of non-Abelian statistics for the honeycomb lattice model"  
J. Pachos

11:30 Title TBA, N. Bonesteel

12:00 "Paired Composite Fermion States" G. Moller

12:30 *Lunch*

13:30 *Departure*