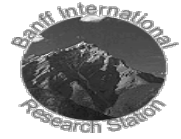# Quantum Computation and Information Theory
September 18 – 23, 2004

MEALS

Breakfast (Continental): 7:00 – 9:00 am, 2nd floor lounge, Corbett Hall, Sunday – Thursday
*Lunch (Buffet): 11:30 am – 1:30 pm, Donald Cameron Hall, Sunday – Thursday
*Dinner (Buffet): 5:30 – 7:30 pm, Donald Cameron Hall, Saturday – Wednesday
Coffee Breaks: As per daily schedule, 2nd floor lounge, Corbett Hall
*Please remember to scan your meal card at the host/hostess station in the dining room for each lunch and dinner.

MEETING ROOMS

All lectures will be held in Max Bell 159 (Max Bell Building accessible by bridge on 2nd floor of Corbett Hall). Hours: 6 am – 12 midnight. LCD projector, overhead projectors and blackboards are available for presentations. *Please note that the meeting space designated for BIRS is the lower level of Max Bell, Rooms 155-159. Please respect that all other space has been contracted to other Banff Centre guests, including any Food and Beverage in those areas.*

SCHEDULE

Saturday, September 18

16:00   Check-in begins (Front Desk – Professional Development Centre - open 24 hours)

17:30-19:30 Buffet Dinner, Donald Cameron Hall

20:00   Informal gathering in 2nd floor lounge, Corbett Hall
                   Beverages and small assortment of snacks available on a cash honour-system basis.

Sunday, September 19

7:00-8:45   Breakfast

8:45-9:00   Introduction and Welcome to BIRS by BIRS Station Manager, Max Bell 159

9:00-9:45   Andrew Childs, "Spatial search and the Dirac equation"

10:00-10:30 Yaoyun Shi, "Classical simulation of quantum communication with entanglement"

10:30-11:00 Coffee break

11:00-12:00 Mario Szegedy "TBA"

12:00-1:30 Lunch

1:30 -   Informal discussion and talks

Monday, September 20

7:00-9:00   Breakfast
10:00-11:00 Peter Selinger, "Towards a quantum programming language" (will include discussion of semantics for higher-order quantum operations)
13:00-14:00 Guided Tour of The Banff Centre; meet in the 2nd floor lounge, Corbett Hall
16:00-17:00 Scott Aaronson, "NP-complete problems and physical reality" (will include a demonstration of a physical experiment)

Tuesday, September 21

7:00-9:00   Breakfast
9:15-10:00 Steve Fenner, "The Solvable Group Intersection Problem"
10:00-10:30 Andrew Scott, "Bounds on Classical Fingerprinting"
10:30-11:00 Coffee Break
11:00-12:00 Andris Ambainis, "Derandomizing Approximate Quantum State Encryption"
12:00-12:10 Group photo; meet on the front steps of Corbett Hall
12:00-1:30   Lunch
1:30- 5:30   Afternoon free
5:30- 7:30   Dinner

Wednesday, September 22

7:00-9:00   Breakfast
9:15-10:00 Dave Bacon, "The dihedral hidden subgroup problem and low density subset sum problems"
10:00-10:30 John Smolin, "The Pangloss universe: science in the many worlds where probability breaks down"
10:30-11:00 Coffee Break
11:00-12:00 John Watrous, "Many copies may be required for entanglement distillation"
12:00-1:30   Lunch
1:30-5:30   Afternoon free
5:30-7:30   Dinner

Thursday, September 23

9:30-10:30 Daniel Gottesman, "Improved simulation of stabilizer circuits"
10:30-11:00 Coffee break
11:00-11:45 Ben Reichardt, "Recent schemes for increasing the fault-tolerant threshold"
11:30-1:30   Lunch (included)

Checkout by 12 noon.