



# Banff International Research Station

for Mathematical Innovation and Discovery

## TOPOLOGY

February 25 – March 2, 2007

### MEALS

\*Breakfast (Buffet): 7:00 – 9:00 am, Donald Cameron Hall, Monday – Friday

\*Lunch (Buffet): 11:30 am – 1:30 pm, Donald Cameron Hall, Monday – Friday

\*Dinner (Buffet): 5:30 – 7:30 pm, Donald Cameron Hall, Sunday – Thursday

Coffee Breaks: As per daily schedule, 2<sup>nd</sup> floor lounge, Corbett Hall

\*Please remember to scan your meal card at the host/hostess station in the dining room for each meal.

### MEETING ROOMS

All lectures will be held in Max Bell 159 (Max Bell Building accessible by bridge on 2<sup>nd</sup> 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

#### Sunday

- 16:00 Check-in begins (Front Desk – Professional Development Centre - open 24 hours)  
Lecture rooms available after 16:00 (if desired)
- 17:30-19:30 Buffet Dinner, Donald Cameron Hall
- 20:00 Informal gathering in 2<sup>nd</sup> floor lounge, Corbett Hall (if desired)  
Beverages and small assortment of snacks available on a cash honour-system.

#### Monday

- 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 Karen Vogtmann (Cornell): Right-angled Artin groups.
- 10:00-10:45 Arthur Bartels (Münster): The Farrell-Jones Conjecture in algebraic K-theory for hyperbolic groups.
- 10:45-11:15 Coffee Break, 2<sup>nd</sup> floor lounge, Corbett Hall
- 11:15-12:00 Jim Bryan (UBC): The Quantum McKay Correspondence
- 12:00-13:00 Lunch
- 13:00-14:00 Guided Tour of The Banff Centre; meet in the 2<sup>nd</sup> floor lounge, Corbett Hall
- 15:30-16:00 Coffee Break, 2<sup>nd</sup> floor lounge, Corbett Hall
- 16:00-16:45 Jason Behrstock (Univ. of Utah): Dimension and rank of mapping class groups.
- 17:00-17:45 Jean-Claude Hausmann (L'Université de Genève): The topology and geometry of Polygon spaces.
- 17:45-19:30 Dinner

## Tuesday

- 7:00-9:00 Breakfast  
9:00-9:45 Soren Galatius (Stanford): The homotopy type of the cobordism category.  
10:00-10:45 John Morgan (Columbia): Overview of Perelman's proof of the Poincare Conjecture and the Geometrization Conjecture.  
10:45-11:15 Coffee Break, 2<sup>nd</sup> floor lounge, Corbett Hall  
11:15-12:00 Fabien Morel (Ludwig-Maximilians-Universität Munich): Towards a surgical approach to the classification of smooth projective varieties over a field  
12:00 Group Photo; meet on the front steps of Corbett Hall  
12:15-13:30 Lunch  
15:30-16:00 Coffee Break, 2<sup>nd</sup> floor lounge, Corbett Hall  
16:00-16:45 Lizhen Ji (Michigan): Large scale geometry and topology of subgroups of Lie groups and mapping class groups  
17:00-17:45 Ozgun Unlu (McMaster): Free actions of extraspecial  $p$ -groups on products of spheres  
17:45-19:30 Dinner

## Wednesday

- 7:00-9:00 Breakfast  
9:00-9:45 Jacob Lurie (Harvard): Equivariant Cohomology Theories and Algebraic Groups  
10:00-10:45 John Morgan (Columbia): Overview of Perelman's proof of the Poincare Conjecture and the Geometrization Conjecture.  
10:45-11:15 Coffee Break, 2<sup>nd</sup> floor lounge, Corbett Hall  
11:15-12:00 Roman Sauer (Chicago): On and around proportionality of the simplicial volume of finite volume manifolds.  
12:00-13:30 Lunch  
15:30-16:00 Coffee Break, 2<sup>nd</sup> floor lounge, Corbett Hall  
16:00-16:45 Martin Olbermann (Heidelberg): Conjugations on six-manifolds  
17:00-17:45 Paolo Ghiggini (Montreal): Contact structures, Heegaard Floer homology, and fibred knots  
17:45-19:30 Dinner

## Thursday

- 7:00-9:00 Breakfast  
9:00-9:45 Andrew Ranicki (Edinburgh): A survey of codimension one splitting obstruction theory  
10:00-10:45 John Morgan (Columbia): Overview of Perelman's proof of the Poincare Conjecture and the Geometrization Conjecture.  
10:45-11:15 Coffee Break, 2<sup>nd</sup> floor lounge, Corbett Hall  
11:15-12:00 Margaret Symington (Mercer University): Applications of toric geometry to more general manifolds.  
12:00-13:30 Lunch  
15:30-16:00 Coffee Break, 2<sup>nd</sup> floor lounge, Corbett Hall  
16:00-16:45 Brent Doran (IAS, Princeton) Unipotent groups, contractible varieties, and some classical questions in affine geometry  
17:00-17:45 Wolfgang Lueck (Muenster): Topological rigidity for non-aspherical manifolds  
17:45-19:30 Dinner

## Friday

- 7:00-9:00 Breakfast

9:00-11:30 Informal discussions

11:30-13:30 Lunch

**Checkout by 12 noon.**

\*\* 5-day workshops are welcome to use the BIRS facilities (2<sup>nd</sup> Floor Lounge, Max Bell Meeting Rooms, Reading Room) until 3 pm on Friday, although participants are still required to checkout of the guest rooms by 12 noon. \*\*