



# Banff International Research Station

for Mathematical Innovation and Discovery

## Operator Algebras and Representation Theory: Frames, Wavelets and Fractals October 9-10, 2010

### MEALS

Meal plan included in the workshop: buffets in the Vistas Main Dining Room, 4th floor, Sally Borden Building (breakfast: 7:00 – 9:30 am; lunch: 11:30 am – 1:30 pm; dinner: 5:30 – 7:30 pm)

Coffee Breaks included in the workshop: As per daily schedule, 2nd floor lounge, Corbett Hall

### MEETING ROOMS

All lectures will be held in Max Bell 159. LCD projector, overhead projectors and blackboards are available for presentations. *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 Beverages in those areas.*

### SCHEDULE

#### Friday October 8

- 16:00 Check-in begins (Front Desk – Professional Development Centre - open 24 hours)  
Lecture rooms available after 16:00.
- 17:30-19:30 Dinner at the Vistas main dining room, 4th floor, Sally Borden Building
- 19:30 Informal gathering in 2nd floor lounge, Corbett Hall  
Beverages and a small assortment of snacks are available in the lounge on a cash honor system.

#### Saturday October 9

- 07:00-09:00 Breakfast at the Vistas main dining room, 4th floor, Sally Borden Building
- 09:00-09:50 Peter Casazza (University of Missouri)  
Kadison-Singer: A few results and a lot of questions
- 10:00-11:00 Coffee Break, 2nd floor lounge, Corbett Hall
- 11:00-11:20 Shidong Li (San Francisco State University)  
Sparse dual frames and the most compact dual Gabor function
- 11:30-11:50 Dorin Dutkay (University of Central Florida)  
Fourier bases on fractal measures
- 12:00-13:30 Lunch at the Vistas main dining room, 4th floor, Sally Borden Building
- 13:30-13:50 Bin Han (University of Alberta)  
Some results and open problems on nonhomogeneous wavelet systems
- 14:00-14:20 Jean Pierre Gabardo (McMaster University)  
Convolution inequalities and Beurling density of wavelet systems
- 14:30-15:30 Coffee Break, 2nd floor lounge, Corbett Hall
- 15:30-15:50 Jens Gerlach Christensen (University of Maryland)  
Sampling and representations of Lie groups
- 16:00-16:20 Deguang Han (University of Central Florida)  
Group representation frames: questions and partial results
- 16:30-16:50 Keri Kornelson (University of Oklahoma)  
Operators on Bernoulli measures spaces
- 17:30-19:30 Dinner at the Vistas main dining room, 4th floor, Sally Borden Building

## Sunday October 10

- 07:00-09:00 Breakfast
- 09:00-09:20 Judith Packer (University of Colorado)  
Operators arising from generalized multiresolution analyses
- 09:30-09:50 Marcin Bownik (University of Oregon)  
Existence of frames with prescribed norms and frame operator
- 10:00-10:30 Coffee Break, 2nd floor lounge, Corbett Hall
- 10:30-10:50 Qiyu Sun (University of Central Florida)  
Nonlinear Wiener's lemma and numerical implementation
- 11:00-11:20 Sergei Silvestrov (Lund University)  
Wavelets, commutants, and representations of generalized crossed products
- 12:00 noon Checkout by 12 noon.
- 12:00-13:30 Lunch at the Vistas main dining room, 4th floor, Sally Borden Building

2-day workshops are welcome to use BIRS facilities (2nd Floor Lounge, Max Bell Meeting Rooms, Reading Room) until 15:00 on Sunday, although participants are still required to checkout of the guest rooms by 12 noon. There is no coffee break service on Sunday afternoon, but self-serve coffee and tea are always available in the 2nd floor lounge, Corbett Hall.