

Information and Schedule for Banff Workshop 07w5004, 7-12 Oct. 2007

Recent progress on nonlinear elliptic and parabolic problems and related abstract methods

Organizers:

E. Norman Dancer (University of Sydney, Australia)
Yihong Du (University of New England, Australia)
Konstantin Mischaikow (Rutgers University, USA)
Peter Polacik (University of Minnesota, USA)
Xiaoqiang Zhao (Memorial University of Newfoundland, Canada)

General Information

Meals

Breakfast (Buffet) 7:00-9:00, Sally Building, Monday-Friday

Lunch (Buffet) 11:30-1:30, Sally Borden Building, Monday-Friday

Dinner (Buffet) 5:30-7:30, Sally Borden Building, Sunday-Thursday

Meeting rooms

Max Bell 159 All lectures are given here. Opens during 6 am-12 midnight.
Facilities include: LCD projector, overhead projector, blackboards

Max Bell 155-159 Available for participants as meeting places. Please note that all other space has been contracted to other Banff Center guests, including any Food and Beverage in those areas.

Sunday, Oct. 7

4pm	Check-in	Front Desk, Professional Development Center (opens 24 hours) Lecture rooms available from 4pm
5:30-7:30pm	Buffet Dinner	Sally Borden Building
8pm	Informal Gathering	Corbett Hall (beverages etc. available on a cash honour-system)

Workshop Schedule

Monday Oct. 8

Morning

8:45-9:00	BIRS Manager	Introduction and welcome to BIRS
9:00-9:40	Henri Berestycki,	Generalized travelling fronts passing an obstacle
9:45-10:25	Francois Hamel,	Uniqueness and further qualitative properties of monostable pulsating fronts

10:30-10:45 **tea break**

10:45-11:25	Marek Fila,	Large time behaviour of solutions of a semilinear heat equation with a supercritical nonlinearity
11:30-11:55	Thomas Hillen	A classification of spikes and plateaus

12-1:30 **lunch**

Afternoon

2:00-2:40	Hiroshi Matano	Convergence and sharp thresholds for propagation in nonlinear diffusion problems
2:45-3:25	Juan Luis Vazquez	Nonlinear elliptic and parabolic equations with "incompatible" measures as data

3:30-3:45 **tea break**

3:45-4:25	Pavol Quittner	Very weak solutions of elliptic equations with nonlinear boundary conditions
4:30-5:10	Wenxian Shen	Variational principle for spatial spread and propagation speeds in time almost and space periodic KPP models

5:30-7:30 **dinner**

Evening

8-9:30	Celebration of Norman Dancer's 60th birthday, various informal speeches	
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Tuesday, Oct. 9

Morning

9-9:40	Thomas Bartsch	On a parabolic semiflow with small diffusion
9:45-10:25	Massimo Grossi	Existence results in the supercritical case

10:30-10:45 **tea break**

10:45-11:25	Changfeng Gui	A Hamiltonian identity for PDEs and its application
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11:30-1 **lunch**

Afternoon

1-1:50	Guided Tour of the Banff Centre (meet in the 2nd floor lounge, Corbett Hall)	
1:50-1:55	Group Photo (meet on the front steps of Corbett Hall)	
2:00-2:40	Juncheng Wei	Toda system, Allen-Cahn equation and nonlinear Schrodinger equations
2:45-3:25	Tobias Weth	A priori bounds and multiple existence of solutions to a non-cooperative elliptic system
3:30-3:45	tea break	
3:45-4:25pm	Danielle Hilhorst	Peak solutions of a chemotaxis-growth system
4:30-5:10pm	Daniel Daners	The Faber-Krahn inequality for Robin Problems
5:30-7:30pm	dinner	

Wednesday, Oct. 10**Morning**

9-9:40am	Nassif Ghoussoub	Bessel potentials and optimal Hardy and Hardy-Rellich inequalities
9:45-10:25am	Congming Li	Classification of solutions to some integral systems
10:30-10:45am	tea break	
10:45-11:25am	Andrej Zlatoš	Speed-up of reaction-diffusion fronts by strong flows
11:30-11:55	Vera Mikyoung Hur	Steady free-surface water waves with vorticity

12-1:30 **lunch**

Afternoon **Free**

5:30-7:30pm **dinner**

Thursday, Oct. 11**Morning**

9-9:40am	Paul Rabinowitz	On a class of infinite transition solutions for an Allen-Cahn model equation
9:45-10:25am	Yuan Lou	Principal eigenvalue and Eigenfunction of elliptic operator with large Advection and its application

10:30-10:45am **tea break**

10:45-11:25am Jean Mawhin Maximum and antimaximum principles around an eigenvalue

11:30-11:55 Walter Allegretto with constant eigenfunction
On some parabolic equations motivated by biological problems

12-1:30 **lunch**

Afternoon

2-2:40pm Charles Stuart A stable branch of solutions of a nonlinear Schrödinger equation

2:45-3:25 Meiyue Jiang Semilinear elliptic equations with indefinite nonlinearities

3:30-3:45pm **tea break**

3:45-4:25pm Eiji Yanagida Solutions with moving singularities for a semilinear parabolic equation

4:30-5:10pm Hal Smith Applications of monotone systems theory to parabolic systems

5:30-7:30pm **dinner**

Friday, Oct. 12

Morning

9-9:40am Peter Bates Invariant Manifolds of Spikes

9:45-10:25am Susanna Terracini TBA

10:30-10:45am **tea break**

11:30am-1pm **lunch**

Afternoon **Participants leave BIRS**