



# 6th Symposium on Analysis and PDEs

Purdue University, June 1–4, 2015

## SCHEDULE

All talks will be held in LWSN 1142. All coffee breaks will be in LWSN Commons area.

### Monday, June 1

8:30 – 8:50	Registration and Refreshments
8:50 – 9:00	Opening Remarks
9:00 – 9:50	<b>Daniela De Silva</b> , Barnard College, Columbia University <i>Higher Order Boundary Harnack Inequalities and Applications to Free Boundary Problems</i>
10:00–10:50	<b>Luis Silvestre</b> , University of Chicago <i><math>C^{1,\alpha}</math> regularity for the parabolic homogeneous <math>p</math>-Laplacian equation</i>
11:00–11:30	Coffee Break
11:30–12:20	<b>Mark Allen</b> , University of Texas at Austin <i>Parabolic Problems with a Fractional Time Derivative</i>
12:30– 2:30	Lunch Break
2:30 – 3:20	<b>Fang-Hua Lin</b> , Courant Institute <i>Extremum Problems for Elliptic Eigenvalues – Lecture I</i>
3:30 – 3:55	<b>Rohit Jain</b> , University of Texas at Austin <i>Randomly Homogenized Boundary Obstacle Problem</i>
4:00 – 4:30	Coffee Break
4:30 – 4:55	<b>Alessia Kogoj</b> , University of Bologna <i>Weighted <math>L^p</math>-Liouville Theorems for Hypoelliptic Partial Differential Operators on Lie Groups</i>
5:00 – 5:25	<b>Matias Delgadino</b> , University of Maryland-College Park <i>The Relationship Between the Obstacle Problem and Minimizers of the Interaction Energy</i>

## Tuesday, June 2

8:30 – 9:00	Refreshments
9:00 – 9:50	<b>David Jerison</b> , Massachusetts Institute of Technology <i>Free Boundaries and Minimal Surfaces – Lecture I</i>
10:00–10:50	<b>Ailana Fraser</b> , University of British Columbia <i>Minimal Surfaces and an Extremal Eigenvalue Problem</i>
11:00–11:30	Coffee Break
11:30–12:20	<b>Yuan Lou</b> , Ohio State University <i>Asymptotic Behavior of the Smallest Eigenvalue of an Elliptic Operator and its Applications to Evolution of Dispersal</i>
12:30– 2:30	Lunch Break
2:30 – 3:20	<b>Fang-Hua Lin</b> , Courant Institute <i>Extremum Problems for Elliptic Eigenvalues – Lecture II</i>
3:30 – 3:55	<b>Robin Neumayer</b> , University of Texas at Austin <i>A Strong Form of the Quantitative Wulff Inequality</i>
4:00 – 4:30	Coffee Break
4:30 – 4:55	<b>Eric Baer</b> , Massachusetts Institute of Technology <i>Optimal Function Spaces for Continuity of the Hessian Determinant as a Distribution</i>
5:00 – 5:25	<b>Ryan Murray</b> , Carnegie Mellon University <i>Second-Order Gamma Limit for the Cahn-Hilliard Functional</i>
<b>BANQUET</b>	<i>Location: Purdue Memorial Union (PMU) – North Ballroom</i>
6:30	Cash Bar
7:00	<b>Dinner</b>

## Wednesday, June 3

8:30 – 9:00	Refreshments
9:00 – 9:50	<b>David Jerison</b> , Massachusetts Institute of Technology <i>Free Boundaries and Minimal Surfaces – Lecture II</i>
10:00–10:50	<b>Nikola Kamburov</b> , University of Arizona <i>The Space of One-Phase Free Boundary Solutions in the Plane</i>

11:00–11:30	Coffee Break
11:30–11:55	<b>Max Engelstein</b> , University of Chicago <i>A Free Boundary Problem for the Parabolic Poisson Kernel</i>
12:00–12:25	<b>Lyudmila Korobenko</b> , McMaster University <i>Boundedness and Continuity of Solutions to Infinitely Degenerate Elliptic Equations via Sobolev Inequalities for Associated Metrics</i>
12:30– 2:30	Lunch Break
2:30 – 3:20	<b>Fang-Hua Lin</b> , Courant Institute <i>Extremum Problems for Elliptic Eigenvalues – Lecture III</i>
3:30 – 3:55	<b>Drew Swartz</b> , Purdue University <i>Dynamics of a Second Order Gradient Model for Phase Transitions</i>
4:00 – 4:25	<b>Soledad Benguria</b> , University of Wisconsin-Madison <i>The Brezis-Nirenberg Problem on <math>S^n</math>, in Spaces of Fractional Dimension</i>
4:30 – 5:00	Refreshments

## Thursday, June 4

8:30 – 9:00	Refreshments
9:00 – 9:50	<b>David Jerison</b> , Massachusetts Institute of Technology <i>Free Boundaries and Minimal Surfaces – Lecture III</i>
10:00–10:25	<b>Dennis Kriventsov</b> , University of Texas at Austin <i>A Free Boundary Problem Related to Thermal Insulation</i>
10:30–10:55	<b>Veronica Quitalo</b> , Purdue University <i>On a Long Range Segregation Model</i>
11:00–11:30	Coffee Break
11:30–12:20	<b>Hung Tran</b> , University of Chicago <i>Some Inverse Problems in Periodic Homogenization of Hamilton-Jacobi Equations</i>



**IMA** Institute for Mathematics  
and its Applications

**PURDUE**  
UNIVERSITY