68th Midwest PDE Seminar – Program *(Updated: November 3)*

November 4–6, 2011

Department of Mathematics, University of Notre Dame

Sponsors: *The 68th Midwest Partial Differential Equations Seminar is partially funded by the National Science Foundation, the Graduate School, the College of Science, the Department of Mathematics, the Department of ACMS of the University of Notre Dame and the Center for Mathematics.*

Friday, November 4, 2011

- **1:00-2:00,** *Registration and Refreshments*, Hurley 257 (Talks in Hayes-Healy 127)
- **2:00–2:10,** *Welcoming Remarks* (Hayes-Healy 127)
- **2:10-3:00,** Jerry Bona, University of Illinois at Chicago, *"Comparisons between Model Equations for Water Waves"*
- **3:10-4:00,** Hongqiu Chen, University of Memphis, *"Analysis on Stability of Solitary-Wave Solutions for a System of Nonlinear Dispersive Equations"*
- **4:00-4:30,** *Tea & Coffee Break*

Short Talks – Session I, Hayes – Healy 127

- **4:30-4:50,** Katie Grayshan, University of Notre Dame, *"Nonuniform Dependence for the Cauchy Problem of the Periodic b-family Equation"*
- **4:50-5:10,** Marcelo Mendes Disconzi, SUNY at Stony Brook, *"A Compactness Theorem for the Yamabe Problem on Manifolds with Boundary"*
- **5:10-5:30,** Kazuo Yamazaki, Oklahoma State University, *"On the Global Regularity of Generalized Leray-alpha Type Models"*

Short Talks – Session I, Hayes – Healy 125

- **4:30-4:50,** Melissa Davidson, University of Notre Dame, *"The Generalized Reduced Ostrovsky Equation and its Continuity Properties"*
- **4:50-5:10,** William Green, Eastern Illinois University, *"Dispersive Estimates for Schrödinger Operators in Dimension Two with Obstructions at Zero Energy"*
- **5:10-5:30,** Nathan Pennington, Kansas State University, *"Global Solutions to the Lagrangian Averaged Navier-Stokes Equation in $B^{n/p}_{p,q}(\mathbb{R}^n)$"*

6:45, Dinner party at Himonas' house

Saturday, November 5, 2011

- **8:00-8:50,** *Registration and Refreshments*, Hurley 257 (Talks in Hayes-Healy 127)
- **8:50–9:00,** *Welcoming Remarks* (Hayes-Healy 127)
- **9:00–9:50,** Joel Smoller, University of Michigan, *"Gravitation"*
- **10:00–10:50,** Marcus Khuri, SUNY at Stony Brook, *"The Jang Equation of General Relativity and Applications"*
- **10:50-11:10,** *Tea & Coffee Break*
- **11:10-12:00,** Gustavo Ponce, University of California, Santa Barbara, *"The IVP for the Benjamin-Ono Equation in Weighted Sobolev Spaces"*
- **11:50-1:30,** *Lunch, Hurley 257*
- **1:30-2:20,** Wilhelm Schlag, University of Chicago, *"Invariant Manifolds and Hamiltonian Evolution Equations"*
- **2:30-3:20,** Feride Tiglay, Fields Institute, *"Integrable Evolution Equations on Spaces of Tensor Densities"*
- **3:20-3:40,** *Tea & Coffee Break*
- **3:40-4:30,** James Colliander, University of Toronto, *"Interaction Morawetz Estimate for gauged Schrödinger"*

Short Talks – Session I, Hayes – Healy 127

- **4:40-5:00,** Curtis Holliman, University of Alabama at Birmingham, *"Norm Inflation and ill-posedness for the Degasperis-Procesi Equation"*
- **5:00-5:20,** Matthew Masarik, University of Michigan, *"The Wave Equation in General Black Hole and Particlelike Geometries"*
- **5:20-5:40,** Ihsan Topaloglu, Indiana University, *"A Nonlocal Isoperimetric Problem on the Two-sphere"*

Short Talks – Session II, Hayes – Healy 129

- **4:40-5:00,** Matthias Youngs, Indiana University, *"Existence of Weak Solutions to a Model for Sparse, One-dimensional, Non-barotropic Fluid"*
- **5:00-5:20,** Ko-Shin Chen, Indiana University, *"Vortex Annihilation for Ginzburg-Landau on a Manifold"*
- **5:20-5:40,** David Karapetyan, University of Notre Dame, *"On the Hölder Continuity of the Data to Solution Map for the Hyperelastic Rod Equation"*

6:30, Conference Dinner, Jordan Hall Galleria

Sunday, November 6, 2011

- **8:00-8:15,** *Tea & Coffee*

Short Talks – Session I, Hayes – Healy 127

- **8:15-8:35,** Daniel da Silva, University of Rochester, *"On the Regularity of the 2+1 Dimensional Skyrme Model"*
- **8:35-8:55,** John Holmes, University of Notre Dame, *"Regularity Issues of the Generalized Burgers Equation"*

Short Talks – Session II, Hayes – Healy 129

- **8:15-8:35,** Nguyen Lam, Wayne State University, *"Existence and Multiplicity of Solutions to Equations of N-Laplacian Type with Critical Exponential Growth in $\mathbb{R}^n$"*
- **8:35-8:55,** Anthony Suen, Indiana University, *"Global Weak Solutions of the Equations of 3-D Compressible Magnetohydrodynamics"*

- **9:00-9:50,** Peter Sternberg, Indiana University, *"Vortex Motion on a Closed Surface"*
- **9:50-10:10,** *Tea & Coffee Break*
- **10:10-11:00,** Dan-Andrei Geba, University of Rochester, *"The Global Regularity Problem for Several Classical Field Theories"*
- **11:10-12:00,** Xinfu Chen, University of Pittsburgh, *"Effects of White Noise in Multistable Dynamics"*
