Saturday, 12 March 2016

1. Saturday Morning Sessions

8:30 AM   Coffee and registration   CB 341
9:00 AM   Opening and welcome   CB 349

Session I: Chair Peter Hislop

9:10 AM   **Hans Lindblad,** Johns Hopkins University
         *A sharp counter example to local existence for Einstein equations in wave coordinates*   CB 349

10:15 AM   **Malabika Pramanik,** University of British Columbia
            *Configurations in sets big and small*   CB 349

11:15 AM   Coffee break   CB 341

11:30 AM   Parallel Session 1A: Chair Leonid Slavin   CB 343
            Parallel Session 1B: Chair Russell Brown   CB 345
            Parallel Session 1C: Chair Mihai Tohaneanu   CB 347
            Parallel Session 1D: Chair Michael Goldberg   CB 349

12:30 PM   Lunch   nearby the campus
2. Parallel session 1A in CB 343

11:30 AM – 11:50 AM
Shu Gu U. Kentucky
*Homogenization of Stokes systems and uniform regularity estimates*

12:00 PM – 12:20 PM
Lukas Maly U. Cincinnati
*Trace and extension theorems for BV and Sobolev functions in metric spaces*

3. Parallel session 1B in CB 345

11:30 AM – 11:50 AM
Guanying Peng U. Cincinnati
*Gamma-convergence for an anisotropic superconductivity model with magnetic fields*

12:00 PM – 12:20 PM
Kazuo Yamazaki Washington State U.
*Global well-posedness and asymptotic behavior of solutions to a reaction-convection-diffusion cholera epidemic model*

4. Parallel session 1C in CB 347

11:30 AM – 11:50 AM
Chad Money U. Louisville
*Chaos in a wider context*

12:00 PM – 12:20 PM
Xin Yang Lu McGill University
*Grain boundary characteristic distribution*

5. Parallel session 1D in CB 349

11:30 AM – 11:50 AM
Jiaqi Liu U. Kentucky
*Scattering and long-time asymptotics for the derivative nonlinear Schrödinger equation*

12:00 PM – 12:20 PM
Jacob Shapiro Purdue U.
*Semiclassical resolvent bounds in two dimensions*
6. Saturday Afternoon Sessions

Session II: Chair Michael Goldberg

2:00 PM  Camil Muscalu, Cornell University
Multiple vector valued inequalities via the helicoidal method  CB 349

3:00 PM  Coffee break  CB 341

3:30 PM  Parallel session 2A: Chair Nages Shanmugalingam  CB 343
Parallel Session 2B: Chair Francis Chung  CB 345
Parallel Session 2C: Chair Bingyu Zhang  CB 347
Parallel Session 2D: Chair Russell Brown  CB 349

6:30 PM  Conference Dinner 124 North Ashland Ave. near the campus

7. Parallel session 2A in CB 343

3:30 PM – 3:50 PM  Daniel Wang  Sam Houston State U.
Variable $A_p$ weights

4:00 PM – 4:20 PM  Jasun Gong  Fordham University
Sierpinski-type fractals are differentiably trivial

4:30 PM – 4:50 PM  Minh Kha  Texas A & M U.
Green’s function asymptotics of periodic elliptic operators on abelian coverings of compact manifolds
8. **Parallel session 2B in CB 345**

3:30 PM – 3:50 PM
Chris Marx, Oberlin College
*Spectral theory of extended Harper’s model and a question by Erdös and Szekeres*

4:00 PM – 4:20 PM
Rajinder Mavi, Michigan State U.
*Anderson localization in the Holstein model with a disordered field*

4:30 PM – 4:50 PM
Robert Wolf, U. Kentucky
*Compactness of iso-resonant potentials*

9. **Parallel session 2C in CB 347**

3:30 PM – 3:50 PM
Ebru Toprak, University of Illinois
*Dispersive estimate for linear Schrödinger equations with real potential in four dimensions*

4:00 PM – 4:20 PM
Eric Stachura, Temple University
*Boundary-value problems for the anisotropic Maxwell system in Lipschitz domains*

4:30 PM – 4:50 PM
Xiang Xu, Old Dominion U.
*A stable scheme for a 2D dynamic Q-tensor model*

10. **Parallel session 2D in CB 349**

3:30 PM – 3:50 PM
Henok Mawi, Howard University
*Existence and Regularity of Solutions to Equations with Convex Gradient Constraint*

4:00 PM – 4:20 PM
Seyed Zoalroshd, University of South Florida
*Some remarks on single-layer potentials*

4:30 PM – 4:50 PM
Dionysios Mantzavinos, SUNY Buffalo
*A new approach to initial-boundary value problems for nonlinear dispersive PDEs*
Sunday, 13 March 2016: Daylight Savings Time Begins!

8:30 AM Coffee CB 341

Session III: Chair Zhongwei Shen

9:00 AM Scott Armstrong, Université Paris-Dauphine
*A quantitative theory of stochastic homogenization* CB 349

10:00 AM Monica Visan, University of California, Los Angeles
*Symplectic non-squeezing for the cubic nonlinear Schrödinger equation on $R^2$* CB 349

11:00 AM Coffee break CB 341

11:30 AM Parallel session 3A: Chair Mihai Tohaneanu CB 343

Pei Pei Earlham College
*Well-posedness and stability of a Mindlin-Timoshenko plate model with nonlinear damping and sources*

Dmitriy Stolyarov Michigan State U.
*Bellman function for Ornstein non-inequalities*

Joseph Lindgren U. Kentucky
*Orbital stability of soliton solutions to the cubic nonlinear Schrödinger equation*

1:00 END of CONFERENCE

Lunch nearby the campus
12. Parallel session 3B in CB 345

11:30 AM – 11:50 AM
Chandan Biswas  
U. Wisconsin Madison

*Extremals for the convolution operator with a surface measure on the moment curve*

12:00 PM – 12:20 PM
Alex Misiats  
Courant Institute, NYU

*Energy bounds and formation of microstructures in alloys*

12:30 PM – 12:50 PM
Sujeewa Hapuarachchi  
U. of Louisville

*Backward heat equation with time dependent variable coefficient*

13. Parallel session 3C in CB 347

11:30 AM – 11:50 AM
Gareth Speight  
U. Cincinnati

*A measure zero universal differentiability set in the Heisenberg group*

12:00 PM – 12:20 PM
Jinping Zhuge  
U. Kentucky

*Convergence rates in periodic homogenization of systems of elasticity*

12:30 PM – 12:50 PM
Carlos Paniagua  
U. Louisville

*A geometric PDE based model for image segmentation*

14. Parallel session 3D in CB 349

11:30 AM – 11:50 AM
Maxim Gilula  
U. Pennsylvania

*A dyadic approach to oscillatory integrals*

12:00 PM – 12:20 PM
Nguyen Lam  
U. Pittsburgh

*Sharp constants and optimizers for a class of the Caffarelli-Kohn-Nirenberg inequalities*

12:30 PM – 12:50 PM
Feride Tiglay  
Ohio State Newark

*The periodic Cauchy problem for the Hunter-Saxton equation in Besov space*