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SEVENTH NEW MEXICO ANALYSIS SEMINAR
PROGRAM

Department of Mathematics and Statistics
University of New Mexico, Albuquerque
October 14-15, 2004

Sponsored by NSF

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Thursday October 14th - Dane Smith Hall Room 125

10:30am Coffee at the Atrium of Dane Smith Hall.

10:45am Official Opening.

11:00am Patricia Bauman (Purdue University)
Minicourse: *Analysis of solutions to Ginzburg-Landau Models I.*

12:30pm Lunch Break

2:00pm Luca Capogna (University of Arkansas)
Minicourse: *Mean curvature flow in the Heisenberg group I.*

3:30pm Coffee Break

4:00pm Peter Sternberg (Indiana University)
Invited Lecture: *Elliptic Variational Problems on Constricted Networks with Applications to Ginzburg-Landau Theory*

5:00pm Break/Questions

5:30pm Donatella Danielli (Purdue University)
Invited Lecture: *Hypersurfaces of minimal type in sub-Riemannian geometry.*

7:15pm Meet at Kellys Brewery on 3222 Central Av.

Friday October 15th - Dane Smith Hall Room 125

8:30am Coffee and goodies

9:00am Luca Capogna (University of Arkansas)
Minicourse: *Mean curvature flow in the Heisenberg group II.*

10:30am Coffee Break

11:00am Patricia Bauman (Purdue University)
Minicourse: *Analysis of solutions to Ginzburg-Landau Models II.*

12:30pm Lunch Break

3:00pm Lia Bronsard (McMaster University)
Invited Lecture: *Fractional degree vortices for a spinor Ginzburg-Landau model.*

4:00pm Break/Questions

4:30pm Scott Pauls (Dartmouth College)
Invited Lecture: *Representations of Minimal Surfaces in the Heisenberg group with applications to the Bernstein Problem.*

Short talks are scheduled in the 2004 Fall Western Section Meeting of the AMS on Saturday October 16th and Sunday October 17th. The Special Sessions directly connected to the New Mexico Analysis Seminar are:

- *Special Session on Analysis and Geometry in Carnot-Caratheodory Spaces.* Organized by Luca Capogna (University of Arkansas) and Robert Smits (New Mexico State University).

- *Special Session on Nonlinear Partial Differential Equations Applied to Materials Science.* Organized by Patricia Bauman (Purdue University) and Tiziana Giorgi (New Mexico State University).

- *Special Session on Multiscale Methods and Sampling in Time-Frequency Analysis.* Organized by Jeffrey Andrew Hogan (University of Arkansas) and Joseph D. Lakey (New Mexico State University).

- *Special Session on Regularity in PDEs and Harmonic Analysis.* Organized by Marianne Korten (Kansas State University,) Charles Nelson Moore (Kansas State University) and Cristina Pereyra (University of New Mexico).

- *Special Session on Spectral Geometry .* Organized by Ivan G. Avramidi (New Mexico Institute of Mining and Technology) and Thomas Patrick Branson (University of Iowa).

- *Special Session on Probabilistic and Geometric Methods in Learning Theory.* Organized by Vladimir Koltchinskii (University of New Mexico).

- *Special Session on Financial Mathematics: The Mathematics of Derivative Securities.* Organized by Maria Cristina Mariani (New Mexico State University) and Osvaldo Mendez (University of Texas at El Paso).

See the AMS schedule and abstracts. All talks will take place in Dane Smith Hall.

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Organizers: Tiziana Giorgi (NMSU), Joseph Lakey (NMSU), Robert Smits (NMSU), Adam Sikora (NMSU), and Cristina Pereyra (UNM).

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