# NINTH NEW MEXICO ANALYSIS SEMINAR

Department of Mathematics and Statistics
University of New Mexico
Albuquerque
April 6-8, 2006
PROGRAM

Sponsored by NSF

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### THURSDAY APRIL 6 - WOODWARD HALL 147

- Coffee and cookies.
- **3:20pm** Official Opening.
- 3:30pm Tatiana Toro (University of Washington, Seattle, WA Geometric measure theory as a tool in free boundary regularity problems I.
  - Coffee Break.
- 5:20pm Christina Selby (Purdue University, West Lafayette, IN)

  An extension and trace theorem for functions of G-bounded variation in Carnot Groups of step 2.
- 6:00pm Ivan Avramidi (New Mexico Institute of Mining and Technology, Socorro, NM)
  Spectral asymptotics of non-commutative Laplacian.

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#### FRIDAY MORNING APRIL 7 - WOODWARD HALL 147

- Coffee and goodies.
- 8:30pm Tatiana Toro (University of Washington, Seattle, WA Geometric measure theory as a tool in free boundary regularity problems II.
  - Coffee Break
- 10:20am Michael Wilson (University of Vermont, Burlington, VM)

  The intrinsic square function.
- 11:00am Tao Mei (Texas A & M University, College Station, TX)

  Matrix valued BMO spaces and paraproducts.
- 11:40am Geoff Diestel (University of Missouri at Columbia, MO)
  The Multilinear Ball Multiplier Problem.
  - Lunch Break

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#### FRIDAY AFTERNOON APRIL 7 - WOODWARD HALL 147

- 2:00pm Tatiana Toro (University of Washington, Seattle, WA

  Geometric measure theory as a tool in free boundary regularity problems III.
  - Coffee Break
- 4:00pm Raluca Felea (Rochester Institute of Technology, Rochester, NY)

  An FIO calculus for the marine seismic imaging: folds and cross caps.
- 4:40pm Maria Cristina Mariani (New Mexico State University, Las Cruces, NM)
  Essentially different and decaying periodic solutions of the forced pendulum equation with friction.
- 5:20pm Bixiang Wang (New Mexico Institute of Mining and Technology, Socorro, NM)
  Asymptotic Behavior of the FitzHugh-Nagumo System

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#### SATURDAY APRIL 8 - WOODWARD HALL 147

- Coffee and goodies.
- 9:30am Wilfredo Urbina (Universidad Central de Venezuela/University of New Mexico, Albuquerque, NM)

  Orthogonal polynomials with Hermitian matrix argument.
- 10:10am Michael Eydenberg (New Mexico State University, Las Cruces, NM)

  The Weyl Correspondence as a Functional Calculus.
- 10:50am Hamed Obiedat (New Mexico State University, Las Cruces, NM) A Topological Characterization of the Beurling-Bjrck Space  $S_w$  Using the Short-Time Fourier Transform.
  - THE END

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