

# Workshop of Young Researchers in Mathematics

September 21-23, 2011



Universidad Complutense  
de Madrid



## Wednesday, September 21

- 09.00: Registration  
09.30: Opening  
10.00: Jaime Gutiérrez Gutiérrez (Universidad de Cantabria), *Lattice reduction techniques and predicting pseudorandom number generators*  
11.00: Coffee break  
11.30: Manuel González Villa (University of Heidelberg), *Motivic invariants of hypersurface singularities*  
12.00: Pablo Raúl Stinga (Universidad de La Rioja), *The fractional Laplacian in the Signorini problem: a semigroup approach to the problem*  
12.30: Marta Abril Bucero (UCM), *Normal bundle of Grassmannian  $G(k,n)$*   
Lunch  
15.30: Anna Khmel'nitskaya (Saint-Petersburg State University), *Introduction to game theory*  
16.30: Pedro Pérez Caro (University of Helsinki), *Analyticity in the Calderón problem with partial data*  
17.00: Coffee break  
17.30: Pablo Álvarez-Caudevilla (UC3M), *Aspects of higher-order differential equations*  
18.00: Giovanna Miritello (UC3M), *Mathematical Modeling of Human Communication*  
18.30: Gustavo Ito (UCM), *Numerical approach to the heat equation with nonlinear flow at the border*

## Thursday, September 22

- 09.30: Lydia Aussenhofer (University of Passau), *An introduction to topological groups*  
10.30: Jaime Jorge Sánchez Gabites (UCLM), *A way of measuring the complexity of subsets of  $\mathbb{R}^3$*   
11.00: Coffee break

- 11.30: Tom Vroegrijk (University of Antwerp), *Boundedness and Topology*  
12.00: Simone Virili (UAB), *Entropy on LCA groups*  
12.30: Andrea Tellini (UCM), *Multiplicity of positive large solutions in a superlinear indefinite problem*  
13.00: Andrea Cadarso Rebolledo (UCM), *Entanglement, fractional magnetization and long range interactions*  
Lunch  
15.30: Olaf Post (Humboldt University of Berlin), *Spectral analysis on graph-like spaces*  
16.30: Marta Szumanska (University of Warsaw), *Knots with finite integral Menger Curvature*  
17.00: Coffee break  
17.30: Paulo Enrique Fernández Moncada (UC3M), *Analytical sampling and Lagrange-type interpolation series*  
18.00: José Manuel Conde Alonso (UAM), *Noncommutative  $L_p$  spaces and Calderón-Zygmund theory*

## Friday, September 23

- 09.30: Stefaan Vaes (Catholic University of Leuven), *Von Neumann algebras, countable groups and ergodic theory*  
10.30: Gerardo Morsella (University of Rome Tor Vergata), *Operator Algebras and the Renormalization Group in Quantum Field Theory*  
11.00: Coffee break  
11.30: Jorge A. Borrego Morell (UC3M), *On a class of orthogonal polynomials with respect to a Jacobi operator*  
12.00: Alba Segurado López (UCM), *Extreme interpolation methods*  
12.30: Clemente Fernández Arias (UCM), *A mathematical model of the cell cycle in T lymphocytes. Deciding when to die and when to divide*  
13.00: Juan Ramón Duque Rodríguez (UCM), *Vascular network modeling and simulation*

The Workshop will take place at the room Miguel de Guzmán, School of Mathematics,  
Universidad Complutense de Madrid

School of Mathematics

Universidad Complutense de Madrid

e-mail: [secreadm.imi@mat.ucm.es](mailto:secreadm.imi@mat.ucm.es)

<http://www.mat.ucm.es/imi/YoungResearchers/>

