

AMERICAS VII PROGRAM



Cartagena, COLOMBIA: July 23-27, 2007

SUNDAY 22

4:00 - 7:00 p. m., Hall Hotel Caribe, **REGISTRATION.**

MONDAY 23

7:00 – 9:00 a.m., Hall Hotel Caribe, **REGISTRATION.**

9:00 – 9:10 a.m., Salón Arcos, **Introduction.**

9: 10 – 9:50 a.m., Salón Arcos, **Vieri Benci, Italy**, *Solitary waves and vortices.*

9:50 – 10:10 a.m. **Coffee Break**

10:10 - 10 50 a. m., Salón Arcos, **María Esteban, France**, *Hardy inequalities and applications.*

10:55 -11:40 p.m., Salón Arcos, **Felipe Linares, Brazil**, *On Zakharov-Kuznetsov Equation.*

10:55 -11:40 p.m., Salón Teatro, **Ratnasingham Shivaji, USA**, *Positive solutions to elliptic systems with combined nonlinear effects.*

11:45–12:25 p.m., Salón Arcos, **Gustavo Ponce, USA**, *Unique continuation properties of some dispersive nonlinear equations.*

LUNCH

2:00 - 2:40 p.m, Salón Arcos, **Patricio Felmer, Chile**, *Monotonicity properties of ground states.*

2:00 - 2:40 p.m, Salón Teatro, **Rafael Iorio, Brazil**, *On the Cauchy Problem Associated to the Brinkman Flow.*

2:45 - 3:25 p.m., Salón Arcos, **Raúl Manásevich, Chile**, *Positive solutions for a system with non homogeneous p -Laplace like operators via blow up.*

3:30 - 4:10 p.m., Salón Arcos, **Noemi Wolanski, Argentina**, *Regularity of the free boundary for the limit of an inhomogenous singular perturbation problem.*

3:30 - 4:10 p.m., Salón Teatro, **Hubertus Von Bremen, USA**, *Stability in a periodic model for genetically modified mosquitos.*

4:10 – 4:30 p.m. **Coffee Break**

4:30–5:10 p.m., Salón Teatro, **Joseph McKenna, USA**, *Semilinear elliptic boundary value problems and finite difference approximations.*

5:15- 5:55 p.m., Salón Teatro, **Mónica Clapp, Mexico**, *Multiple Solutions to the Pure Critical Exponent Problem in Domains with a Hole of Arbitrary Size.*

6:00 p.m., Salón Arcos, **OPENING CEREMONY**

TUESDAY 24

8:10 – 8:50 a.m., Salón Arcos, **Peter Markowich, Austria**, *To be announced.*

9:00–9:30 a.m., Salón Arcos, **Marta García, Chile**, *On a new region of existence and nonexistence of solutions for a system of p - q -Laplacians.*

9:00–9:30 a.m., Salón Teatro, **Renato Iturriaga, Mexico**, *Periodic Schrödinger equation with magnetic field.*

9:35–10:05 a.m., Salón Arcos, **Luz de Teresa, Mexico**, *Null controllability results for parabolic equations in unbounded domains.*

9:35–10:05 a.m., Salón Teatro, **Raúl Quintero, Colombia**, *Solitons and Periodic Traveling Waves for the 2D-Generalized Benney-Luke Equation.*

10: 05 - 10:35 a.m. **Coffee Break**

10:40–11:10 a.m., Salón Arcos, **Pedro Ubilla, Chile**, *Superlinear Systems of Second-Order ODE's.*

10:40–11:10 a.m., Salón Teatro, **Enrique José Lami Dozo, Argentina**, *On Non-Linear Singular Elliptic Problems.*

11:15–11:35 a.m., Salón Arcos, **Adalberto Bergamasco, Brazil**, *To be announced.*

11:15–11:35 a.m., Salón Teatro, **Alexander Carrasco, Venezuela**, *Variation Constant Formula for Functional Partial Parabolic Equations and Applications.*

11:15–11:35 a.m., Salón Veleros 1 y 2, **César Niche, Brazil**, *Decay of weak solutions to the 2D dissipative quasi-geostrophic equation.*

11:15–11:35 a.m., Salón Veleros 3, **Nancy López, Colombia**, *On the discrete Brockett hierarchy.*

11:40-12:20 p.m., Salón Arcos, **Gabriella Tarantello, Italy**, *A weighted Moser-Trudinger inequality and its relations to the symmetry breaking phenomenon for the Caffarelli-Kohn-Nirenberg inequality.*

LUNCH

2:00-2:20 p.m., Salón Arcos, **Mauricio Bogoya, Colombia**, *Blow up for a Nonlocal Nonlinear Diffusion Equation with Source.*

2:00-2:20 p.m., Salón Teatro, **Marlio Paredes, USA**, *Sobre una condición para métricas cosimplécticas sobre una variedad bandera maximal.*

2:00-2:20 p.m., Salón Veleros 1 y 2, **Jorge Mozo, Spain**, *Monomial summability for singularly perturbed differential equations.*

2:00-2:20 p.m., Salón Veleros 3, **Anthony Uyi Afuwape, Colombia**, *Convergence of Solutions of Some Third Order Systems of Non-Linear Ordinary Differential Equations.*

2:25-2:45 p.m., Salón Arcos, **Jaime Navarro, Mexico**, *The Wavelet Transform on arbitrary locally compact topological groups.*

2:25-2:45 p.m., Salón Teatro, **Gilberto Arenas, Colombia**, *Very weak solutions for the equations of magnetohydrodynamic type.*

2:25-2:45 p.m., Salón Veleros 1 y 2, **Mariela Castillo, Venezuela**, *A method of fundamental solutions for unsteady equation of the pressure in an oil reservoir.*

2:25-2:45 p.m., Salón Veleros 3, **Zoraida Sívoli, Venezuela**, *Exact Controllability for a System of Functional Semilinear Integrodifferential Equations.*

2:50-3:10 p.m., Salón Arcos, **Carlos Vélez, Colombia**, *Existence of Multiple Solutions for an Asymptotically Linear Dirichlet Problem.*

2:50-3:10 p.m., Salón Teatro, **Jose Maria Gomes, Portugal**, *An energy-decreasing rearrangement of level sets preserving the domain and volume constraints.*

2:50-3:10 p.m., Salón Veleros 1 y 2, **Ana Moros, Venezuela**, *Existence of Periodic Solution for Van der Pol Reduced Equation.*

2:50-3:10 p.m., Salón Veleros 3, **Angélica Caicedo, Colombia**, *On the Orbital and Numerical Stability of Periodic Wave Solutions for a 1D Boussinesq System.*

3:15-3:35 p.m., Salón Arcos, **German Lozada, Brazil**, *Continuity of the set of equilibria for parabolic equations in dumbbell type domains.*

3:15-3:35 p.m., Salón Teatro, **Adriana Gómez, Colombia**, *Normal forms for reversible polynomial automorphisms of the complex plane.*

3:15-3:35 p.m., Salón Veleros 1 y 2, **Lakhdar Ragoub, Saudi Arabia**, *On an over-determined parabolic problem in a sector domain.*

3:15-3:35 p.m., Salón Veleros 3, **Ademir Ferreira, Brazil**, *Existence and stability of periodic traveling wave solutions for a coupled Schrödinger system in nonlinear optics.*

3:35–4:05 p.m. **Coffee Break**

4:10–4:40 p.m., Salón Arcos, **Gilberto Flores, Mexico**, *Asymptotics for kink propagation in the discrete Sine-Gordon equation.*

4:10–4:40 p.m., Salón Teatro, **Nelson Castañeda, USA**, *Liouville Properties for Nonsymmetric Diffusion Operators.*

4:45-5:15 p.m., Salón Arcos, **Jaime Angulo, Brazil**, *Existence and stability of periodic traveling waves solutions for dispersive evolution equations.*

4:45-5:15 p.m., Salón Teatro, **Carmen Judith Vanegas, Venezuela**, *Mixed boundary value problems for the inhomogeneous polyanalytic equation.*

5:20–6:00 p.m., Salón Arcos, **Rafael De la Llave, USA**, *Instability and Arnold diffusion in Hamiltonian systems.*

WEDNESDAY 25

TOUR TO THE ROSARIO ISLANDS

Departure 8:00 a.m. from Hall Hotel Caribe, arrival 4:00 p.m.

Registration: Sunday, Monday and Tuesday

THURSDAY 26

8:20 - 9:00 a. m., Salón Arcos, **Peter Bates, USA**, *Invariant Manifolds of Spikes.*

9:00 – 9:40 a. m., Salón Arcos, **Luis Vega, Spain**, *Selfsimilar solutions of non-linear Schrödinger equations related to some geometric problems.*

9:40–10:10 a.m. **Coffee Break**

10:10-10:50 a.m., Salón Arcos, **Leonardo Rendón, Colombia**, *Asymptotic stability of Riemann solutions in BGK approximations to certain multidimensional systems of conservation laws.*

10:10-10:50 a.m., Salón Teatro, **Jean Pierre Gossez, Belgium**, *Multiplicity of Positive Solutions for some Semilinear Elliptic Problems.*

10:55-11:35 a.m., Salón Arcos, **James Muldowney, Canada**, *Evolution of differential forms in dynamics on a Banach space.*

10:55-11:35 a.m., Salón Teatro, **Carlos Tomei, Brazil**, *The subtle convergence of Wilkinson's iteration.*

11:40–12:20 p.m., Salón Arcos, **Filomena Pacella, Italy**, *Sign changing solutions of critical exponent problems.*

LUNCH

2:00–2:40 p.m., Salón Arcos, **Shui-Nee Chow, USA**, *Mathematical Issues related to a Nonlinear Circuit.*

2:00–2:40 p.m., Salón Teatro, **Hermano Frid, Brazil**, *Multiscale Young Measures in Stochastic Homogenization and Applications to Porous Media Equations.*

2:45–3:25 p.m., Salón Arcos, **Ernst Stephan, Germany**, *Corner singularities and Mellin symbols.*

3:30–4:10 p.m., Salón Arcos, **Bernhard Ruf, Italy**, *Singularly perturbed elliptic equations with solutions concentrating on 1-dimensional orbits.*

4:10–4:30 p.m. **Coffee Break**

4:30–5:10 p.m., Salón Arcos, **Manuel del Pino, Chile**, *The Lane-Emden-Fowler equation above criticality.*

5:15–5:55 p.m., Salón Arcos, **Anna Maria Micheletti, Italy**, *On the Multiplicity of Solutions of a Nonlinear Elliptic Problem on Riemannian Manifolds.*

FRIDAY 27

8:00–8:40 a.m., Salón Arcos, **Pedro Isaza, Colombia (joint work with Jorge Mejía)**, *Local well-posedness and ill-posedness for the Ostrovsky equation.*

8:45–9:05 a.m., Salón Arcos, **Primitivo Acosta, Spain**, *Algebrization of Linear Differential Equations.*

8:45–9:05 a.m., Salón Teatro, **David Blazquez, Spain**, *A Note on the Backlund Theorem: Obstruction to Global Extension of Contact Transformations.*

8:45–9:05 a.m., Salón Veleros 1 y 2, **Olivaine de Queiroz, Brazil**, *A singular elliptic equation with logarithmic nonlinearity.*

8:45–9:05 a.m., Salón Veleros 3, **Élder Villamizar, Colombia**, *On the well-posedness and asymptotic behavior for the Boussinesq problem in nD .*

9:10–9:40 a.m., Salón Arcos, **Juan J. Morales Ruiz, Spain**, *Integrability of Hamiltonian Systems and Differential Galois Groups of Higher Variational Equations.*

9:10–9:40 a.m., Salón Teatro, **Hildebrando Rodrigues, Brazil**, *Linearization in Infinite Dimensions. Some previous and some new results.*

9:45–10:15 a.m., Salón Arcos, **Jaime Arango, Colombia**, *Critical points of solutions to semilinear elliptic problems.*

9:45–10:15 a.m., Salón Teatro, **Alfonso Limón, USA**, *Meshless Methods for Discrete PDEs on kD -Trees.*

10:15–10:35 a.m. **Coffee Break**

10:40–11:10 a.m., Salón Arcos, **Marco Calahorrano, Ecuador**, *El problema del plasma confinado. Multiplicidad de soluciones cuando las no linealidades son indefinidas.*

10:40–11:10 a.m., Salón Teatro, **Hugo Leiva, Venezuela**, *Exact Controllability of the nD Non-Linear Wave Equation.*

11:15–11:35 a.m., Salón Arcos, **José Tomás Lázaro, Spain**, *Tchebycheff systems and its application to estimate the number of limit cycles of a certain family of polynomial planar systems.*

11:15–11:35 a.m., Salón Teatro, **Julio César Delgado, Colombia**, *Sharp L_p estimates for a class of pseudodifferential operators associated to the subLaplacian corresponding to the Heisenberg group.*

11:15–11:35 a.m., Salón Veleros 1 y 2, **Jairo Hernández, Colombia**, *A mixed FEM formulation for the transmission problem of an elastic thin plate coupled with a membrane.*

11:15-11:35 a.m., Salón Veleros 3, **Ernesto Pérez-Chavela, Mexico**, *On the role of the homographic solutions in celestial mechanics.*

11:40-12:20 p.m., Salón Arcos, **Yingfei Yi, USA**, *Quasi-periodic breathers in Hamiltonian networks with long-range coupling.*

LUNCH

2:00-2:20 p.m., Salón Arcos, **Oscar Perdomo, Colombia**, *A family of solutions for the sinh-Gordon equation.*

2:00-2:20 p.m. Salón Teatro, **César Gómez, Colombia**, *The generalized tanh-coth method to obtain more exact solutions of NLPDE's.*

2:00-2:20 p.m., Salón Veleros 1 y 2, **Qian Wang, Canada**, *Stability of Periodic Orbits for Autonomous Differential Equations in Banach Spaces.*

2:00-2:20 p.m., Salón Veleros 3, **Leonelo Iturriaga, Chile**, *Exact Number of Solutions of Reaction--Diffusion Equations.*

2:25-2:45 p.m., Salón Arcos, **Sigifredo Herrón, Colombia**, *Existence of radial solutions for an asymptotically linear p -Laplacian problem.*

2:25-2:45 p.m., Salón Teatro, **Ana Magnolia Marín, Colombia**, *High-Frequency Asymptotic of Waves Trapped By Underwater Ridges.*

2:25-2:45 p.m., Salón Veleros 1 y 2, **Pedro Girao, Portugal**, *Multibump nodal solutions for an indefinite nonhomogeneous elliptic problem.*

2:50-3:10 p.m., Salón Arcos, **Juan Carlos Muñoz, Colombia**, *Método Espectral Para Una Ecuación Unidimensional Del Tipo Benney-Luke.*

2:50-3:10 p.m., Salón Teatro, **Pedro Pablo Cárdenas, Colombia**, *A shooting method for a nonlinear beam equation.*

2:50-3:10 p.m., Salón Veleros 1 y 2, **Rubén Darío Ortiz, Colombia**, *High-frequency asymptotic of waves trapped by submerged cylinders.*

2:50-3:10 p.m., Salón Veleros 3, **José Luis Sánchez, Venezuela**, *Controllability of the Benjamin-Bona-Mahony Equation.*

3:15- 3:35 p. m., Salón Arcos, **Sebastián Lorca, Chile**, *On a degenerate elliptic equations with dependence on the gradient.*

3:15- 3:35 p. m., Salón Teatro, **Miguel Caicedo, Colombia**, *Existencia de soluciones de un modelo tipo reacción-difusión con cinética no Lipschitz.*

3:15- 3:35 p. m., Salón Veleros 1 y 2, **Oswaldo Zapata, Colombia**, *On some Qualitative Properties of Stratified Flows.*

3:35- 4:00 p. m. **Coffee Break**

4:00- 4:40 p. m., Salón Arcos, **Dung Le, USA**, *Pattern formation in cross diffusion system.*

4:00- 4:40 p. m., Salón Teatro, **Víctor Padrón, USA**, *Wave Blocking in Inhomogeneous Media.*

4:45-5:15 p. m., Salón Arcos, **Carlos Mejía, Colombia**, *Mollified Central Schemes for Conservation Laws.*

4:45-5:15 p. m., Salón Teatro, **Marcos Lizana, Venezuela**, *Traveling waves in a reaction diffusion ratio-dependent predator-prey model.*

5:20- 6:00 p. m., Salón Arcos, **Djairo de Figueiredo, Brazil**, *On a class of non-variational elliptic systems.*

8:00 p.m., **Fiesta Caribe, Hotel Caribe**