

Thursday November 29, 2018

7:45am Registration Opens – Coffee and Pastries

8:00-8:15am Welcome

Nonlinear Optics I

8:20-9:00am X waves, filaments and black holes
Daniele Faccio, University of Glasgow, Scotland

9:00-9:20am The (Great) Unidirectional Pulse Propagation Equation: Applications to laser-driven terahertz pulse generation
Luc Bergé, CEA Paris, France

9:20-9:40am Non-linear propagation of femtosecond pulses in the atmosphere
Andreas Schmitt-Sody, Air Force Research Lab, USA

9:40-10:00am Optical Patterns Revisited
Willie Firth and Gian-Luca Oppo, University of Strathclyde, Scotland (telecon)

10:00-10:20am Coffee Break

Nonlinear waves, random media and dynamical systems

10:20-11:00 am New Classes of Integrable Nonlocal Nonlinear Equations and Solitons
Mark Ablowitz, University of Colorado, USA

11:00-11:20am Rate-induced tipping in an idealized hurricane model
Christopher Jones, University of North Carolina, USA

11:20-11:40am Symmetry breaking in evolutionary dynamics
Natalia Komarova, University of California, USA

11:40-12:00am Searching for Local/Global Minima in Random Energy Landscapes
Charles Newman, New York University, USA

12:00– 1:40pm Lunch Break/Poster Session

Nonlinear Optics II

1:40-2:20pm Microscopic Approach to Computational Nonlinear Optics of Semiconductors and Atomic/Molecular Gases
Stephan Koch, Philipps Universität, Marburg, Germany

2:20-2:40pm Nonlinear optics with a twist
Alejandro Aceves, Southern Methodist University, USA

2:40-3:00pm	From string theory to Anderson localization in disordered optical fibers Arash Mafi, University of New Mexico, USA
3:00-3:20pm	Extending and amending UPPE using BPPE and leaky modes. Per Jakobsen, University of Tromsø, Norway
3:20-3:30pm	Coffee Break
3:30-5:00pm	Panel Discussion - Alan Newell, Jerry Moloney, Arje Nachman, Dave McLaughlin
6:30pm	Banquet at Agustin Kitchen (100 South Avenida del Convento #150)

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7:45am	Coffee/Pastries
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Wave Turbulence

8:00-8:25am	Interacting waves and zonal jets in Charney-Hasegawa-Mima turbulence. Sergey Nazarenko, University of Warwick, England
8:25-8:50am	Internal Waves in the Ocean: what we know and what we do not Yuri Lvov, Rensselaer Polytechnic Institute, USA
8:50-9:15am	Closure of the closure: Wave turbulence found alive and well Benno Rumpf, Southern Methodist University, USA
9:15-9:40am	Kinetics of aggregation-fragmentation processes Colm Connaughton, University of Warwick, England

9:40-10am	Coffee Break
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Patterns

10:00-10:40	Enhanced Diffusivity in Chaotic Flows Jack Xin, University of California at Irvine, USA
10:40-11:00am	
11:00-11:20am	Rivalry vs Fusion in Visual Perception David McLaughlin, New York University, USA
11:20-11:40am	Inhomogeneity-controlled functions of DNA Alan Bishop, Center for Nonlinear Studies, USA
11:40am	Closing Remarks – Alan Newell, Jerry Moloney, Dave McLaughlin
12:30pm	Lunch at Gentle Ben's (865 E University Boulevard)