CONFERENCE PROGRAM

"Advanced Computational and Experimental Techniques in Nonlinear Dynamics"

October 26 - 30, 2020

(Zoom Webinar Virtual Conference)

MONDAY 26

16:55 – 17:00 GMT

WELCOME ADDRESS AND OPENING

17:00 GMT

“Seeing the Light: Waves and Photons, Complexity and Randomness”

Rajarshi Roy

Benedict Visiting Professor, Carleton College, Northfield MN and University of Maryland, College Park MD, USA

17:30 GMT

“Non-Markovian Stochastic Resonance of Light in a Microcavity”

Said R.K. Rodríguez

Institute for Atomic and Molecular Physics - AMOLF, Amsterdam, The Netherlands.

18:00 GMT

“The arrow of time across five centuries of classical music”

Gustavo Martínez-Mekler

Instituto de Ciencias Físicas, UNAM, Cuernavaca, México

BREAK 18:30-19:30 GMT

19:30 GMT

“The topological structure of reconstructed flows in latent spaces”

Gabriel Mindlin

Dept. of Physics, University of Buenos Aires and IFIBA-CONICET, Argentina.

20:00 GMT

“A continuous phase transition characterized via chaotic diffusion for two dimensional mappings”

Edson Denis Leonel

Departmento de Fisica, UNESP - Univ Estadual Paulista, Rio Claro, SP, Brasil

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20:30 GMT

"Localized Modes in Discrete and Continuous Nonlinear Dirac-Like Equations"

Alejandro Aceves

Department of Mathematics, Southern Methodist University, Texas, USA

TUESDAY 27

17:00 GMT

“Droplets of quantum matter”

Boris Malomed

Department of Quantum Electronics Faculty of Engineering, Tel Aviv University, Israel

17:30 GMT

"Topological transitions in an oscillatory driven liquid crystal cell"

Marcel G. Clerc

Departamento de Fisica (DFI), Facultad de Ciencias Fisicas y Matematicas, Universidad de Chile, Santiago,Chile.

18:00 GMT

“Kaleidoscopic Self-Similar Characteristics of Integral Apollonian Gaskets”

Indu Satija

Department of Physics, George Mason University , Fairfax, VA, USA

BREAK 18:30-19:30 GMT

19:30 GMT

“Low dimensional models and electrophysiological experiments to study neural dynamics in songbirds”

Ana Amador

Dept. of Physics, University of Buenos Aires, and IFIBA-CONICET, Buenos Aires, Argentina.

20:00 GMT

“Semiclassical and quantum phase transitions of two coupled photonic crystal nanocavities”

Andrus Giraldo

Department of Mathematics, University of Auckland, New Zealand

20:30 GMT

“Vortices to spiral-galaxy-like tracer patterns induced by contact-line shear gradient on Faraday waves”

Leonardo Gordillo

Departamento de Física, Universidad de Santiago de Chile, Santiago, Chile

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WEDNESDAY 28

17:00 GMT

“Computation of multicritical points at the onset of convection in rotating fluid spheres”

Juan Sánchez Umbría

Universitat Politécnica de Catalunya, Barcelona, Spain

17:30 GMT

“The Origin of GnRH Pulse Generation: An Integrative Mathematical-Experimental Approach”

Krasimira Tsaneva-Atanasova

College of Engineering, Mathematics and Physical Sciences Living Systems Institute, University of Exeter, Exeter, UK

18:00 GMT

“Invariant manifolds organising the propagation and containment of dengue”

Pablo Aguirre

Departamento de Matemática, Universidad Técnica Federico Santa María, Chile.

BREAK 18:30-19:30 GMT

19:30 GMT

“Effects of state-dependence in the delayed feedback loop driving El Niño”

Bernd Krauskopf

Department of Mathematics, The University of Auckland, Auckland, New Zealand

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20:00 GMT

“Estimate for the Yarkovsky effect for Apophis based on automatic differentiation”

Luis Benet

ICF, Universidad Autónoma de México - UNAM, Cuernavaca, México.

THURSDAY 29

17:00 GMT

“Numerical methods to study tipping phenomena in highly multistable systems”

Ulrike Feudel

Carl von Ossietzky University Oldenburg, Germany

17:30 GMT

“Rate-Induced Tipping Points: Beyond Classical Bifurcations”

Sebastian Wieczorek

Applied Mathematics at University College Cork, Ireland (UCC)

18:00 GMT

“Topologies that favor synchronization in energy transmission networks”

Elbert E. N. Macau

Associated Laboratory for Computing and Applied Mathematics (LAC) - INPE, São José dos Campos, Brazil

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BREAK 18:30-19:30 GMT

19:30 GMT

“Matching geometric and numerical characteristics of wild chaotic attractors"

Hinke M. Osinga

Department of Mathematics, The University of Auckland, Auckland, New Zealand

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20:00 GMT

“A restricted four-body problem for the eight figure choreography”

Abimael Bengochea

Instituto Tecnológico Autónomo de México - ITAM, CDMX, México.

20:30 GMT

“New families of periodic orbits in the 4–body problem emanating from a kite configuration”

Ernesto Pérez-Chavela

Instituto Tecnológico Autónomo de México - ITAM, CDMX, México

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FRIDAY 30

17:00 GMT

“First stages of thermal convection in rotating spherical fluids at low Prandtl numbers”

Marta Net

Universitat Politécnica de Catalunya, Barcelona, Spain

17:30 GMT

“A novel approach to generate attractors with a high number of scrolls”

Guillermo Huerta

Centro Universitario de los Lagos, UdG, Jalisco, México

18:00 GMT

“Modeling complex ecological networks in spatially structured environments”

María Fabiana Laguna

Statistical and Interdisciplinary Physics Group, Centro Atómico Bariloche - CONICET. Bariloche, Argentina

BREAK 18:30-19:30 GMT

19:30 GMT

“The robustness of synchronization in the Kuramoto model of identical networked nodes”

Rene Orlando Medrano Torricos

Departamento de Física, Universidade Federal de São Paulo, Campus – Diadema, Brasil

20:00 GMT

“Anticontinuous limit for Landau-de Gennes equilibria”

Panayotis Panayotaros

IIMAS, Universidad Autónoma de México - UNAM, CDMX, México.

20:30 GMT

"Pattern formation on a finite disk"

Nicolás Verschueren van Rees

University of California, Berkeley, CA, USA.