

Workshop on Dynamical Systems and Applications

PROGRAM

TUESDAY 10 Dec.

Chair : Bruno Escribano

- 9:50-10:00 Opening
- 10:00-10:50 Julyan Cartwright, CSIC-Universidad de Granada, Spain
The Belly Phase: Geometric Mixing, Peristalsis, and the Geometric Phase of the Stomach
- 10:55-11:45 David Chillingworth, University of Southampton, UK
Log-rolling and kayaking: periodic dynamics of a nematic liquid crystal in a shear flow

Coffee Break

- 12:00-12:50 Dimitri Breda, University of Udine, Italy
From delay differential equations to ordinary differential equations

Lunch

Chair : Julyan Cartwright

- 14:30-15:20 Jesús Palacián, Public University of Navarre, Spain
Transition state geometry near higher-rank saddles in phase space
- 15:25-15:55 Riccardo Jadanza, Politecnico di Torino, Italy
Linear stability of relative equilibria in n -body-type problems

Coffee Break

- 16:10-16:40 Michael Stich, Aston University, UK
Control of pattern formation by time-delay feedback with global and local contributions
- 16:45-17:15 Elisabete Alberdi, UPV/EHU, Spain
The integration of stiff systems of ODEs using multistep methods

Scientific discussions with a glass of wine

WEDNESDAY 11 Dec.

Chair : Roberto Castelli

- 9:30-10:20 Elena Fantino, Institut d'Estudis Espacials de Catalunya, Spain
Powered invariant manifold transfers between libration point orbits in the Sun-Earth-Moon system
- 10:25-11:15 Holger Teismann, Acadia University, Canada
A semi-classical take on quantum control

Coffee Break

- 11:35-12:25 Diego González, CNR-IMM, University of Bologna, Italy
A Mathematical Model of the Genetic Code, the Origin of Protein Coding, and the Ribosome as a Dynamical Molecular Machine
- 12:30-13:00 Simone Rusconi, Basque Center for Applied Mathematics, Spain
Study on Controlled Radical Polymerization

Lunch

Chair: Holger
Teismann

- 14:30-15:00 Domagoj Vlah, University of Zagreb, Croatia
Fractal properties of generalized Bessel functions
- 15:05-15:35 Matthieu Vanicat, ENS-Cachan, France
Rigorous continuation in a nutshell
- 15:40-16:10 Maxime Breden, ENS-Cachan, France
Rigorous computation of a bifurcation diagram for a reaction diffusion system
- 16:15-16:45 Roberto Castelli, Basque Center for Applied Mathematics, Spain
Computing tangent bundle for hyperbolic periodic orbits of system of ODEs

Coffee and discussions

P.S. Lunches (with *Pintxos*) are served in BCAM and offered to speakers and organizers