

University of Craiova
Department of Applied Mathematics

NONLINEAR DYNAMICS Workshop

26-27 September 2014, Sinaia, Romania

in the frame of the project FP7-PEOPLE-2012-IRSES-316338
“Dynamical systems and their applications”

and of the University of Craiova Grant 19C/27.01.2014
“Differential equations: qualitative study, efficient numerical processing and applications”

List of Talks

Invited Lectures

Limit cycle bifurcations near a 2-polycycle or double 2-polycycle of planar systems
Maoan HAN, Shanghai Normal University, China

On the study of two classes of singular nonlinear wave equations: dynamical system approach
Jibin LI, Zhejiang Normal University, Jinhua, China

Integrability and bifurcations in polynomial systems of ODEs
Valery ROMANOVSKI, University of Maribor, Slovenia

On solutions of Korteweg-de Vries equations of the higher order related to solutions of Painlevé equations
Valery GROMAK, Belarusian State University Minsk, Belarus

Applications of dynamical systems in neuronal models
Gheorghe ȚIGAN, Politehnica University Timișoara, Romania

Short Communications

Elliptic problems with variable exponents and no-flux boundary conditions
Maria-Magdalena BOUREANU and Cristian UDREA, University of Craiova, Romania

The study of some dynamical processes from financial market
Liliana BUCUR, University of Craiova, Romania

- Regular versus chaotic dynamics in some systems generated by area-preserving maps. Applications to the study of some transport phenomena**
Dana CONSTANTINESCU, Marian NEGREA, and Iulian PETRIȘOR, University of Craiova, Romania
- Bifurcation analysis in a 3D symmetric system of interest in plasma physics**
Raluca EFREM, University of Craiova, Romania
- Opial-type inequalities in time scales with applications in dynamic equations**
Aurelia FLOREA, University of Craiova, Romania
- Nonlinear dynamics of the mixing flow mathematical model. The parameter influence on the trajectory behavior**
Adela IONESCU, University of Craiova, Romania
- Using Matcont for bifurcations in neuronal models**
Cristian LĂZUREANU, Politehnica University Timișoara, Romania
- The lower bound of limit cycles appearing from the perturbation of a system with a multiple line of critical points**
Na LI, Shanghai Normal University, China
- Computational Analysis of Conservation Laws for Mathematical Models of the Multi-Species Interactions**
Romulus MILITARU and Florian MUNTEANU, University of Craiova, Romania
- Numerical simulations and some applications in the cortical bone behaviour and thermo ablation in living tissues**
Mihaela RACILĂ, University of Craiova, Romania
Jean-Marie CROLET, Institut Supérieur d'Ingénieurs de Franche-Comté, Besançon, France
- The controllability of a system modeling the motion of a swimmer moving in a viscous fluid**
Ionel ROVENȚA, University of Craiova, Romania
- Compatibility conditions for a potential on a dynamical system**
Traian ȘURTEA, University of Craiova, Romania
- Stability problems for a damped nonlinear oscillator**
Cristian VLADIMIRESCU, University of Craiova, Romania
- Multiple positive periodic solutions for a delayed predator-prey system with Beddington-DeAngelis functional response and harvesting terms**
Yanqin WANG, Shanghai Normal University, China
- Polynomial solutions of the polynomial-like iterative equation**
Zhiheng YU, Sichuan University, Chengdu, China
- Hopf bifurcation of a ratio-dependent predator-prey system with Holling type III functional response**
Qiuyan ZHANG, Sichuan University, Chengdu, China