INTERDISCIPLINARY WORKSHOP ON PERIODIC OSCILLATIONS

Granada, October 20-23, 2009

The aim of this meeting is to bring together mathematicians with experience on the analysis of Differential Equations and Dynamical Systems and leading experts on Physics, Biology or Chemistry with a deep knowledge of relevant models.

Schedule

Tuesday 20:

- 18:30. Welcome reception at the Carmen de la Victoria.

Wednesday 21:

- 9:30-10:20. Natalia Janson (Loughborough University, UK): *Detection and modelling of synchronization in cardiovascular system.*

- 11:00-11:50. David G. Schaeffer (Duke University, USA): *Chaotic behavior in a one-dimensional cardiac model.*

- 12:00-12:50. Lewi Stone (Tel Aviv University, Israel): *The Nonlinear Dynamics of Seasonal Epidemics.*

- 16:00-16:50. Guy Katriel (Tel Aviv University, Israel): *Oscillators coupled through an environment.*

- 17:00-17:50 Alessandro Fonda (University of Trieste, Italy): *Periodic orbits of radially symmetric systems with a singularity.*

Thursday 22:

- 9:30-10:20. Natalia Berloff (University of Cambridge, UK): *Dynamical models of exciton-polariton condensates.*

- 11:00-11:50. Ricardo Riaza (Universidad Politécnica de Madrid, Spain): *Some qualitative aspects of electrical circuit dynamics.*

- 12:00-12:50. Jean Mawhin (Catholic University of Louvain, Belgium): *The early history of self-sustained and relaxation oscillations: a case study in modeling.*

- 16:00-16:50. Fabio Zanolin (University of Udine, Italy): *Linked twist maps configurations in first order planar ODEs: some remarks.*

- 17:30-dawn. Peripatetic session in the Albaicin. Flamenco and tapas. (This activity is optional)

Friday 23:

- 9:30-10:20. Víctor Pérez-García (University of Castilla-La Mancha, Spain): *Models of tumour growth with under cyclic hypoxia.*

- 11:00-11:50. Panayotis Kevrekidis (University of Massachusetts, USA): *On periodic oscillations of dark solitons/multi-solitons and vortices in Bose-Einstein condensates at zero and finite temperatures.*

- 12:00-12:50. Carlos Rascón (Universidad Carlos III de Madrid, Spain): *Models of Fluid Adsorption in Structured Substrates.*

- 16:00-18:00. Open problems session. Conclusions and farewell.

Note from the organizers: the scientific sessions will take place at the Conference Hall of the Carmen de la Victoria. Attendance to this workshop is free and the only restriction is the capacity of the hall (70 persons). Therefore everybody is welcome and no registration fee is required. People interested in attending the workshop are kindly requested to look for travel and lodging by themselves.

Coordinator of the Organizing team: Pedro J. Torres (ptorres@ugr.es)