

Warwick Mathematics Institute

From Nonlinear Dynamics to Systems Biology: in celebration of David Rand's 60th birthday, achievements and influence

Monday Ist & Tuesday 2nd December 2008

Organisers: Robert MacKay, Sebastian van Strien, Nigel Burroughs & Matt Keeling



This London Mathematical Society and EU Research Training Network CODY supported workshop will address renormalisation of dynamical systems, singularities and bifurcations, time series analysis, game theory in economics, finance, epidemiology, ecology, biophysics and biological regulation.

All are welcome to attend. Research students are especially welcome. Please register at

https://www.warwick.ac.uk/mrc/events.php

by I November if you would like assistance with reserving accommodation and in any case by 21 November so that we can plan catering. There will be a registration fee of £20 (UK pounds) payable on arrival. The workshop will be followed by a CODY Day on Dynamical Systems, Wednesday 3 December 2008, those who would like to stay on for this should include this in their dates on the registration form for Rand 60.

Programme

Monday | December 2008 - talks in B3.02, Mathematics Institute, Zeeman Building

- from 9:00 **Registration** in the MRC Room B1.37 in the Mathematics Institute
 - 12:15 Lunch in the Mathematics Institute Common Room
 - 13:20 Welcome/Introduction
 - 13:30 **David Chillingworth** (Southampton) Impact oscillators: singularity theory and dynamical systems
 - 14:15 Ben Mestel (Open University) TBA
 - 15:00 Tea in the Mathematics Institute Common Room
 - 15:30 Alberto Pinto (Minho, Portugal) Fine structures of hyperbolic diffeomorphisms
 - 16:15 Alan Kirman (Marseille, France) Born under a Lucky Star
 - 17:00 Drinks including Springer presentation of book to David Rand and speech by Christopher Zeeman
 - 18:00 Buffet dinner in the Mathematics Institute Common Room

Tuesday 2 December 2008 - From 9:00 to 13:30 talks in B3.02

- 09:00 David Broomhead (Manchester) Reaction and diffusion on fractal sets
- 09:45 Tomas Bohr (Lyngby, Denmark) Broken symmetries and sharp corners at interfaces in moving fluids
- 10:30 Coffee in the Mathematics Institute Common Room
- 11:00 **Phil Holmes** (Princeton, USA) From spike rates to simple decisions; stochastic ODEs as models for evidence accumulation in cortical circuits
- 11:45 Chris Bauch (Guelph, Canada) Application of game theory to voluntary vaccination policy
- 12:30 Lunch
- 13:30 Move to Systems Biology Centre in Coventry House for the afternoon
- 13:45 Andrew Millar (Edinburgh) Systems Biology Flowers
- 14:30 Minus van Baalen (Paris, France) Self-structuring in spatial evolutionary ecology
- 15:15 Erik Mosekilde (Lyngby, Denmark) The role of nonlinear dynamic phenomena in physiological control systems
- 16:00 Tea in the Systems Biology Common Room

Titles of talks will be added to the webpage as they become available, see our website at

go.warwick.ac.uk/rand60

For other questions please contact the Mathematics Research Centre at mrc@maths.warwick.ac.uk





