

One-Day IOP meeting
Modelling Complex Systems in Biology, Physiology and Medicine
12 December 2012, University of Manchester

Preliminary programme

10:00	registration, welcome and coffee
10:30-11:15	Alexey Zaikin (University College London) Delayed bifurcations in gene regulatory networks
11:15-11:45	Richard Clayton (University of Sheffield) Modelling the heart
11:45-12:15	Magnus Rattray (University of Manchester) Inferring the structure of gene regulatory networks from time-series data
12:15-13:00	LUNCH
13:00-13:20	James Marshall (University of Sheffield) Value-sensitive decision-making in a model of collective choice
13:20-13:40	Peter Dodd (London School of Hygiene and Tropical Medicine) Agent-based modelling of TB control in high-HIV settings
13:40-14:00	Andrea Apolloni (London School of Hygiene and Tropical Medicine) Optimal vaccine allocation and vulnerability
14:00-14:20	Angela Oliveira Pisco (University of Manchester) Dynamics of cancer drug resistance development: selection vs. instruction by chemotherapy
14:20-14:40	Jack Heal (University of Warwick) Inhibition of HIV---1 protease: the rigidity perspective
14:40-15:00	COFFEE BREAK
15:00-15:20	Bartosz Szczesny (University of Leeds) When does cyclic dominance lead to stable spiral waves?
15:20-15:40	Elahe Radmaneshfar (University of Aberdeen) Modelling the reaction of the cell cycle to a fluctuating environment: A Boolean approach
15:40-16:00	Daniel Garry (University of Manchester) Stimulus response in a coupled cortical compartment model of intermittent epileptic dynamics
16:00-16:20	David Foster (University of Manchester) The information gained by the eye from the colours of the natural world
16:20-16:40	Paula Croal (University of Nottingham) Quantifying the effect of blood oxygenation on MRI signal.
16:40-17:00	Chris Welshman (University of Manchester) Reducing the Dimension of Models of Complex Systems

The meeting is organized by the Nonlinear and Complex Physics Group of the Institute of Physics, and supported by the Medical Physics Group of the IoP.

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