

# Second European Science Foundation Conference on Functional Dynamics

Rothenburg ob der Tauber, Germany  
15 – 18 September 2008



## Monday, 15 September

- |                 |  |
|-----------------|--|
| 13.00 – 18.00 h | Registration   |
| 18.00 – 19.00 h | Dinner   |
| 19.00 – 19.10 h | Welcome  |
| 19.10 – 19.30 h | A. Lunke (ESF, Strasbourg):<br>Introduction to the ESF and its activities in the life sciences |
| 19.30 – 21.00 h | Brief presentation of posters  |

## Tuesday, 16 September

- 08.00 – 09.00 h      Breakfast
- 09.00 – 10.00 h      Karsten Kruse (Saarbrücken):  
Cell movements and cytoskeletal self-organisation
- 10.00 – 10.30 h      Markus Bär (Berlin):  
Modelling the role of shape in orientational ordering and  
collective motion of myxobacteria
- 10.30 – 11.00 h      Coffee break
- 11.00 – 12.00 h      Tetsuo Ueda (Sapporo):  
Functional dynamics in *Physarum*: Towards an understanding of  
cellular behavioural intelligence
- 12.00 – 12.30 h      Silvia de Monte (Paris):  
Dynamical quorum sensing
- 12.30 – 13.30 h      Lunch
- 13.30 – 18.00 h      Poster section and Discussion time
- 18.00 – 19.00 h      Dinner
- 19.00 – 20.00 h      Martin Falcke (Berlin):  
Cells as stochastic media
- 20.00 – 20.30 h      Didier Gonze (Brussels):  
Circadian rhythms and molecular noise
- 20.30 – 21.00 h      Dirk Lebiedz (Freiburg):  
Phase tracking and restoration of circadian rhythms by model-  
based optimal control

## Wednesday, 17 September

- 08.00 – 09.00 h      Breakfast
- 09.00 – 10.00 h      Igor Schreiber (Prague):  
Stability of reaction networks with applications to biochemical  
reactions
- 10.00 – 10.30 h      Tamás Turanyi (Budapest):  
Analysis of cell cycle models using the shapes of local sensitivity  
functions
- 10.30 – 11.00 h      Coffee break

- 11.00 – 11.30 h Csaba Bagyinka (Szeged):  
The autocatalytic reaction cycle of hydrogenase: Evidences, models, and possible physiological importance
- 11.30 – 12.00 h Adrian Bîrzu (Iași):  
Modelling of globally coupled array of oscillators
- 12.00 – 12.30 h Frantisek Štěpánek (Prague):  
Model-based design of structured reactive particles for controlled release
- 12.30 – 13.30 h Lunch
- 13.30 – 18.00 h Poster section and Discussion time
- 18.00 – 19.00 h Dinner
- 19.00 – 20.00 h Javier Buceta (Barcelona):  
Modelling protein dilution experiments: stochastic effects
- 20.00 – 20.30 h Rui Dilão (Lisbon):  
Calibrating 2 reaction-diffusion models describing the formation of the gradient of the protein Bicoid in the *Drosophila* embryo
- 20.30 – 21.00 h Antônio Roldão (Oeiras):  
Predicting recombinant protein expression in the *BuCoVirus* / insect cell system: A stochastic / structured modelling approach

## Thursday, 18 September

- 08.00 – 09.00 h Breakfast
- 09.00 – 10.00 h Blas Echebarria (Barcelona):  
Modelling cardiac dynamics: What do we learn from simple models?
- 10.00 – 10.30 h Stephan Luther (Göttingen):  
Controlled wave-emission from endogenous sites terminates malignant cardiac wave dynamics
- 10.30 – 11.00 h Coffee break
- 11.00 – 12.00 h Alexandra Zahradnikova (Bratislava):  
Generation and suppression of calcium-induced arrhythmias in a model of the heart ventricular myocyte
- 12.00 – 12.30 h Concluding remarks / Closing
- 12.30 – 13.30 h Lunch