

Zwölftes Harzseminar

Strukturbildung in Chemie und Biophysik

Goslar-Hahnenklee (OT Bockswiese), 2 – 4 March 2008

Organizers: E. Bodenschatz, M. Hauser, R. Imbihl, A. S. Mikhailov



Programme

Sunday, 2 March

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|----------------------|---|
| 15:30 – 15:40 | Opening |
| 15:40 – 16:15 | R. Kapral (Univ. Toronto):
Design of chemically propelled nanodimer motors |
| 16:15 – 16:45 | K. Kassner (Uni Magdeburg):
Symmetry breaking in actin gels – implications for cellular motility |
| 16:45 – 17:05 | Coffee break |
| 17:05 – 17:35 | A. Gholami (MPI Göttingen)
A microscopic description of actin-based propulsion of beads |
| 17:35 – 17:55 | H. Flehsig (FHI Berlin):
Design of elastic-network prototypes of protein machines |
| 17:55 – 18:15 | Coffee break |
| 18:15 – 18:45 | R. Imbihl (Uni Hannover):
Mathematical modelling of pulses in the $\text{NO} + \text{H}_2$ reaction on $\text{Rh}(110)/\text{K}$ |
| 18:45 – 19:15 | I. Miethe (TU München):
Period doubling and period tripling during the electrodisolution of Si |
| 19:15 – 19:45 | J. Vollmer (MPI Göttingen):
Instabilities and pattern formation in phase-separating fluids |
| 20:00 | Dinner |

Monday, 3 March

- 09:00 – 09:20 P. Kolski (TU Berlin):
Three-dimensional wave propagation in thin layers of a photo-sensitive BZ-medium.
- 09:20 – 09:40 C. Luengviriyaya (Uni Magdeburg):
Excitable scroll rings in an advective field
- 09:40 – 10:10 S. Luther (MPI Göttingen):
Imaging the heart - Experimental methods in cardiac dynamics
- 10:10 – 10:30 S. Bauer (PTB Berlin):
Experiments and simulations of excitation propagation in the rabbit heart
- 10:30 – 10:50 Coffee Break**
- 10:50 – 11:10 A. Squires (MPI Göttingen):
Multi-site wave emission in biological excitable tissues
- 11:10 – 11:30 C. Richter (MPI Göttingen):
Mapping cardiac arrhythmias - Wave dynamics in cardiomyocyte cell cultures
- 11:30 – 12:00 M. Dahlem (TU Berlin):
Feedback control of traveling waves close to the excitation limit
- 12:00 – 12:30 V. Zykov (TU Berlin):
A unified approximation for rigidly rotating spirals in weakly and highly excitable media.
- 12:30 – 15:30 Lunch**
- 15:30 – 15:50 S. Alonso (PTB Berlin):
Calcium regulation in membrane pattern formation
- 15:50 – 16:20 O. Rudzick (FHI Berlin):
Nonequilibrium patterns in active Langmuir monolayers
- 16:20 – 16:50 M. Bär (PTB Berlin):
Modelling reaction-diffusion patterns in soft matter
- 16:50 – 17:10 Coffee break**
- 17:10 – 17:30 C. Lukas (TU Berlin):
Mechanical implications of the inhomogeneity of bone material
- 17:30 – 17:50 S. Gil (FHI Berlin):
Controlling chaos in dynamical networks
- 17:50 – 18:10 S. Fruhner (TU Berlin):
Anisotropy effects in clusters of ferromagnetic fluids
- 18:10 – 18:30 Break**
- 18:30 – 18:50 M. Torralba (MPI Göttingen):
Oscillating Newtonian and complex fluids
- 18:50 – 19:10 M. Gibert (MPI Göttingen):
Thermal turbulent convection and inertial particles in turbulent flows
- 19:10 – 19:40 S. Weiß (MPI Göttingen):
Forcing in thermal convection experiments
- 20:00 Dinner**

Tuesday, 4 March

09:00 – 09:30	H. Nakao (Kyoto Univ. / FHI Berlin): Turing patterns on random networks
09:30 – 10:00	A. Lavrova (HU Berlin): Spatio-temporal dynamics of pH and membrane potential along the alga cell
10:00 – 10:30	R. Straube (MPI Magdeburg): Spatial aspects of intracellular signalling
10:30 – 10:50	Coffee break
10:50 – 11:20	C. Beta (Uni Potsdam): Quantitative analysis of random amoeboid motion using model-free methods
11:20 – 11:40	G. Amselem (MPI Göttingen): Directional sensing in eukaryotic cells - towards a bistable mechanism
11:40 – 12:00	M. Radszweit (TU Berlin): Kinetic Monte-Carlo simulation of three-dimensional growth of a cell population
12:20	Closing
12:30	Lunch

How to reach the conference site:

Hotel Niedersachsen, Wiesenstr. 12, Goslar, OT Hahnenklee-Bockswiese, Tel.: 05325/52860
<http://www.hotelniedersachsen.com>

Arrival by train to Goslar, then take the bus **830 to Bockswiese**:

2 March:	Goslar (ZOB) 12.05 h – Bockswiese 12.25 h
	Goslar (ZOB) 14.05 h – Bockswiese 14.25 h
4 March:	Bockswiese 13.37 h – Goslar (ZOB) 13.57 h
	Bockswiese 14.37 h – Goslar (ZOB) 14.57 h

For the complete timetable, see <http://www.weser-ems-bus-de>