

Fünfzehntes Harzseminar
Strukturbildung in Chemie und Biophysik

Goslar-Hahnenklee (OT Bockswiese), 20 – 22 February 2011

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



Programme

Sunday, 20 February

15:30 – 15:40	Opening
15:40 – 16:15	Vadim Anishchenko (Saratov University) Poincaré recurrences
16:15 – 16:35	Anna Karnauhova (FU Berlin) Partial Characterization of the global attractor for the sunflower equation
16:35 – 16:55	Pablo Kaluza (FHI Berlin) Controlled pattern retrieval in a designed energy landscape
16:55 – 17:15	Coffee break
17:15 – 17:50	Ronny Straube (MPI Magdeburg) Bistability and Oscillations in Protein Modification Cycles
17:50 – 18:10	Yasuaki Kobayashi (FHI Berlin) Evolutionary design of robust genetic oscillators
18:10 – 18:30	Break
18:30 – 18:50	André Weber (Uni Magdeburg) Quorum sensing by yeast cells
18:50 – 19:10	Gonzalo Ramires Avila (Potsdam Institut für Klimafolgeforschung) Firefly courtship as the basis of synchronization-response principle
19:30	Dinner

Monday, 21 February

09:00 – 09:35	Dennis Kupitz (Uni Magdeburg) Interaction of a pair of scroll waves
09:35 – 09:55	Fabian Paul (TU Berlin) Boundary effects on scroll rings in oscillatory media
09:55 – 10:15	Claudia Lenk (TU Ilmenau) Interaction of chemical oscillators in regular two-dimensional arrangements of catalyst spots in the Belousov-Zhabotinsky reaction
10:15 – 10:35	Vladimir Zykov (MPI Göttingen) Kinematics of rigidly rotating spiral waves in the Kessler-Levine model of an excitable medium
10:35 – 10:55	Coffee break
10:55 – 11:15	Harm-Hinrich Rotermund (Dalhousie University) Gradient induced spiral drift in heterogeneous excitable media
11:15 – 11:50	Sebastian Kirsch (MPI Magdeburg) Oscillations and pattern formation in PEM fuel cells exposed to H ₂ /CO mixtures
11:50 – 12:10	Ronald Imbihl (Uni Hannover) Interface excitations and new types of wave patterns in ammonia oxidation over Rh(110)
12:10 – 12:30	Martin Hesse (Uni Hannover) Making vanadium oxide layers dynamic: self-organization in potassium promoted V-oxide catalysts
12:40 – 15:30	Lunch
15:30 – 16:05	Thomas Isele (TU Berlin) A reaction-diffusion model for spreading depolarization
16:05 – 16:40	Markus Radzuweit (PTB Berlin) A model for oscillation and pattern formation in protoplasmic droplets of <i>Physarum polycephalum</i>
16:40 – 17:00	Coffee break
17:00 – 17:20	Werner Baumgarten (Uni Magdeburg) Transport efficiency governs the morphology of the plasmodial network in slime moulds
17:20 – 17:40	Markus Mittenzweig (FU Berlin) Stability of F-actin
17:40 – 18:00	Christian Westendorf (MPI Göttingen) Investigating time-periodic properties of the actin cytoskeleton
18:00 – 18:20	Break
18:20 – 18:40	Eva Pfannes (Uni Potsdam) Mechanical stability and dynamics of motile cells under the influence of a cytoskeletal inhibitor
18:40 – 19:00	Helmar Leonhardt (Uni Potsdam) Cell-substrate impedance analysis of cellular motility
19:00 – 19:20	Maximilian Schmidt (TU Berlin) A model for the growth of bacterial flagella
19:30	Dinner

Tuesday, 22 February

09:00 – 09:35	Markus Düttmann (FHI Berlin) Myosin as a mechanical sensor: Elastic-network study of intramolecular communication
09:35 – 09:55	Yves Dehouck (FHI Berlin) Prediction of the effect of mutations on protein stability using knowledge-based potential functions
09:55 – 10:15	Holger Flechsig (FHI Berlin) New results on elastic-network modeling of protein machines
10:15 – 10:35	Coffee break
10:35 – 11:10	Mihaela Enulescu (TU Berlin) Polar order in sedimenting suspensions of active particles
11:10 – 11:30	Markus Bär (PTB Berlin) Universal scaling in dynamical self-assembly and clustering of self-propelled particles and bacteria
11:30 – 11:50	Andreas Zöttl (TU Berlin) Motion of a model microswimmer in Poiseuille flow
11:50 – 12:10	Stefan Müller Chemical reaction evolving in a droplet
12:10	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 13.35 h – Goslar (ZOB) 13.55 h
 Bockswises 14.35 h – Goslar (ZOB) 14.55 h

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