Siebzehntes Harzseminar

Strukturbildung in Chemie und Biophysik

Goslar-Hahnenklee (OT Bockswiese), 24 – 26 February 2013

Organizers: Markus Bär, Eberhard Bodenschatz, Marcus Hauser, Ronald Imbihl

Programme

Sunday, 24 February

15:30 – 15:40	Opening
15:40 – 16:15	Shigefumi Hata (FHI Berlin): Oscillatory Turing patterns in network-organized reaction-diffusion systems
16:15 – 16:50	Benjamin Lindner (HU Berlin): Mean-field theory for coupled noisy hairbundles
16:50 – 17:10	coffee break
17:10 – 17:45	Jakob Löber (TU Berlin): Analytical approximations for spiral waves
17:45 – 18:05	Vladimir Zykov (MPI Göttingen): Between two limits in spiral wave dynamics
18:05 – 18:25	break
18:25 – 18:45	Jan Totz (TU Berlin): Dynamics of scroll rings in spatial confinement
18:45 – 19:05	Arash Azhand (TU Berlin): Evolution of scroll rings in confined geometry under variation of the excitation threshold
19:15	dinner

Monday, 25 February

09:00 – 09:35	Masotoshi Nishikawa (MPI CBG Dresden): Oscillatory flow of the actomyosin cortex in *C. elegans* embryo
09:35 – 10:10	Werner Baumgarten (Uni Magdeburg): Genesis and characterization of the vascular network in *Physarum polycephalum*
10:10 – 10:30	Sebastian Weise (Uni Magdeburg): Protoplasmic flow in the tubular veins of *Physarum polycephalum*
10:30 – 10:50	coffee break
10:50 – 11:25	Adrian Fessel (Uni Bremen): *Physarum polycephalum* percolation as a paradigm for topological phase transitions in transportation networks
11:25 – 12:00	Claus Fütterer (Uni Leipzig): Instability of toroids and differential contraction during tissue regenreation
12:00 – 12:20	Markus Radszuweit (PTB Berlin): Cardiac contraction and mechano-electric feedback promotes discordant alternans and block
12:30 – 15:30	lunch
15:30 – 16:05	Azam Gholami (MPI Göttingen) Flow-driven instabilities during aggregation of *Dictyostelium discoideum*: Experiments and modelling
16:05 – 16:25	Christian Westendorf (MPI Göttingen) The actin cytoskeleton of chemotactic amoebae operates close to the onset of oscillations
16:25 – 16:45	Matthias Gerhardt (Uni Potsdam): Complex spatiotemporal wave-patterns observed in giant *Dictyostelium discoideum* cells
16:45 – 17:05	coffee break
17:05 – 17:25	Beatrice Rodiek (Uni Magdeburg): Spatio-temporal dynamics of plasmodial migration of the slime mould *Physarum polycephalum*
17:25 – 17:45	Christoph Blum (MPI Göttingen): Correlating signaling cascade with movement in *Dictyostelium discoideum*
17:45 – 18:05	Brian Utter (MPI Göttingen): Electrotaxis in *Dictyostelium*
18:05 – 18:40	Sebastian Heidenreich (PTB Berlin): Minimal continuum theories of structure formation in dense active fluids
18:45	dinner

Tuesday, 26 February

09:00 – 09:35	Francesc Sagués (Uni Barcelona): Compensation of chiral forces: A proof of concept in self-assembled soft matter
09:35 – 10:10	Steffen Mertens (HU Berlin): Hydrodynamically enforced entropic trapping of Brownian particles
10:10 – 10:45	Alexey Eremin (Uni Magdeburg): Cyclosis-mediated peroxide transfer and the formation dynamics of alkaline patterns in *Chara coralline* cells
10:45 – 11:05	coffee break
11:05 – 11:40	Sebastian Kirsch (MPI Magdeburg): Experimental investigation of pattern formation in a polymer electrolyte membrane fuel cell (PEMFC) operated with H_2CO
11:40 – 12:00	Holger Flechsig (FHI Berlin): Conformational dynamics of membrane transporter proteins
12:00 – 12:20	David Schüler (PTB Berlin): Simulation and weakly nonlinear analysis of pattern formation in multiscale systems
12:20 – 12:35	closing
12:40	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:**

24 February:	Goslar (ZOB) 12.05 h – Bockswiese 12.25 h
	Goslar (ZOB) 14.05 h – Bockswiese 14.25 h
26 February:	Bockswiese 13.35 h – Goslar (ZOB) 13.55 h
	Bockswiese 14.35 h – Goslar (ZOB) 14.55 h

For the complete timetable, see **http://www.rbb-bus.de** or consult **http://www.bahn.de**