

Einundzwanzigstes Harzseminar

Strukturbildung in Chemie und Biophysik

Goslar-Hahnenklee (OT Bockswiese), 26 – 28 Februar 2017

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



Programme

Sunday, 26 February

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|---------------|--|
| 15:30 – 15:40 | Opening |
| 15:40 – 16:15 | Benjamin Friedrich (MPI-PKS Dresden)
Self-organized dynamics of cilia and flagella: swimming, steering, and synchronization |
| 16:15 – 16:35 | Christian Westendorf (MPI-DS Göttingen)
Cilia based flow in the brain ventricular system |
| 16:35 – 16:55 | Felix Rühle (TU Berlin)
Microswimmers under gravity: a hydrodynamic study |
| 16:55 – 17:15 | coffee break |
| 17:15 – 17:50 | Maria Zeitz (TU Berlin)
Active Brownian particles moving in a random Lorentz gas |
| 17:50 – 18:10 | Sebastian Heidenreich (PTB Berlin)
Continuum model for active fluids |
| 18:10 – 18:25 | break |
| 18:25 – 19:00 | Jakob Löber (MPI-PKS Dresden)
Poroelastic two-phase model for <i>Physarum polycephalum</i> with free boundaries |
| 19:00 – 19:20 | Adrian Fessel (Uni Bremen)
Nonlinear compliance of elastic layers to indentation: Scaling analysis and FEM numerics |
| 19:30 | dinner |

Monday, 27 February

- 09:00 – 09:35 Angela Stevens (Uni Münster)
Sorting phenomena
- 09:35 – 10:10 Julia Lange (Uni Bremen)
Lammelipodium actin dynamics on patterned substrates: Filipodia and circular dorsal ruffles under biochemical control
- 10:10 – 10:30 Hans-Günther Döbereiner (Uni Bremen)
Spatiotemporal dynamics of free and constrained actin waves
- 10:30 – 10:50 coffee break
- 10:50 – 11:10 Felix Bäuerle (MPI-DS Göttingen)
Light stimuli trigger local and global cellular response in *Physarum polycephalum*
- 11:10 – 11:30 Oliver Nagel (Uni Potsdam)
Amoeboid cells as transport agents for micro-cargo
- 11:30 – 11:50 Torsten Eckstein (MPI-DS Göttingen)
Control of pattern formation in *Dictyostelium discoideum*
- 12:00 – 15:30 lunch
- 15:30 – 15:50 Tim Smolinsky (Uni Hannover)
In situ photo electron spectroscopy resolving the mechanism of chemical waves on alloyed Rh/Ni surfaces
- 15:50 – 16:10 Bernhard von Boehn (Uni Hannover)
Interface instabilities in catalytic reactions on Rh(110)
- 16:10 – 16:45 Sarah Trinschek (Uni Münster)
Persistent vs arrested spreading of biofilms at solid-gas interfaces. The role of surface forces
- 16:45 – 17:05 coffee break
- 17:05 – 17:40 Henning Reinken (TU Berlin)
Shear banding in nematic fluids
- 17:40 – 18:00 Svetlana Gurevich (Uni Münster)
Impact of time-delayed feedback on the dynamics of spatiotemporal patterns in dissipative systems
- 18:00 – 18:20 Uwe Thiele (Uni Münster)
Sliding drops – from stationary states to collective dynamics
- 18:40 dinner

Tuesday, 28 March

09:00 – 09:20	Anne-Kathleen Malchow (TU Berlin) Wave segmentation in reaction-diffusion systems as an aspect to biomorph formations
09:20 – 09:40	Alexander Ziepke (TU Berlin) Control of wave propagation in neural field equations
09:40 – 10:15	Jan Christoph (MPI-DS Göttingen) Electromechanical scroll waves in the heart
10:35 – 10:55	coffee break
10:55 – 11:15	Pavel Buran (PTB Berlin) Control of electrical turbulence by cooperative excitation of cardiac tissue
11:15 – 11:50	Thomas Niedermayer (PTB Berlin) Strategies to understand cooperative defibrillation
11:50 – 12:00	closing
12:10	lunch

How to reach the conference site:

Hotel Niedersachsen, Wiesenstr. 12, Goslar, OT Hahnenklee-Bockswiese, Tel.: 05325/52860
<http://www.hotel-niedersachsen-harz.de>

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

26 February: Goslar (ZOB) 12.05 h – Bockswiese 12.25 h
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28 February: Bockswiese 13:00 h – Goslar (ZOB) 13:20 h
Bockswiese 13.30 h – Goslar (ZOB) 13.50 h
Bockswiese 14.30 h – Goslar (ZOB) 14.50 h

For the complete timetable, consult <http://www.bahn.de>