

Neunzehntes Harzseminar

Strukturbildung in Chemie und Biophysik

Goslar-Hahnenklee (OT Bockswiese), 29 – 31 March 2015

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



Programme

Sunday, 29 March

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|---------------|--|
| 15:30 – 15:40 | Opening |
| 15:40 – 16:15 | Lutz Schimansky-Geier (HU Berlin):
Self-organized escape processes of linear chains of nonlinear potentials |
| 16:15 – 16:50 | Jan Tatz (TU Berlin):
Permutation symmetries and phase wave synchronization on networks of heterogeneous chemical oscillators |
| 16:50 – 17:10 | coffee break |
| 17:10 – 17:45 | Robert Großmann (PTB Berlin):
Synchronization of moving oscillators |
| 17:45 – 18:05 | Sebastian Milster (HU Berlin):
Synchronization and phase separation of motile oscillators |
| 18:05 – 18:25 | break |
| 18:25 – 18:45 | Julian Rode (TU Berlin):
Tracking chimera states from phase oscillators to relaxation oscillators |
| 18:45 – 19:20 | Fumito Mori (FHI Berlin):
Period variability of a large number of cycles in complex dynamical systems with noise |
| 19:20 – 19:45 | Stefan C. Müller (Uni Magdeburg):
Proposed principles of maximum entropy production |
| 20:00 | dinner |

Monday, 30 March

- 09:00 – 09:35 Alexey Eremin (Uni Magdeburg):
Optically driven translational and rotational motions of microrod particles in nematic liquid crystals
- 09:35 – 09:55 Walter Tewes (Uni Münster):
A theoretical investigation of patterned depositions from thin films of evaporating solutions
- 09:55 – 10:15 Kirsten Harth (Uni Magdeburg):
From viscous to elastic sheets: Dynamics of thin freely floating smectic films
- 10:15 – 10:35 Felix Tabbert (Uni Münster):
Delay-induced dynamics of localized structures in systems with spatial inhomogeneities
- 10:35 – 10:55 coffee break
- 10:55 – 11:30 Svetlana Gurevich (Uni Münster):
Control and selection of spatio-temporal patterns in dynamic self-assembly systems
- 11:30 – 11:50 Maria Zeitz (TU Berlin):
Feedback strategies for regulation of flow vorticity at low Reynolds numbers
- 11:50 – 12:10 Uwe Thiele (Uni Münster):
Dynamics of self-propelled surfactant particles on a liquid support layer: The effect of rotational diffusion
- 12:10 – 12:45 Johannes Blaschke (TU Berlin):
Simulating the swimming dynamics of *Trypanosoma brucei* in crowded environments
- 12:50 – 15:30 lunch
- 15:30 – 16:05 Werner Baumgarten (Uni Rostock)
Mechanism of formation of *Physarum polycephalum* vein networks
- 16:05 – 16:25 Hans-Günther Döbereiner (Uni Bremen)
Foraging strategies and topological network characteristics of *Physarum polycephalum*
- 16:25 – 16:45 Christina Oettmeier (Uni Bremen)
Locomotion pattern and motility mechanism of *Physarum polycephalum* satellites
- 16:45 – 17:05 coffee break
- 17:05 – 17:40 Christian Westendorf (Uni Graz):
Comparison of different plasmodial slime molds based on oscillatory properties
- 17:40 – 18:15 Isabela Guido (MPI Göttingen)
Effects of electric field on cell migration
- 18:15 – 18:35 Kaumudi Prabhakara (MPI Göttingen):
Excitable pattern formation in inhomogeneous systems
- 18:35 – 18:55 break
- 18:55 – 19:15 Steffen Werner (MPI PKS Dresden):
Scaling and regeneration of self-organized patterns
- 19:15 – 19:35 Pavel Buran (PTB Berlin):
Control of wave dynamics in a model for heterogeneous cardiac tissue
- 19:35 – 19:55 Dirk Kulawiak (TU Berlin)
Modelling cell movement on heterogeneous substrates
- 20:00 dinner

Tuesday, 31 March

09:00 – 09:35	Ralf Stannarius (Uni Magdeburg): Sheared granular materials, dilation, flow alignment, and secondary flows
09:35 – 10:10	Bernhard von Boehm (Uni Hannover): Polymerization mechanism for travelling vanadium oxide islands
10:10 – 10:30	Patricia Dähmlow (Uni Magdeburg): Patterns in the bubble-free Belousov-Zhabotinsky reaction dissolved in a microemulsion
10:30 – 10:50	coffee break
10:50 – 11:10	Tim Smolinsky (Uni Hannover): Chemical wave patterns on bimetallic catalysts
11:10 – 11:45	Eric Bernitt (Uni Bremen) Experimental exploration of the phase space of actin waves
11:45 – 12:05	Alexander Ziepkke (TU Berlin): Front propagation in sinusoidally modulated channels and tubes
12:05 – 12:15	closing
12:30	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:**

29 March:	Goslar (ZOB) 12.05 h – Bockswiese 12.25 h Goslar (ZOB) 14.05 h – Bockswiese 14.25 h
31 March:	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>