Achtzehntes Harzseminar

Strukturbildung in Chemie und Biophysik

Goslar-Hahnenklee (OT Bockswiese), 16 – 18 February 2014

Organizers: M. Bär, E. Bodenschatz, M. Hauser, R. Imbihl

Programme

Sunday, 16 February

15:30 – 15:40 Opening
15:40 – 16:15 T. K. Shajahan (MPI Göttingen)
Spiral wave initiation and their interactions in heterogeneous excitable media: Experiments and theory
16:15 – 16:35 A. Azhand (TU Berlin)
Boundary-induced stabilization of expanding scroll rings
16:35 – 17:10 J. Löber (TU Berlin)
Position and shape control of nonlinear waves
17:10 – 17:30 Coffee break
17:30 – 18:05 P. Dähmlow (Uni Magdeburg)
Discontinuously propagating waves and Turing patterns: Different catalysts in the BZ reaction incorporated into a microemulsion
18:05 – 18:25 B. Sonnenschein (HU Berlin)
Drift-noise relation reveals synchronization with phase lag
18:25 – 18:45 F. Mori (FHI Berlin)
Methods to infer interactions and noise intensities in coupled oscillators using only spike-time data
18:45 – 19:05 Break
19:05 – 19:40 M. Deliano (LIN Magdeburg)
On the dynamics of brain-machine interfaces
19:40 – 20:00 D. Pischel (Uni Magdeburg)
Characterization of spatio-temporal patterns in the human electroencephalogram
20:15 Dinner
Monday, 17 February

09:00 – 09:35  H. Kitahata (FHI Berlin)
Spontaneous motion driven by surface-tension gradients
09:35 – 10:10  K. Wolff (TU Berlin)
Active particles and fluid flow
10:10 – 10:30  S. Hata (FHI Berlin)
Advection of passive particles over flow networks
10:30 – 10:50  Y. Koyano (FHI Berlin)
Bifurcation-analysis of self-driven particles in a 1-D finite region

10:50 – 11:10  Coffee break

11:10 – 11:30  M. Schmidt (TU Berlin)
Phase-separation by Marangoni flow propels emulsion droplets
11:30 – 12:05  A. Straube (HU Berlin)
Pattern formation in suspensions of magnetically interacting particles
12:05 – 12:25  R. Großmann (PTB Berlin)
Derivation of coarse-grained theories for self-propelled particles with aligning interactions
12:25 – 12:45  P. Romanczuk (PTB Berlin)
Pattern formation of self-propelled particles with alignment and anti-alignment

12:45 – 15:30  Lunch

15:30 – 16:05  A. Crespo-Yapur (TU München)
Cooperative phenomena and finite size-effects during CO bulk oxidation on coupled Pt microelectrodes
16:05 – 16:25  M. Hesse (Uni Hannover)
Pattern formation and activation of supported oxide catalysts
16:25 – 16:45  B. von Boehn (Uni Hannover)
Long-range attraction between macroscopic vanadium oxide islands
16:45 – 17:05  M. Wilczek (Uni Münster)
Pattern formation in Cahn-Hilliard models for Langmuir-Blodgett transfer

17:05 – 17:25  Coffee break

17:25 – 18:00  E. Bernitt (Uni Bremen)
Dynamics of dorsal ruffles
18:00 – 18:20  S. Alonso (FHI Berlin)
A poroelastic model for mechanochemical waves in protoplasmic droplets of Physarum polycephalum
18:20 – 18:40  I. Guido (MPI Göttingen)
Electrotaxis of amoeba cells

18:40 – 19:00  Break

19:00 – 19:20  C. Oettmeier (Uni Bremen)
Keratocyte-like motility on large length scales
19:20 – 19:40  J. Strübig (Uni Bremen)
Lateral lamellipodia waves
19:40 – 20:00  Marcus Hauser
Dynamics of frontal extension of an amoeboid cell

20:15  Dinner
Tuesday, 18 February

09:00 – 09:35  J. Negrete (MPI Göttingen)
Dynamics of actin cytoskeleton in chemotactic amoeba

09:35 – 09:55  K. Prabhakara (MPI Göttingen)
Excitability-dependent pattern formation

09:55 – 10:15  S. C. Müller (Uni Magdeburg)
Proposed principles of maximum entropy production

10:15 – 10:35  Coffee break

10:35 – 11:10  S. Gurevich (Uni Münster)
Delayed feedback control of breathing localized structures in reaction-diffusion systems

11:10 – 11:30  A. Kraft (Uni Münster)
Application and analysis of time-delayed feedback control in the Swift-Hohenberg equation

11:30 – 11:50  D. Loutchko (FHI Berlin)
Tryptophan synthase – kinetic modeling of a chemical nanomachine

11:50 – 12:10  A. Sarkar (FHI Berlin)
Towards synthetic molecular motors: A study of an elastic-network model

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:
16 February:  Goslar (ZOB) 12.05 h – Bockswiese 12.25 h
              Goslar (ZOB) 14.05 h – Bockswiese 14.25 h
18 February:  Bockswiese 13.30 h – Goslar (ZOB) 13.50 h
              Bockswiese 14.30 h – Goslar (ZOB) 14.50 h

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