

## Zehntes Harzseminar

### Strukturbildung in Chemie und Biophysik

#### Program

#### 23 February

- 15:00-15:35 C. Beta "Microfluidic approaches for the study of cell dynamics"
- 15:35-15:55 Ph. Beltrame "Dewetting of an aqueous dispersion of cornstarch"
- 15:55-16:15 L. Sebestikova "Hydrodynamic instabilities caused by a chemical reaction"
- 16:15-16:30 Coffee break
- 16:30-17:05 E. Gerritsma "Modelization of F1-ATPase Molecular Motor",
- 17:05-17:25 R. Straube "About a common origin of bursting oscillations and quasi-periodic behavior on a 2-torus"
- 17:25-17:45 L. Sciascia "A new way to produce smart materials: Emulsion polymerization coupled to an oscillating reaction"
- 17:45-18:00 Coffee break
- 18:00 - 18:35 Yu. Togashi "Slow conformational changes in elastic networks: Possible design principles of molecular machines"
- 19:00 Dinner

#### 24 February

- 9:00 - 9:35 L. Schimansky-Geier "Noise in systems with Hopf bifurcation"
- 9:35-10:10 L. Hong "Mass transport with pulses on surfaces"
- 10:10-10:30 M. Pineda "Fluctuations in catalytic CO oxidation"
- 10:30-10:45 Coffee break
- 10:45-11:20 Th. Mair "Reaction-diffusion waves in biological systems: Possible functions and future aspects"
- 11:20-11:40 M. Rafti "Simulation of chemical waves in NO + NH<sub>3</sub> on Pt(100)"
- 11:40-11:55 Coffee break
- 11:55-12:15 M. Bär „Nonequilibrium clustering of self-propelled rods"
- 12:15-12:35 M. Hauser "Effect of buffers on the dynamics of a pH oscillator"
- 12:35-12:55 D. Bakes "Mixed-mode oscillations in a pH oscillator"
- 13:15 Lunch

- 15:30-16:05 M. Dornhege "Visualizing corrosion phenomena in electrochemical environments"
- 16:05–16:25 Ch. Punckt "Quantitative measurement of the deformation of ultra-thin platinum foils during adsorption and reaction of CO and O<sub>2</sub>"
- 16:25–16: 45 P. Kaira "Complex patterns in a periodically forced surface reaction"
- 16:45–17:05 O. Rudzick „Front reversal and wave traps in periodically forced oscillatory media: Results for the catalytic CO oxidation on Pt(110)"
- 17:05–17:20 Coffee break
- 17:20-17:55 M. Stich "Control of turbulence in reaction-diffusion systems through pacemakers"
- 17:55-18:15 A. Hutt "Activity propagation in neural fields"
- 18:15–18:35 H. Kori "Entrainment of random oscillator networks and design of biological clocks"
- 19:00 Dinner

## 25 February

- 9:00-9:35 G. Bordiougov "Creating bound states in excitable media by means of non-local coupling"
- 9:35–9:55 S. Alonso "3D chemical turbulence"
- 9:55–10:15 Ch. Luengiviriya "Electric field effects on scroll waves - Preliminary results"
- 10:15–10:35 J. Schlesner "Stabilization of unstable rigid rotation of spiral waves in excitable media"
- 10:35–10:50 Coffee break
- 10:50 -11:25 G. Meacci „Physical aspects of Min oscillations in *E. Coli*"
- 11:25–11:45 P. Kaluza „Evolutionary design of robust functional networks “
- 11:45 -12:05 F. Müller "Noisy spiral drift"
- 12:05-12:15 Closing
- 12:30 Lunch