International workshop on

Small Scale Dynamics of Physico-Chemical Processes at Interfaces

Dresden, Germany • June 15 - 19, 1998

Scientific coordinators:

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Program

Sunday, 14th

18:00 – 20.00	*Registration*
20:00 –	*Get together* *Cafeteria, Max-Planck-Institute für Physik komplexer Systeme*

Monday, 15th

08:50 – 09:00	Opening address
	Chairwoman: Sandra Troian
09:00 – 09:45	Joel Koplik (New York, USA): Fluid interfaces and wetting at the molecular scale
09:45 – 10:30	Ilhan Aksay (Princeton, USA) Nano- and microscale patterning of organic/inorganic composite
10:30 – 11:00	*Coffee*
11:00 – 11:45	Patrick De Kepper (Pessac, France) Turing patterns: standard and non standard directional growth dynamics
12:00 – 14:30	*Lunch*
	Chairman: Dieter Langbein
14:30 – 15:15	Hartmut Linde (Berlin, Germany) Periodic wave trains of dissipative solitons of Marangoni instability
15:15 – 16:00	David Edwards (University Park, USA) Spontaneous vesicle formation at membranes
16:00 – 16:30	*Coffee*
16:30 – 17:15	Stefan C. Müller (Magdeburg, Germany) Convection driven by chemical waves: the role of surface tension
18:00 – 19:30	*Supper*
19:30 –	*Poster Session*

Program

Tuesday, 16th

Chairman: Paul Steen

09:00 – 09:45	Charles R. Doering (Ann Arbor, USA) Bounds for heat transport in a porous layer
09:45 – 10:30	Wolfgang Pompe (Dresden, Germany) Formation of metallic nanoclusters on biomolecular templates
10:30 – 11:00	*Coffee*
11:00 – 11:45	Raymond Kapral (Toronto, Canada) Mesoscale description of reaction-diffusion systems
11:45 – 12:30	Ehud Meron (Sede Boker, Israel) Multi-phase patterns in extended oscillatory systems
12:30 – 14:30	*Lunch*

Chairman: Alexander Oron

14:30 – 16:10	Contributed Talks I
14:30 – 14:50	Hidetoshi Miike (Ube, Japan) Propagating Marangoni convection induced by spiral waves in Belousov-Zhabotinsky reaction
14:50 – 15:10	Michael Bestehorn (Stuttgart, Germany) Surface-driven instabilities in a binary mixture
15:10 – 15:30	Pierre Colinet (Bruxelles, Belgium) Oscillatory convection patterns in Rayleigh-Marangoni instabilites
15:30 – 15:50	Arno F. Münster (Würzburg, Germany) Turing patterns in the PA-MBO-System
15:50 – 16:10	Hendrik Kuhlmann (Bremen,Germany) Thermocapillary flow near the contact line
16:10 – 16:50	*Coffee*
16:50 – 18:30	Contributed Talks II
16:50 – 17:10	Tran-Cong Qui (Kyoto, Japan) Pattern selection process in photochemically reacting polymer mixtures
17:10 – 17:30	Hermann Wilke (Berlin, Germany) Convective interaction and flow patterns during oxide crystal growth
17:30 – 17:50	Mathias Bode (Münster, Germany) Coupled ignition processes in periodically driven systems
17:50 – 18:10	Julyan Cartwright (San Juan, Alicante, Spain) The Tia Maria instability: explorations in solutal convection
18:10 – 18:30	Andreas G. Class (Karlsruhe, Germany) Localized morphologies with long-scale forcing
19:00 –	*Supper*

Program

Wednesday, 17th

Chairman: Stefan C. Müller

09:00 – 09:45	Anne de Wit (Bruxelles, Belgium) Fingering in reaction-diffusion systems
09:45 – 10:30	Jean-Marc Flesselles (Paris, France) Selection and dispersion for spiral waves in the Belousov-Zhabotinsky reaction
10:30 – 11:00	*Coffee*
11:00 – 11:45	Michele Vignes-Adler (Meudon, France) Surface waves sustained by a solutal Marangoni effect: interactions and collisions
11:45 – 12:30	Sandra M. Troian (Princeton, USA) Novel instabilities in thin liquid films: the beauty and the beast
12:30 – 14:30	*Lunch*

Chairman: Harald Engel

14:30 – 18:00	Application Session
14:30 – 15:15	Dirk Meinköhn (Hardthausen, Germany) Instability in thin film hydrodynamics
15:15 – 16:00	Milos Marek (Prague, Czech Republic) Structured (monolith, honeycomb) catalytic reactors - examples of nonlinear dynamics in chemical reaction-transport systems
16:00 – 16:30	*Coffee*
16:30 – 17:15	D. Langbein (Bad Homburg, Germany) Interfacial instabilities and Marangoni effects under microgravity conditions
19:00 –	*Conference Dinner*

Program

Thursday, 18th

	Chairman: Raymond Kapral
09:00 – 09:45	Harald Engel (Berlin, Germany) Interacting spiral waves in active media
09:45 – 10:30	Dwight Barkley (Minneapolis, USA) Computations, bifurcations, demonstrations and open questions in excitable media
10:30 – 11:00	*Coffee*
11:00 – 11:45	Marc K. Smith (Atlanta, USA) Thermocapillary migration of liquid droplets on solid surfaces
11:45 – 12:30	J. C. Earnshaw (Belfast, U.K.) Light scattering as a probe of liquid surface and interface dynamics
12:30 – 14:30	*Lunch*
	Chairman: Joel Koplik
14:30 – 15:15	Jeffrey J. Derby (Minneapolis, USA) The formation of spoke patterns on melt surfaces during Czochralski oxide growth
15:15 – 16:00	Paul H. Steen (Ithaca, USA) Capillary-driven instabilities and pinchoff in liquid and film bridges: experiment, theory and computations
16:00 – 16:30	*Coffee*
16:30 – 17:15	Bernard J. Matkowsky (Evanston, USA) Instabilities, fingering and the Saffman-Taylor problem in filtration combustion
17:15 – 18:00	Michael Schatz (Atlanta, USA) Control of Marangoni instability
18:00 –	*Supper*

Program

Friday, 19th

	Chairman: Hartmut Linde
09:00 – 09:45	Ronald Imbihl (Hannover, Germany) Pattern formation on composite surfaces
09:45 – 10:30	Andreas G. Boudouvis (Athens, Greece) Static pattern formation in ferromagnetic liquids
10:30 – 11:00	*Coffee*
11:00 – 11:45	Alexander Mikhailov (Berlin, Germany) Self-organized nanoscale structures in surface chemical reactions
11:45 – 12:30	Alexander Oron (Haifa, Israel) Nonlinear dynamics of thin liquid films subjected to Marangoni effects
12:30 – 14:30	*Lunch*
	Chairman: J. Earnshaw
14:30 – 15:15	Harm Hinrich Rotermund (Berlin, Germany) Pattern formation in a surface reaction
15:15 – 16:00	Kerstin Eckert (Dresden, Germany) Recent milestones towards a better understanding of Bénard-Marangoni convection
16:45 – 17:00	Closing remarks

Saturday, 20th

Excursion