Conference
Program

last update: 12/09/2014, 08:03
<table>
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<tr>
<th>Time</th>
<th>Monday</th>
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<tbody>
<tr>
<td>8.45 - 9.00</td>
<td>Registration</td>
<td>IP3 Room H15 I. Aronson</td>
<td>IP6 Room H15 A. De Wit</td>
<td>IP8 Room H15 P. Damman</td>
<td>M59.1 - Room H17 Extreme Events on Networks</td>
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<tr>
<td>9.00 - 9.15</td>
<td>Opening</td>
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<td>M59.2 - Room H18 Comput. Soft Matter</td>
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<td>9.15 - 9.45</td>
<td>IP1 Room H15 N. Hoffmann</td>
<td>IP4 Room H15 S. De Monte</td>
<td>IP7 Room H15 M. Ghil</td>
<td>IP9 Room H15 Z. Dogic</td>
<td>M59.3 - Room H19 Set-Dynamic</td>
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<td>9.45 - 10.00</td>
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<td>CT9.1 - Room H16 Bifurcations/Patterns II</td>
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<td>10.45 - 11.00</td>
<td>MS1.1 - Room H17 Viscoelastic Fluids I</td>
<td>MS3.1 - Room H17 Particle Advection</td>
<td>MS6.1 - Room H17 Living Fluids II</td>
<td>MS7.1 - Room H17 Living Matter</td>
<td>IP12 Room H15 M. Dellnitz</td>
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<td>11.00 - 11.15</td>
<td>MS1.2 - Room H18 Synchr./Chimera</td>
<td>MS3.2 - Room H18 Living Fluids I</td>
<td>MS6.2 - Room H18 Time Series, Causality and Networks</td>
<td>MS7.2 - Room H18 Control in Science &amp; Engineering</td>
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<td>11.15 - 11.30</td>
<td>CT1.1 - Room H19 Statistical Phenomena</td>
<td>MS3.3 - Room H19 Chimera Applications</td>
<td>CT6.1 - Room H19 Data Analysis</td>
<td>MS7.3 - Room H19 Localized Patterns</td>
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<td>CT3.1 - Room H16 Network Applications</td>
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<td>IP2 Room H15 S. Rotter</td>
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<td>15.00 - 15.15</td>
<td>MS2.1 - Room H17 Viscoelastic Fluids II</td>
<td>MS4.1 - Room H17 Chemical Gardens</td>
<td>MS4.2 - Room H18 Complex Networks</td>
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<td>15.15 - 15.30</td>
<td>MS2.2 - Room H18 Network Interference</td>
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<td>CT2.1 - Room H19 Nonlinear/Complex</td>
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**Excursion**

**Posters Session**

**Dinner at the Campus**

**Poster and Wine Session**

**Conference Dinner**
### Registration
08:00-09:15

### Opening
09:15-09:30
*Welcome address of the President of the University of Bayreuth, Professor Stefan Leible*

### IP1
**Plenary Talk** *(Chair: Walter Zimmermann)*
*Rogue Waves in the Ocean - From Mariners Yarn to Nonlinear Physics Norbert Hoffmann*
Room H15
09:30-10:15

### Coffee Break
10:15-10:45

### MS1.1
**Flow Instabilities and Turbulence in Viscoelastic Fluids I**
*Organizers: Björn Hof, Christian Wagner, Robert Poole, and Alexander Morozov*
Room H17
10:45-12:45

1. **Drag reduction and the dynamics of turbulence in simple and complex fluids**
   *Michael Graham*

2. **Experiments in hibernating turbulence**
   *Robert Poole*

3. **The onset of elasto-inertial turbulence**
   *Björn Hof*

4. **Anisotropic particles align perpendicular to the flow direction in narrow microchannels**
   *Martin Trebbin*

### MS1.2
**Partial Synchronization, Oscillation Death, and Chimera States in Dynamical Networks**
*Organizer: Eckehard Schöll*
Room H18
10:45-12:45

1. **Synchronization in Populations of Chemical Oscillators: Phase Clusters and Chimeras**
   *Kenneth Showalter*

2. **Experimental Studies of Symmetry and Synchronization in Networks**
   *Rajarshi Roy*

3. **Theoretical analysis of experimental cluster and chimera states in a photoelectrochemical oscillator**
   *Katharina Krischer*

4. **Symmetry-breaking patterns in dynamical networks**
   *Anna Zakharova*

### CT1.1
**Statistical Phenomena** *(Chair: Matthias Weiss)*
Room H19
10:45-12:45

1. **Entropic Motors: Brownian Ratchets far from Equilibrium**
   *Johannes Blaschke*

2. **Symmetries shape the current in ratchets**
   *Niurka R. Quintero*

3. **Hydrodynamically enforced entropic trapping of Brownian particles**
   *Steffen Martens*

4. **Nonlinear Response in Stochastic Thermodynamics**
   *Jürgen Vollmer*

5. **Evaluation of acoustic energy generation and absorption in a flue instrument with Howe’s energy corollary**
   *Kin’ya Takahashi*

6. **Localized transition states in many-particle systems**
   *Jens Pfeifer*

### Lunch Break
12:45-14:00

### IP2
**Plenary Talk** *(Chair: Stephan Gekle)*
*Non-Markovian Quantum Dynamics in the Strong-Coupling Limit of Cavity QED Stefan Rotter*
Room H15
14:00-14:45

### Coffee Break
14:45-15:15
Monday Conference Program

15:15-17:15  MS2.1  Flow Instabilities and Turbulence in Viscoelastic Fluids II
Organizers: Björn Hof, Christian Wagner, Robert Poole, and Alexander Morozov

1. Turbulent drag reduction in von Karman swirling flow Victor Steinberg
2. Linear instabilities and Dean–type vortices in viscoelastic liquids Philipp Bohr
3. Viscoelastic instability in the Couette-Taylor system with Keplerian corotating cylinders Olivier Crumeyrolle
4. Shear banding in colloidal dispersions Pree-cha Kiatkirakajorn
5. Diffusive effects into buoyantly miscible fluids Jorge Carballido Landeira (canceled)

CT4.1-4  Experimental results on pair dispersion in a spatially smooth and chaotic in time flow Eldad Afik

15:15-17:15  MS2.2  Data Based Modelling Meets Network Inference
Organizers: Bjoern Schelter and Klaus Lehnertz

1. Networks: On the relation of bi- and multivariate measures Wolfgang Mader
2. Interpreting causal networks obtained from proxy measurements Jaroslav Hlinka
3. Restricted partial directed coherence for direct Granger causality estimation in short time series Elsa Siggiridou
4. How can we avoid spurious indications for phase synchronization due to superimposed signals? Stephan Porz

15:15-17:15  CT2.1  Nonlinear Complex Systems (Chair: Eckehard Schöll)

1. A bifurcational geometric method for the global qualitative analysis of polynomial dynamical systems Valery Gaiko (canceled)
2. A new nonlinear model for Pilot Induced Oscillations Maria G Xibilia (canceled)
3. Determining the sub-Lyapunov exponent from time series of delay systems Thomas Jüngling
4. Excitable dynamics and cellular automata dynamics on loop-free networks Jens Christian Claussen
5. Observation of Transient Nature of Chimera States in Experimental Networks of Boolean Phase Oscillators Damien Rontani
6. From dynamics to topology on regulatory Boolean networks Burc¸in Danacı

15:15-17:15  CT2.2  Biological Systems and Soft Matter (Chair: Holger Kress)

1. Dynamics of fibrillatory wave propagation in presence of fibrosis. A simulation study. Michela Masè
2. An evolutionary daisyworld model: the role of natural selection Camilo Hincapie (canceled)
3. Spontaneous chiral symmetry breaking in model bacterial suspensions Rebekka Breier
4. A Spatial Evolutionary Food Web Model: Community structure and dynamic behaviour Daniel Ritterskamp
5. Dynamic of vesicles and RBC-like vesicles in flow Othmane Aouane
6. Study of electric field induced undulations in lipid membranes using MARTINI simulations K. R. Prathyusha

17:15-18:30  Poster Session

18:30-19:30  Dinner at the Campus

19:30-22:00  Poster and Wine Session

XXXIV Dynamics Days Europe 2014
IP3  Plenary Talk *(Chair: Hugues Chaté)*  
*Instabilities and turbulence in bacterial suspensions* Igor Aronson  
Room H15

IP4  Plenary Talk *(Chair: Hugues Chaté)*  
*The evolutionary emergence of social groups* Silvia De Monte  
Room H15

Coffee Break  
10:15-10:45

MS3.1  *The Effect of the Basset History Force on Particle Advection*  
Organizers: Ulrike Feudel and Tamas Tel  
1. The influence of inertia upon the tumbling of small axisymmetric particles in a shear flow Bernhard Mehlig  
2. The role of the history force for particle advection in turbulence Anton Daitche  
3. Influence of the history force on inertial particle advection: Gravitational effects and horizontal diffusion Ksenia Guseva  
4. The Basset history force and particle clustering in homogeneous and isotropic turbulence Luca Brandt  
Room H17

MS3.2  *Living Fluids I*  
Organizers: Marc Leonetti and Chaouqi Misbah  
1. Active colloidal swimmers as building blocks for active matter Ramin Golestanian  
2. *Dynamics of Blood Flow in Microvessel Networks* Russell Carr  
   → MS6.1-1 Dynamic patterns of microswimmers: Role of hydrodynamics and driving fields Holger Stark  
   ← MS6.1-1  
3. Swimming and Self-Propulsion in Polymeric Fluids Paulo Arratia (canceled)  
5. Ameboid swimming in confined geometry Hao Wu  
Room H18

MS3.3  *Chimera States in Biological Systems and Technological Applications*  
Organizers: Erik Andreas Martens and Chris Bick  
1. Chimeras and bumps Carlo Laing  
2. Controlling Chimeras Erik A. Martens  
3. Chimeralike States in an Ensemble of Globally Coupled Oscillators Azamat Yeldesbay  
4. Hysteretic transitions in the Kuramoto model with inertia Adrián Navas Santo-Tomás  
Room H19

CT3.1  *Network Applications* *(Chair: Michael Stich)*  
1. Dynamical evolution of the community structure in complex network of earthquakes Norikazu Suzuki  
2. Inferring the directionality of the links of climate networks via nonlinear time series analysis Cristina Masoller  
   → CT7.1  
3. Physics and Engineering models of the power grid Chengwei Wang  
4. Synchronization in Electrical Power Grids Described by Kuramoto-like Models Katrin Schmietendorf  
5. Wind Farm Modeling Mehrnaz Anvari  
6. Fundamental cycles and multistability in the Kuramoto model and power grids Debsankha Manik  
Room H16

Lunch Break  
12:45-14:00

IP5  Plenary Talk *(Chair: Ingo Rehberg)*  
*Jamming meets friction* Matthias Schröter  
Room H15

Coffee Break  
14:45-15:15
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<tr>
<td>15:15-17:15</td>
<td>MS4.1</td>
<td>The Dynamics of Chemical Gardens</td>
<td>Julyan Cartwright and Anne De Wit</td>
<td>1. From chemical gardens to chemobrionics Julyan Cartwright</td>
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<td>2. Direct and reverse chemical gardens in Hele-Shaw cells Florence Haudin</td>
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<td>3. Spiral precipitation patterns in confined chemical gardens Fabian Brau</td>
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<td>4. Dynamics of precipitate growth in the copper-phosphate system Agota Toth</td>
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<td>5. Instabilities and pattern-formation in precipitation-dissolution systems Pawel Kondratiuk</td>
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<td>6. Self-organization in the flow-driven copper-cobaltous-oxalate system Dezso Horvath</td>
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<td>15:15-17:15</td>
<td>MS4.2</td>
<td>Dynamics in Complex Networks: Synchronisation and Time-varying Structures</td>
<td>Tiago Pereira and Michael Field</td>
<td>1. Dynamics of Asynchronous Networks Christian Bick</td>
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<td>2. Nonlinear coupling in pulse-coupled neural systems Raoul-Martin Memmesheimer</td>
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<td>3. Synchrony Subspaces for Product Coupled Cell Networks Ana Dias</td>
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<td>4. Dynamics of Coupled Maps in Heterogeneous Time-Varying Random Networks Francesco Ricci</td>
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<td>MS4.3</td>
<td>Conformational Fluctuations of Confined Polymers</td>
<td>Bernhard Mehlig</td>
<td>1. Confined DNA - Experiments and Models Jonas Tegenfeldt</td>
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<td>2. Dynamics of confined circular DNA Fredrik Westerlund</td>
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<td>3. An exactly solvable model for conformational statistics in the extended de Gennes regime Erik Werner</td>
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<td>CT4.1</td>
<td>Fluids (Chair: Stephan Gekle)</td>
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<td>1. From viscous to elastic sheets: Dynamics of smectic freely floating films Ralf Stannarius</td>
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<td>2. Effects of flow on topological defects in a nematic liquid crystal near a colloid Marco Mazza (canceled)</td>
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<td>3. Dynamics of small solid particles in periodic flows: the emergence of coherent large-scale structures formed by repeated interactions with fluid. Denis Melnikov</td>
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<td>4. Experimental results on pair-distribution in a spatially smooth and chaotic in time flow Eldad Afik</td>
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<td>5. Size distributions in droplet coarsening: Impact of net volume fluxes and fluctuations of the environment Martin Rohloff</td>
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<td>6. Stability of the wavy film falling down a vertical plate: the DNS computations and Floquet theory Yuri Trifonov</td>
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<td>7. Experimental study on spots in the transition to turbulence in channel flows José Eduardo Wesfreid</td>
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<td>17:45-19:45</td>
<td>MS5.1</td>
<td>Cell Motility</td>
<td>Karsten Kruse and Falko Ziebert</td>
<td>1. How do cells crawl through your body? Josefa Kus (canceled)</td>
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<td>2. Engineered environments to study intermediate filaments in cell migration Franziska Lautenschläger</td>
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<td>3. From oscillating tissues to intelligent materials: Different feedback, different dynamics Michael Hubert Koepf</td>
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<td>4. Modeling crawling cell motility Jakob Löber</td>
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<td>5. Amoeboid cell motion in complex geometry or &quot;Curvotaxis&quot; Christoph Blum</td>
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<td>MS5.2</td>
<td>Extreme Events: Mechanisms of their Generation and Termination</td>
<td>Klaus Lehnertz and Ulrike Feudel</td>
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<td>Suppressing extreme optical pulses via weak periodic modulation</td>
<td>Cristina Masoller</td>
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<td>Predictability of extreme events in dynamical systems</td>
<td>Tamas Bodai</td>
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<td>Suppressing the Extreme Events of Renewable Power from Wind and Solar</td>
<td>Joachim Peinke</td>
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<td>Harmful Algal Bloom as an Extreme Event: A Mechanism of their Generation and Termination</td>
<td>Subhendu Chakraborty</td>
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<td>CT5.1</td>
<td>Control and Synchronization</td>
<td>Juan Almendral</td>
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<td>Controlling synchrony in oscillatory networks via act-and-wait algorithm</td>
<td>Kestutis Pyragas</td>
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<td>Control of synchronization bistability in oscillatory networks</td>
<td>Irmantas Ratas</td>
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<td>Cross-frequency synchronization of delay-coupled oscillators</td>
<td>Vladimir Klinshov</td>
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<td>Mean-field treatment of collective motion in systems of delay-coupled stochastic excitable units</td>
<td>Nikola Buric</td>
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<td>Dynamically emergent explosive synchronization</td>
<td>Vanesa Avalos-Gaytan</td>
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<td>Robust synchronization analysis by quadratic phase equation</td>
<td>Wataru Kurebayashi</td>
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<td>Ralf Stannarius</td>
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<td>Assembly of driven wet grains: from spheres to hexagons</td>
<td>Kai Huang</td>
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<td>Granular Gases of Elongated Grains - Microgravity Experiments</td>
<td>Kirsten Harth</td>
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<td>Hysteresis behaviour in particle models for pedestrian flow</td>
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<td>Analysis of Traffic Jam Formation with Implicit Equation-Free Methods</td>
<td>Christian Marschler</td>
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<td>Free Vibration Analysis of Axially FGM Tapered Micro Beam, using Modified Strain Gradient Elasticity</td>
<td>Ardeshir Karami mohammadi</td>
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<td>Vibrated polar disks: a real system in the Visier model class</td>
<td>Hugues Chaté</td>
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IP6  Plenary Talk *(Chair: Julyan Cartwright)*
Chemical control of convective fingering patterns *Anne De Wit*

Room H15

IP7  Plenary Talk *(Chair: Julyan Cartwright)*
A Mathematical Theory of Climate Sensitivity or, How to Deal With Both Anthropogenic Forcing and Natural Variability? *Michael Ghil*

Room H15

Coffee Break

MS6.1  Living Fluids II
Organizers: Marc Leonetti and Chaouqi Misbah

1. Dynamic patterns of microswimmers: Role of hydrodynamics and driving fields *Holger Stark*
   
   Dynamics of Blood Flow in Microvessel Networks *Russell Carr*

2. Red blood cells under flow: a host for myriad of spatial and temporal instabilities *Chaouqi Misbah*

3. Non-linear deformations of microcapsules in strong elongational flow *Clement de Loubens*

4. Symmetry breaking and cross-streamline migration of three-dimensional vesicles in an axial Poiseuille flow *Alexander Farutin*

5. Shape transition of a vesicle in a narrow capillary *Roberto Trozzo*

6. Three-bead-model for the biflagellate green algae: Reversed Jeffrey’s like orbit and its consequences on the rheology *Levan Jibuti*

MS6.2  Multivariate Time Series, Causality and Networks
Organizers: Dimitris Kugiumtzis and Ralph Andrzejak

1. A generalized approach to detect directional couplings from time-continuous flows, point processes and event-related data *Ralph Andrzejak*

2. Predictive Information Decomposition in Complex Physiological Networks *Luca Faes*

3. Cross-scale information transfer *Milan Palus*

4. Embedding time in networks from time series: univariate and multivariate *Michael Small*

CT6.1  Data Analysis *(Chair: Chris Bick)*

1. Cardiovascular data analysis and sleep-apnea detection *Sabrina Camargo (canceled)*

2. Correlating phase information with higher order statistics in nonlinear data sets *Christoph Raeth*

3. Discrimination among different dynamics classes using Recurrence Quantification Analysis *Elbert E. E. N. Macau (canceled)*

4. A two agent logistic model of opinion dynamic and bounded confidence, analysis and simulation *Ricardo Armando Gonzalez Silva (canceled)*

5. Multi-point reconstruction of ocean wave data including ”Rogue waves” *Ali Hadjiosseini*

6. Wavelet-based extension of MIME and PMIME *Xiaogeng Wan (canceled)*

XXXIV Dynamics Days Europe 2014
CT6.2  Bifurcations and Patterns I (Chair: Ingo Rehberg)

1. Traveling waves stabilized by time-delay feedback in an oscillatory reaction-diffusion system
   Michael Stich

2. Unusually simple way to create spiral wave in an excitable medium Vladimir Zykov
   (canceled)

CT9.1-1  →

Hydodynamic model of the periodic pattern formation upon femtosecond laser ablation
   Evgeny Gurevich

3. The tongue as an excitable medium Gabriel Seiden

4. Patterns driven by combined ac and dc electric fields in nematic liquid crystals
   Alexei Krekhov

5. Emergence of branched pattern spectra in anisotropic inhomogeneous systems Badr Kaoui

6. Effect of Prandtl number on planform selection in Rayleigh-Benard systems with broken
   symmetry Olga Mazhorova

12:45-14:00  Lunch Break

14:00-19:00  Excursion

19:00-22:00  Conference Dinner
**IP8**  Plenary Talk *(Chair: Falko Ziebert)*  
**Pattern formation through elastic instabilities** *Pascal Damman*  
08:45-09:30  
Room H15

**IP9**  Plenary Talk *(Chair: Falko Ziebert)*  
**Dynamics of active nematics** *Zvonimir Dogic*  
09:30-10:15  
Room H15

**Coffee Break**  
10:15-10:45

**MS7.1**  **Mass and Information Propagation in Living Matter**  
*Organizers: Holger Kress and Matthias Weiss*  
10:45-12:45  
Room H17
1. **Nerve pulses as adiabatic electromechnical solitary waves** *Thomas Heimburg*
2. **Bacterial responses to drug combinations** *Tobias Bollenbach*
3. **Construction and function of microtubule overlaps** *Marcel Janson*
4. **Conformational fluctuations of DNA hairpin-loops: dissecting the multiple impacts of macromolecular crowding** *Olivia Stiehl*
5. **Mechanical cues during early embryogenesis of C. elegans** *Philipp Struntz*

**MS7.2**  **Control of Dynamical Systems in Science and Engineering**  
*Organizers: Lars Grüne and Jens Starke*  
10:45-12:45  
Room H18
1. **Control of delay-coupled complex networks** *Eckehard Schöll*
2. **Quantum control – results and challenges from a mathematical point of view** *Gunther Dirr*
3. **Spatial-temporal coherent control in molecules and nanostructures** *Tobias Brixner*
4. **Control-based continuation of a hybrid numerical/physical substructured system**  
   *David Barton* *(canceled)*  
   **Control-based Continuation for noise-contaminated zero problems in experiments**  
   *Jens Starke*

**MS7.3**  **Localized States in Pattern Formation**  
*Organizer: Reinhard Richter*  
10:45-12:45  
Room H19
1. **Front Pinning between an hexagonal pattern and a uniform state** *Gregory Kozyreff*
2. **Time-delayed feedback control of localized structures in the Swift-Hohenberg equation** *Svetlana Gurevich*
3. **Explosive dissipative solitons and their anomalous diffusion** *Jaime Cisternas*
4. **Straightening the snake - (un)tilted snaking in the phase-field crystal description of colloidal crystallisation** *Uwe Thiele*

**CT7.1**  **Coupled Systems and Networks**  
10:45-12:45  
Room H16
1. **Eckhaus scenario for partially coherent twisted states in arrays of coupled phase oscillators** *Oleh Omel’chenko*
2. **Oscillatory networks with adaptive coupling** *Dmitry Kasatkin* *(canceled)*  
   **Inferring the directionality of the links of climate networks via nonlinear time-series analysis** *Cristina Masoller*  
   ← CT3.1-2
3. **Extreme events due to localisation of energy in a one dimensional lattice** *Colm Mulhern*
4. **Emergence of small-world anatomical networks in self-organizing neuronal cultures** *Juan Almendral*
5. **Impact of coupling delay on collective dynamics of modular neural networks** *Oleg Maslennikov*
6. **Network of genes from metric and correlation measures in an embedding space** *Shambhavi Srivastava* *(canceled)*  
   **How does a slime mould construct a regular network?** *Marcus Hauser*
12:45-14:00 Lunch Break

14:00-16:00 MS8.1 Nonlinear Phenomena in Plasma Astrophysics
Organizers: Wolf-Christian Müller and Arthur Peeters
1. Dynamo problems in astrophysics Rainer Arlt (canceled)
2. Chandrasekhar’s equipartition solution, dissipation-induced instabilities, and azimuthal MRI Oleg Kirillov
3. Fluctuation dynamo amplified by intermittent shear bursts Jane Pratt
4. Subgrid-scale closures in highly compressible MHD turbulence: Reynold and Maxwell stresses Philipp Grete
5. Subgrid-scale closures in highly compressible MHD turbulence: the electromotive force Dimitar Vlaykov
6. Dynamics of laboratory dynamo magnetic fields Nicolas Plihon

14:00-16:00 MS8.2 Pattern Formation in Environmental Systems
Organizers: Ehud Meron and Walter Zimmermann
1. The big melt: how stable is the Earth’s Cryosphere? Dirk Notz
3. Why Systems Approach is needed in cloud physics Ilan Koren
4. Localized vegetation patterns and fairy circles as self-organized responses to resource-limited environments Mustapha Tlidi

14:00-16:00 MS8.3 Analysis, Modeling and Control of Electroencephalographic Recordings from Epilepsy Patients
Organizers: Ralph Andrzejak and Dimitris Kugiumtzis
1. The benefits of nonlinear interrelation and spatial coregistration in pre-surgical iEEG analysis: seizure onset zone vs. resection area Christian Rummel
2. Electroencephalogram analysis: epileptiform discharges induced and aborted by transcranial magnetic stimulation Dimitris Kugiumtzis
3. Epileptic seizures are characterized by progressive decrease in stability of epileptic networks Premysl Jiruska
4. Simple Chow-Liu trees are sufficient predictive models for reproducing fey features of functional networks of periictal, intracranial EEG time-series Andreas Steimer

14:00-16:00 CT8.1 General Phenomena (Chair: Lars Grüne)
1. Localization of compact invariant sets of nonlinear systems with disturbances Alexander Krishchenko
2. From Internal Symmetries to Global Dynamics: (Meta)Stable Patterns in Ensembles Antonina Fedorova (canceled)
3. Estimation of Spatial Distribution of Disturbances Yalcin Bulut (canceled)
4. Quantum modeling: beyond coarse graining and gaussians Michael Zeitlin (canceled)
5. Complexity of he chaotic dynamics and the approximation of generalized number systems Agnes Fülöp
6. Review of cases of integrability in Dynamics of a rigid body in a nonconservative field Maxim V. Shamolin

16:00-17:30 Poster Session

17:30-18:30 IP10 Lorenz Kramer Memorial Lecture (Chair: Walter Zimmermann)
Pattern formation - a missing link in the study of ecosystem response to climate change Ehud Meron
MS9.1 Extreme Events on Complex Networks
Organizers: Stephan Bialonski and Klaus Lehnertz

1. Extreme events in random walks on networks Vimal Kishore
2. Irregular macroscopic dynamics and extreme events due to chimera states Alexander Rothkegel
3. Data-driven prediction of extreme events in high-dimensional excitable systems Stephan Bialonski
4. Recurrence properties as signatures of abrupt climate change Norbert Marwan

MS9.2 Computational Soft Matter Physics
Organizers: Jens Harting and Badr Kaoui

1. Modelling and simulation of active soft matter Hartmut Löwen
2. Granular Jet Impact: Probing the Ideal Fluid Description Thorsten Pöschel
3. Theory and application of colloidal chains ratchetting above a stripe-patterned magnetic substrate Arthur Straube
4. Interplay of inertia and deformability on rheological properties of a suspension of capsules Jens Harting

MS9.3 Set-dynamic Approaches with Applications in Car Engineering
Organizers: Robert Baier and Thomas Lorenz

1. A Quarter Car Model with Free Road Contact as an Example for Optimal Control of Coupled ODE and PDE Sven-Joachim Kimmerle
2. Real-time control for singular events in vertical vehicle dynamics Jürgen Pannek
3. Computing reachable sets by the Hamilton-Jacobi approach and application to vehicle avoidance Olivier Bokanowski
4. Robust control problems – in terms of evolution equations for (nonconvex) sets Thomas Lorenz

CT9.1 Bifurcations and Patterns II (Chair: Evgeny Gurevich)

1. Hydodynamic model of the periodic pattern formation upon femtosecond laser ablation Evgeny Gurevich
   Effect of a cut-off on the speed of reaction diffusion fronts Cristina Depassier
2. Experimental Bifurcation Diagram of an External-cavity Semiconductor Laser Byungchil Kim
3. Regime shifts in spatially extended ecosystems and the dynamics of fairy circles Yuval Ron Zelnik
4. Turing instability in one-component reaction-diffusion systems with delay Andreas Otto
5. Control and manipulation of modulation instability Shubham Kumar

Coffee Break

IP11 Plenary Talk (Chair: Günter Radons)
Anomalous diffusion and ergodic violation: from dynamic maps to living biological cells Ralf Metzler

IP12 Plenary Talk (Chair: Lars Grüne)
On the Approximation of Transport Phenomena Michael Dellnitz

Closing

Lunch Break

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