

Conference Program

last update: 12/09/2014, 08:03

Conference Program

	Monday	Tuesday	Wednesday	Thursday	Friday	
8.45 - 9.00	Registration	IP3 Room H15 I. Aronson	IP6 Room H15 A. De Wit	IP8 Room H15 P. Damman	MS9.1 - Room H17 Extreme Events on Networks	
9.00 - 9.15						
9.15 - 9.30	Opening				MS9.2 - Room H18	
9.30 - 9.45	IP1 Room H15 N. Hoffmann	IP4 Room H15 S. De Monte	IP7 Room H15 M. Ghil	IP9 Room H15 Z. Dogic	Comput. Soft Matter	
9.45 - 10.00					MS9.3 - Room H19	
10.00 - 10.15					Set-Dynamic	
10.15 - 10.30	Coffee Break	Coffee Break	Coffee Break	Coffee Break	CT9.1 - Room H16	
10.30 - 10.45					Bifurcations/Patterns II	
10.45 - 11.00	MS1.1 - Room H17 Viscoelastic Fluids I	MS3.1 - Room H17 Particle Advection	MS6.1 - Room H17 Living Fluids II	MS7.1 - Room H17 Living Matter	Coffee Break	
11.00 - 11.15						
11.15 - 11.30	MS1.2 - Room H18	MS3.2 - Room H18	MS6.2 - Room H18	MS7.2 - Room H18	IP11 Room H15 R. Metzler	
11.30 - 11.45	Synchr./Chimera	Living Fluids I	Time Series, Causality and Networks	Control in Science & Engineering		
11.45 - 12.00	CT1.1 - Room H19	MS3.3 - Room H19	CT6.1 - Room H19	MS7.3 - Room H19	IP12 Room H15 M. Dellnitz	
12.00 - 12.15	Statistical Phenomena	Chimera Applications	Data Analysis	Localized Patterns		
12.15 - 12.30		CT3.1 - Room H16	CT6.2 - Room H16	CT7.1 - Room H16		
12.30 - 12.45		Network Applications	Bifurcations/Patterns I	Coupled Systems		
12.45 - 13.00					Closing	
13.00 - 13.15	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break	
13.15 - 13.30						
13.30 - 13.45						
13.45 - 14.00						
14.00 - 14.15	IP2 Room H15 S. Rotter	IP5 Room H15 M. Schröter	Excursion	MS8.1 - Room H17 Plasma Astrophysics		
14.15 - 14.30						MS8.2 - Room H18
14.30 - 14.45				Environm. Patterns		
14.45 - 15.00	Coffee Break	Coffee Break		MS8.3 - Room H19		
15.00 - 15.15				EEG Recordings		
15.15 - 15.30	MS2.1 - Room H17 Viscoelastic Fluids II	MS4.1 - Room H17 Chemical Gardens		Excursion	MS8.1 - Room H17 Plasma Astrophysics	CT8.1 - Room H16
15.30 - 15.45						
15.45 - 16.00	MS2.2 - Room H18	MS4.2 - Room H18			MS8.2 - Room H18	General Phenomena
16.00 - 16.15	Network Interference	Complex Networks				
16.15 - 16.30	CT2.1 - Room H19	MS4.3 - Room H19				
16.30 - 16.45	Nonlinear/Complex	Confined Polymers				
16.45 - 17.00	CT2.2 - Room H16	CT4.1 - Room H16				
16.45 - 17.00	Bio & Soft Matter	Fluids				
17.00 - 17.15						
17.15 - 17.30	Poster Session	Coffee Break				
17.30 - 17.45						
17.45 - 18.00		MS5.1 - Room H17		IP10 Room H15 E. Meron		
18.00 - 18.15		Cell Motility			<i>Lorenz Kramer Memorial Lecture</i>	
18.15 - 18.30		MS5.2 - Room H18				
18.30 - 18.45		Extreme Events				
18.45 - 19.00	Dinner at the Campus	CT5.1 - Room H19				
19.00 - 19.15			Control & Synchr.			
19.15 - 19.30		CT5.2 - Room H16				
19.30 - 19.45		Granular, Traffic, Elastics				
19.45 - 20.00						
20.00 - 20.15	Poster and Wine Session		Conference Dinner			
20.15 - 20.30						
20.30 - 20.45						
20.45 - 21.00						
21.00 - 21.15						
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21.30 - 21.45						
21.45 - 22.00						

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 (<i>Chair: Walter Zimmermann</i>) Rogue Waves in the Ocean - From Mariners Yarn to Nonlinear Physics <i>Norbert Hoffmann</i>	09:30-10:15 Room H15
Coffee Break		10:15-10:45
MS1.1	Flow Instabilities and Turbulence in Viscoelastic Fluids I <i>Organizers: Björn Hof, Christian Wagner, Robert Poole, and Alexander Morozov</i>	10:45-12:45 Room H17
	1. Drag reduction and the dynamics of turbulence in simple and complex fluids <i>Michael Graham</i>	
	2. Experiments in hibernating turbulence <i>Robert Poole</i>	
	3. The onset of elasto-inertial turbulence <i>Björn Hof</i>	
	4. Anisotropic particles align perpendicular to the flow direction in narrow microchannels <i>Martin Trebbin</i>	
MS1.2	Partial Synchronization, Oscillation Death, and Chimera States in Dynamical Networks <i>Organizer: Eckehard Schöll</i>	10:45-12:45 Room H18
	1. Synchronization in Populations of Chemical Oscillators: Phase Clusters and Chimeras <i>Kenneth Showalter</i>	
	2. Experimental Studies of Symmetry and Synchronization in Networks <i>Rajarshi Roy</i>	
	3. Theoretical analysis of experimental cluster and chimera states in a photoelectrochemical oscillator <i>Katharina Krischer</i>	
	4. Symmetry-breaking patterns in dynamical networks <i>Anna Zakharova</i>	
CT1.1	Statistical Phenomena (<i>Chair: Matthias Weiss</i>)	10:45-12:45 Room H19
	1. Entropic Motors: Brownian Ratchets far from Equilibrium <i>Johannes Blaschke</i>	
	2. Symmetries shape the current in ratchets <i>Niurka R. Quintero</i>	
	3. Hydrodynamically enforced entropic trapping of Brownian particles <i>Steffen Martens</i>	
	4. Nonlinear Response in Stochastic Thermodynamics <i>Jürgen Vollmer</i>	
	5. Evaluation of acoustic energy generation and absorption in a flue instrument with Howe's energy corollary <i>Kin'ya Takahashi</i>	
	6. Localized transition states in many-particle systems <i>Jens Pfeifer</i>	
Lunch Break		12:45-14:00
IP2	Plenary Talk (<i>Chair: Stephan Gekle</i>) Non-Markovian Quantum Dynamics in the Strong-Coupling Limit of Cavity QED <i>Stefan Rotter</i>	14:00-14:45 Room H15
Coffee Break		14:45-15:15

- 15:15-17:15 **MS2.1 Flow Instabilities and Turbulence in Viscoelastic Fluids II**
 Room H17 *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**
 Room H18 *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)**
 Room H19
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** *Burçin Danacı*
- 15:15-17:15 **CT2.2 Biological Systems and Soft Matter (Chair: Holger Kress)**
 Room H16
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 Hincapié (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**

IP3	Plenary Talk (<i>Chair: Hugues Chaté</i>) Instabilities and turbulence in bacterial suspensions <i>Igor Aronson</i>	08:45-09:30 Room H15
IP4	Plenary Talk (<i>Chair: Hugues Chaté</i>) The evolutionary emergence of social groups <i>Silvia De Monte</i>	09:30-10:15 Room H15
Coffee Break		10:15-10:45
MS3.1	The Effect of the Basset History Force on Particle Advection <i>Organizers: Ulrike Feudel and Tamas Tel</i>	10:45-12:45 Room H17
	1. The influence of inertia upon the tumbling of small axisymmetric particles in a shear flow <i>Bernhard Mehlig</i>	
	2. The role of the historyforce for particle advection in turbulence <i>Anton Daitche</i>	
	3. Influence of the history force on inertial particle advection: Gravitational effects and horizontal diffusion <i>Ksenia Guseva</i>	
	4. The Basset history force and particle clustering in homogeneous and isotropic turbulence <i>Luca Brandt</i>	
MS3.2	Living Fluids I <i>Organizers: Marc Leonetti and Chaouqi Misbah</i>	10:45-12:45 Room H18
	1. Active colloidal swimmers as building blocks for active matter <i>Ramin Golestanian</i>	
	2. Dynamics of Blood Flow in Microvessel Networks <i>Russell Carr</i>	→ MS6.1-1
	Dynamic patterns of microswimmers: Role of hydrodynamics and driving fields <i>Holger Stark</i>	← MS6.1-1
	3. Swimming and Self-Propulsion in Polymeric Fluids <i>Paulo Arratia</i> (canceled)	
	4. Collective behaviour of chemotactic colloids: clusters, asters and oscillations. <i>Suropriya Saha</i>	
	5. Ameboid swimming in confined geometry <i>Hao Wu</i>	
MS3.3	Chimera States in Biological Systems and Technological Applications <i>Organizers: Erik Andreas Martens and Chris Bick</i>	10:45-12:45 Room H19
	1. Chimeras and bumps <i>Carlo Laing</i>	
	2. Controlling Chimeras <i>Erik A. Martens</i>	
	3. Chimeralike States in an Ensemble of Globally Coupled Oscillators <i>Azamat Yeldesbay</i>	
	4. Hysteretic transitions in the Kuramoto model with inertia <i>Adrián Navas Santo-Tomás</i>	
CT3.1	Network Applications (<i>Chair: Michael Stich</i>)	10:45-12:45 Room H16
	1. Dynamical evolution of the community structure in complex network of earthquakes <i>Norikazu Suzuki</i>	
	2. Inferring the directionality of the links of climate networks via nonlinear time-series analysis <i>Cristina Masoller</i>	→ CT7.1
	3. Physics and Engineering models of the power grid <i>Chengwei Wang</i>	
	4. Synchronization in Electrical Power Grids Described by Kuramoto-like Models <i>Katrin Schmietendorf</i>	
	5. Wind Farm Modeling <i>Mehrnaz Anvari</i>	
	6. Fundamental cycles and multistability in the Kuramoto model and power grids <i>Debsankha Manik</i>	
Lunch Break		12:45-14:00
IP5	Plenary Talk (<i>Chair: Ingo Rehberg</i>) Jamming meets friction <i>Matthias Schröter</i>	14:00-14:45 Room H15
Coffee Break		14:45-15:15

- 15:15-17:15 **MS4.1 The Dynamics of Chemical Gardens**
Room H17
Organizers: Julyan Cartwright and Anne De Wit
1. **From chemical gardens to chemobronics** *Julyan Cartwright*
 2. **Direct and reverse chemical gardens in Hele-Shaw cells** *Florence Haudin*
 3. **Spiral precipitation patterns in confined chemical gardens** *Fabian Brau*
 4. **Dynamics of precipitate growth in the copper-phosphate system** *Agota Toth*
 5. **Instabilities and pattern-formation in precipitation-dissolution systems** *Pawel Kondratiuk*
 6. **Self-organization in the flow-driven copper-cobaltous-oxalate system** *Dezso Horvath*
- 15:15-17:15 **MS4.2 Dynamics in Complex Networks: Synchronisation and Time-varying Structures**
Room H18
Organizers: Tiago Pereira and Michael Field
1. **Dynamics of Asynchronous Networks** *Christian Bick*
 2. **Nonlinear coupling in pulse-coupled neural systems** *Raoul-Martin Memmesheimer*
 3. **Synchrony Subspaces for Product Coupled Cell Networks** *Ana Dias*
 4. **Dynamics of Coupled Maps in Heterogeneous Time-Varying Random Networks** *Francesco Ricci*
- 15:15-17:15 **MS4.3 Conformational Fluctuations of Confined Polymers**
Room H19
Organizer: Bernhard Mehlig
1. **Confined DNA - Experiments and Models** *Jonas Tegenfeldt*
 2. **Dynamics of confined circular DNA** *Fredrik Westerlund*
 3. **An exactly solvable model for conformational statistics in the extended de Gennes regime** *Erik Werner*
- 15:15-17:15 **CT4.1 Fluids** (*Chair: Stephan Gekle*)
Room H16
1. **From viscous to elastic sheets: Dynamics of smectic freely floating films** *Ralf Stannarius*
 2. **Effects of flow on topological defects in a nematic liquid crystal near a colloid** *Marco Mazza* (canceled)
 3. **Dynamics of small solid particles in periodic flows: the emergence of coherent large-scale structures formed by repeated interactions with fluid.** *Denis Melnikov*
 4. **Experimental results on pair dispersion in a spatially smooth and chaotic in time flow** *Eldad Afik*
 5. **Size distributions in droplet coarsening: Impact of net volume fluxes and fluctuations of the environment** *Martin Rohloff*
 6. **Stability of the wavy film falling down a vertical plate: the DNS computations and Floquet theory** *Yuri Trifonov*
 7. **Experimental study on spots in the transition to turbulence in channel flows** *José Eduardo Wesfreid*
- MS2.1 ←
- 17:15-17:45 **Coffee Break**
- 17:45-19:45 **MS5.1 Cell Motility**
Room H17
Organizers: Karsten Kruse and Falko Ziebert
1. **How do cells crawl through your body?** *Josef A. Käs* (canceled)
 2. **Engineered environments to study intermediate filaments in cell migration** *Franziska Lautenschläger*
 3. **From oscillating tissues to intelligent materials: Different feedback, different dynamics** *Michael Hubert Koepf*
 4. **Modeling crawling cell motility** *Jakob Löber*
 5. **Amoeboid cell motion in complex geometry or "Curvotaxis"** *Christoph Blum*

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| <p>MS5.2 Extreme Events: Mechanisms of their Generation and Termination
 <i>Organizers: Klaus Lehnertz and Ulrike Feudel</i></p> <ol style="list-style-type: none"> 1. Suppressing extreme optical pulses via weak periodic modulation <i>Cristina Masoller</i> 2. Predictability of extreme events in dynamical systems <i>Tamas Bodai</i> 3. Suppressing the Extreme Events of Renewable Power from Wind and Solar <i>Joachim Peinke</i> 4. Harmful Algal Bloom as an Extreme Event: A Mechanism of their Generation and Termination <i>Subhendu Chakraborty</i> | <p>17:45-19:45
Room H18</p> |
| <p>CT5.1 Control and Synchronization (<i>Chair: Juan Almendral</i>)</p> <ol style="list-style-type: none"> 1. Controlling synchrony in oscillatory networks via act-and-wait algorithm <i>Kestutis Pyragas</i> 2. Control of synchronization bistability in oscillatory networks <i>Irmantas Ratas</i> 3. Cross-frequency synchronization of delay-coupled oscillators <i>Vladimir Klinshov</i> 4. Mean-field treatment of collective motion in systems of delay-coupled stochastic excitable units <i>Nikola Buric</i> 5. Dynamically emergent explosive synchronization <i>Vanesa Avalos-Gaytan</i> 6. Robust synchronization analysis by quadratic phase equation <i>Wataru Kurebayashi</i> | <p>17:45-19:45
Room H19</p> |
| <p>CT5.2 Granular, Traffic, Elastic (<i>Chair: Ralf Stannarius</i>)</p> <ol style="list-style-type: none"> 1. Assembly of driven wet grains: from spheres to hexagons <i>Kai Huang</i> 2. Granular Gases of Elongated Grains - Microgravity Experiments <i>Kirsten Harth</i> 3. Hysteresis behaviour in particle models for pedestrian flow <i>Jens Starke</i> 4. Analysis of Traffic Jam Formation with Implicit Equation-Free Methods <i>Christian Marschler</i> 5. Free Vibration Analysis of Axially FGM Tapered Micro Beam, using Modified Strain Gradient Elasticity <i>Ardeshir Karami mohammadi</i> 6. Vibrated polar disks: a real system in the Visier model class <i>Hugues Chaté</i> | <p>17:45-19:45
Room H16</p> |

IP6	Plenary Talk (<i>Chair: Julyan Cartwright</i>) Chemical control of convective fingering patterns <i>Anne De Wit</i>	08:45-09:30 Room H15
IP7	Plenary Talk (<i>Chair: Julyan Cartwright</i>) A Mathematical Theory of Climate Sensitivity or, How to Deal With Both Anthropogenic Forcing and Natural Variability? <i>Michael Ghil</i>	09:30-10:15 Room H15
Coffee Break		10:15-10:45
MS6.1	Living Fluids II <i>Organizers: Marc Leonetti and Chaouqi Misbah</i>	10:45-12:45 Room H17
	1. Dynamic patterns of microswimmers: Role of hydrodynamics and driving fields <i>Holger Stark</i> → MS3.2-2	
	Dynamics of Blood Flow in Microvessel Networks <i>Russell Carr</i> ← MS3.2-2	
	2. Red blood cells under flow: a host for myriad of spatial and temporal instabilities <i>Chaouqi Misbah</i>	
	3. Non-linear deformations of microcapsules in strong elongational flow <i>Clement de Loubens</i>	
	4. Symmetry breaking and cross-streamline migration of three-dimensional vesicles in an axial Poiseuille flow <i>Alexander Farutin</i>	
	5. Shape transition of a vesicle in a narrow capillary <i>Roberto Trozzo</i>	
	6. Three-bead-model for the biflagellate green algae: Reversed Jeffrey's like orbit and its consequences on the rheology <i>Levan Jibuti</i>	
MS6.2	Multivariate Time Series, Causality and Networks <i>Organizers: Dimitris Kugiumtzis and Ralph Andrzejak</i>	10:45-12:45 Room H18
	1. A generalized approach to detect directional couplings from time-continuous flows, point processes and event-related data <i>Ralph Andrzejak</i>	
	2. Predictive Information Decomposition in Complex Physiological Networks <i>Luca Faes</i>	
	3. Cross-scale information transfer <i>Milan Palus</i>	
	4. Embedding time in networks from time series: univariate and multivariate <i>Michael Small</i>	
CT6.1	Data Analysis (<i>Chair: Chris Bick</i>)	10:45-12:45 Room H19
	1. Cardiovascular data analysis and sleep-apnea detection <i>Sabrina Camargo</i> (canceled)	
	2. Correlating phase information with higher order statistics in nonlinear data sets <i>Christoph Raeth</i>	
	3. Discrimination among different dynamics classes using Recurrence Quantification Analysis <i>Elbert E. E. N. Macau</i> (canceled)	
	4. A two agent logistic model of opinion dynamic and bounded confidence, analysis and simulation <i>Ricardo Armando Gonzalez-Silva</i> (canceled)	
	5. Multi-point reconstruction of ocean wave data including "Rogue waves" <i>Ali Hadjihosseini</i>	
	6. Wavelet-based extension of MME and PMME <i>Xiaogeng Wan</i> (canceled)	

- 10:45-12:45 **CT6.2 Bifurcations and Patterns I** (*Chair: Ingo Rehberg*)
Room H16
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 → **Hydrodynamic 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 (<i>Chair: Falko Ziebert</i>) Pattern formation through elastic instabilities <i>Pascal Damman</i>	08:45-09:30 Room H15
IP9	Plenary Talk (<i>Chair: Falko Ziebert</i>) Dynamics of active nematics <i>Zvonimir Dogic</i>	09:30-10:15 Room H15
Coffee Break		10:15-10:45
MS7.1	Mass and Information Propagation in Living Matter <i>Organizers: Holger Kress and Matthias Weiss</i>	10:45-12:45 Room H17
	<ol style="list-style-type: none"> 1. Nerve pulses as adiabatic electromechanical solitary waves <i>Thomas Heimburg</i> 2. Bacterial responses to drug combinations <i>Tobias Bollenbach</i> 3. Construction and function of microtubule overlaps <i>Marcel Janson</i> 4. Conformational fluctuations of DNA hairpin-loops: dissecting the multiple impacts of macromolecular crowding <i>Olivia Stiehl</i> 5. Mechanical cues during early embryogenesis of <i>C. elegans</i> <i>Philipp Struntz</i> 	
MS7.2	Control of Dynamical Systems in Science and Engineering <i>Organizers: Lars Grüne and Jens Starke</i>	10:45-12:45 Room H18
	<ol style="list-style-type: none"> 1. Control of delay-coupled complex networks <i>Eckehard Schöll</i> 2. Quantum control – results and challenges from a mathematical point of view <i>Gunther Dirr</i> 3. Spatial-temporal coherent control in molecules and nanostructures <i>Tobias Brixner</i> 4. Control-based continuation of a hybrid numerical/physical substructured system <i>David Barton (canceled)</i> Control-based Continuation for noise-contaminated zero problems in experiments <i>Jens Starke</i> 	
MS7.3	Localized States in Pattern Formation <i>Organizer: Reinhard Richter</i>	10:45-12:45 Room H19
	<ol style="list-style-type: none"> 1. Front Pinning between an hexagonal pattern and a uniform state <i>Gregory Kozyreff</i> 2. Time-delayed feedback control of localized structures in the Swift-Hohenberg equation <i>Svetlana Gurevich</i> 3. Explosive dissipative solitons and their anomalous diffusion <i>Jaime Cisternas</i> 4. Straightening the snake - (un)tilted snaking in the phase-field crystal description of colloidal crystallisation <i>Uwe Thiele</i> 	
CT7.1	Coupled Systems and Networks	10:45-12:45 Room H16
	<ol style="list-style-type: none"> 1. Eckhaus scenario for partially coherent twisted states in arrays of coupled phase oscillators <i>Oleh Omel'chenko</i> 2. Oscillatory networks with adaptive coupling <i>Dmitry Kasatkin (canceled)</i> Inferring the directionality of the links of climate networks via nonlinear time-series analysis <i>Cristina Masoller</i> ← CT3.1-2 3. Extreme events due to localisation of energy in a one dimensional lattice <i>Colm Mulhern</i> 4. Emergence of small-world anatomical networks in self-organizing neuronal cultures <i>Juan Almendral</i> 5. Impact of coupling delay on collective dynamics of modular neural networks <i>Oleg Maslennikov</i> 6. Network of genes from metric and correlation measures in an embedding space <i>Shambhavi Srivastava (canceled)</i> How does a slime mould construct a regular network? <i>Marcus Hauser</i> 	

- 12:45-14:00 **Lunch Break**
- 14:00-16:00 **MS8.1 Nonlinear Phenomena in Plasma Astrophysics**
 Room H17 *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**
 Room H18 *Organizers: Ehud Meron and Walter Zimmermann*
1. The big melt: how stable is the Earth's Cryosphere? *Dirk Notz*
 2. Kinneyia: a fossil hydrodynamic instability? *Lucas Goehring*
 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**
 Room H19 *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)**
 Room H16
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 the 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)**
 Room H15 **Pattern formation - a missing link in the study of ecosystem response to climate change**
Ehud Meron

MS9.1 Extreme Events on Complex Networks <i>Organizers: Stephan Bialonski and Klaus Lehnertz</i>	08:45-10:45 Room H17
<ol style="list-style-type: none"> 1. Extreme events in random walks on networks <i>Vimal Kishore</i> 2. Irregular macroscopic dynamics and extreme events due to chimera states <i>Alexander Rothkegel</i> 3. Data-driven prediction of extreme events in high-dimensional excitable systems <i>Stephan Bialonski</i> 4. Recurrence properties as signatures of abrupt climate change <i>Norbert Marwan</i> 	
MS9.2 Computational Soft Matter Physics <i>Organizers: Jens Harting and Badr Kaoui</i>	08:45-10:45 Room H18
<ol style="list-style-type: none"> 1. Modelling and simulation of active soft matter <i>Hartmut Löwen</i> 2. Granular Jet Impact: Probing the Ideal Fluid Description <i>Thorsten Pöschel</i> 3. Theory and application of colloidal chains ratchetting above a stripe-patterned magnetic substrate <i>Arthur Straube</i> 4. Interplay of inertia and deformability on rheological properties of a suspension of capsules <i>Jens Harting</i> 	
MS9.3 Set-dynamic Approaches with Applications in Car Engineering <i>Organizers: Robert Baier and Thomas Lorenz</i>	08:45-10:45 Room H19
<ol style="list-style-type: none"> 1. A Quarter Car Model with Free Road Contact as an Example for Optimal Control of Coupled ODE and PDE <i>Sven-Joachim Kimmerle</i> 2. Real-time control for singular events in vertical vehicle dynamics <i>Jürgen Pannek</i> 3. Computing reachable sets by the Hamilton-Jacobi approach and application to vehicle avoidance <i>Olivier Bokanowski</i> 4. Robust control problems – in terms of evolution equations for (nonconvex) sets <i>Thomas Lorenz</i> 	
CT9.1 Bifurcations and Patterns II (<i>Chair: Evgeny Gurevich</i>)	08:45-10:45 Room H16
<ol style="list-style-type: none"> 1. Hydrodynamic model of the periodic pattern formation upon femtosecond laser ablation <i>Evgeny Gurevich</i> Effect of a cut-off on the speed of reaction diffusion fronts <i>Cristina Depassier</i> 2. Experimental Bifurcation Diagram of an External-cavity Semiconductor Laser <i>Byungchil Kim</i> 3. Regime shifts in spatially extended ecosystems and the dynamics of fairy circles <i>Yuval Ron Zelnik</i> 4. Turing instability in one-component reaction-diffusion systems with delay <i>Andreas Otto</i> 5. Control and manipulation of modulation instability <i>Shubham Kumar</i> 	→ CT6.1
Coffee Break	10:45-11:15
IP11 Plenary Talk (<i>Chair: Günter Radons</i>) Anomalous diffusion and ergodic violation: from dynamic maps to living biological cells <i>Ralf Metzler</i>	11:15-12:00 Room H15
IP12 Plenary Talk (<i>Chair: Lars Grüne</i>) On the Approximation of Transport Phenomena <i>Michael Dellnitz</i>	12:00-12:45 Room H15
Closing	12:45-13:00
Lunch Break	13:00-14:00

