

**Program 25th seminar "Pattern Formation in Chemistry and Biophysics", Erfurt Feb. 15-17, 2024**

„Ihr könnt predigen, über was ihr wollt, aber predigt niemals über vierzig Minuten.“ Martin Luther

<b>Thursday, February 15</b>	title
13:00h Markus Bär	Opening
13:10h Pawel Romanczuk	Self-organization and collective information processing in animal collectives.
13:50h Valentin Lecheval	Resetting random walks as a model for scouting ants: from the emergence of foraging territory to polydomous networks
14:10h Carla Vollmoeller	Spatio-temporal patterns in behavioral contagion
14:30h Robert Großmann	Formation of trails and bands in signaling active particles
14:50h	Coffee break
15:20h Doris Heinrich	Control of dynamic processes and emergence of patterns in 3D organ systems
16:00h Markus Bär	Pattern formation in active fluids
16:40h	Coffee break
17:10h Joachim Rädler	Cell migration in confinement - automated analysis and simulation based inference
17:50h Benjamin Winkler	Physical phase field model for phagocytosis

<b>Friday, February 16</b>	title
9:00 Mohsen Raoufi	Spatial patterns of echo-chamber formation in homophilic opinion dynamics
9:20h Uwe Thiele	Chemo-mechanical coupling in sessile drops covered by reactive surfactants - a model based on gradient dynamics
10:00h Daniel Greve	Maxwell construction for a nonreciprocal Cahn-Hilliard model
10:20h	Coffee break
10:50h Elias Koch	Dynamics of dark and bright thermo-optical excitable pulses in injected Kerr microcavities
11:10h Svetlana Gurevich	Towards conservative time-delayed systems
11:50h Yukiteru Murakami	A time-delay model for oscillations during Si electrodisolution
12:10h	Lunch
14:00h Hiromi Suetani	Unsupervised learning of collective patterns in self-propelled particles through persistent homology
14:40h Albert von Kenne	Optimal synchronization of elastic rotors through hydrodynamic memory
15:00h Henning Reinken	Pattern selection and the onset of turbulence in incompressible active fluids
15:20h	Coffee break
15:50h Holger Stark	Controlling Active Turbulence by Activity Patterns
16:30h Francine Kolley	Physical principles of pattern formation during myofibrillogenesis
16:50h Marcel Hörning	Self-organization of PIP3 waves in topologically confined cell membranes
17:10h Nicolas Thomé	Type II Cluster Singularities as Organizing Centers for modulated 3-cluster solutions

<b>Saturday, February 17</b>	title
9:00h Oleh Omelchenko	Synchronization patterns in networks of phase oscillators: When multi-body interaction matters
9:20h Wilhelm Neubert	Multiscale modelling of excitation-contraction coupling in cardiac myocytes
9:40h Stefan Luther	Taming cardiac arrhythmias
10:20h	Coffee break
10:50h Laura Diaz	Control of cardiac dynamics using multi-LED and multi-electrode platforms
11:30h Sayedeh Hussaini	Control of Cardiac Arrhythmias using Optogenetics
11:50h Julia Erhardt	Prediction of discordant alternans in bioengineered cardiac tissue
12:10h	Lunch