Conference Program

Tuesday, 23.9.		
08:50-09:00		WELCOME
09:00-09:45	Jacque Prost	Cell cortex and cell division
09:45-10:30	Richard McKenney	BicD2 and dynactin convert a non-processive cytoplasmic dynein to an ultra-processive directional motor
10:30-11:00		COFFEE
11:00-11:30	Jian Liu	Traction oscillation confers focal adhesion mechanosensing– A tale of two distinct actin networks
11:30-12:00	Daniel Riveline	A simple active gel in vivo : The cytokinetic ring
12:00-12:30	Karsten Kruse	Length-distribution of actin filaments in the submembranous cortex of living cells
12:30-14:00		LUNCH
14:00-14:45	Reinhard Lipowsky	Multiscale motility of biomolecular machines
14:45-15:10	Jean-Baptiste Fleury	How to Study a Single SNARE Mediated Membrane Fusion Event ?
15:10-15:35	Reza Shaebani	Anomalous diffusion of self-propelled particles on directed random networks
15:35-16:00		COFFEE
16:00-16:45	David Yule	A multi-scale modeling approach to better understand salivary gland fluid secretion.
16:45-17:30	Richard Lewis	Self-organization of store-operated calcium channels at the immune synapse
17:30-18:00	Markus Hoth	Combining experimental data and theoretical models to analyze cytotoxicity of primary human killer cells
18:00-21:00		POSTER SESSION

Wednesday, 24.9.		
09:00-09:45	Josef Käs	Are biomechanical changes necessary for tumor progression?
09:45-10:30	Nicolas Minc	Developmental morphogenesis of a single cell
10:30-11:00		COFFEE
11:00-11:30	Jaume Casademunt	Formation of helical membrane tubes around microtubules by monomeric kinesin
11:30-12:00	Falko Ziebert	The mystery of circling microtubules: tubulin lattice switches under force
12:00-12:30	Jan Kierfeld	Feedback mechanism for microtubule length regulation by bistable stathmin gradients
12:30-14:00		LUNCH
14:00-14:45	Daniel J. Needleman	Self-Focusing of the Ran Gradient in Mitosis: Signaling, Mechanics, and Spindle Size
14:45-15:30	Frank Jülicher	Phase separation in the cell cytoplasm
15:30-16:00		COFFEE
16:00-16:45	Vincent Hakim	Cell motion in confined environments: collective modes and fluctuations
16:45-17:30	Roland Wedlich-Söldner	A pulsatile acto-myosin network organizes the apical surface of epithelial cells
17:30-18:00	Cécile Appert-Rolland	Microtubule based bidirectional transport
18:30-…		BARBECUE

Thursday, 25.9.		
09:00-09:45	Paul Janmey	Non-linear elasticity and relaxation in polymer networks and soft tissues
09:45-10:30	Lars Hufnagel	Bioimaging embryonic development with light-sheet microscopy
10:30-11:00		COFFEE
11:00-11:30	Thomas Risler	Tension-oriented cell divisions in zebrafish epiboly
11:30-12:00	Christoph Erlenkämper	Mechanics of Cell Rounding and Apical Migration in Epithelial Tissue
12:00-12:30	Stefan Klumpp	Motility and magnetism in magnetotactic bacteria
12:30-14:00		LUNCH
14:00-14:45	Ian Parker	Imaging calcium signaling in intact cells down to the single-molecule scale
14:45-15:30	Sonia Cortassa	Insights from a computational-experimental synergy to elucidate disease mechanisms
15:30-16:00		COFFEE
16:00-16:45	Roy Bar-Ziv	Programmable on-chip DNA compartments as artificial cells
16:45-17:30	José Onuchic	Decision making at the cell level: from microorganisms to possibly cancer
17:30-18:00	Jens Elgeti	Simulating Growing Tissues
19:00-…		SPEAKER DINNER

Friday, 26.9.		
09:00-09:45	Françoise Brochard-Wyart	Collective Migration of Multicellular Aggregates
09:45-10:30	Jean-Francois Joanny	Physics of epithelial cell layers
10:30-11:00		COFFEE
11:00-11:30	Hans-Günther Döbereiner	Foraging via Topological Phase Transitions in the Slime Mold Physarum Polycephalum
11:30-12:00	Zdeněk Petrášek	Reaction-diffusion models of bacterial *min* protein dynamics
12:00-12:30	Moritz Kreysing	Thermal dis-equilibrium as a metabolic platform to allow for the evolution of life
12:30-14:00		CLOSING/LUNCH