

Workshop
Brownian Motion:
A Paradigm of Soft Matter and Biological Physics
Munich
September, 26th-28th

Monday

9.00-9.45	Yossi Klafter	Biological processes on the level of a single molecule
9.45-10.30	Werner Ebeling	From passive to active Brownian motion
10.30-11.00		Coffee-Break
11.00-11.45	Ernst-Ludwig Florin	3D and 2D imaging of soft and dynamic nanostructures using thermal fluctuations
11.45-12.30	Royce Zia	On mass transport models: exact results, condensation transitions and condensates' properties
12.30-14.00		Lunch
14.00-14.45	Yariv Kafri	Collective behavior of molecular motors pulling liquid membranes
14.45-15.30	Christoph Schmidt	Short time inertial response of viscoelastic fluids: direct observation of vortex propagation in the correlated Brownian motion of micron-sized particles
15.30-16.00		Coffee-Break
16.00-16.45	Gerhard Gompper	Hydrodynamics of vesicles and cells in shear and capillary flows
16.45-17.30	Matthias Fuchs	Properties of stationary states in sheared colloidal dispersions



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Tuesday

9.00-9.45	Udo Seifert	Fluctuation theorems, Jarzinski relation and entropy production
9.45-10.30	Felix Ritort	Recovering folding free energies of RNA molecules in an experimental test of Crooks fluctuation theorem
10.30-11.00		Coffee-Break
11.00-11.45	Philippe Cluzel	Noise propagation in the chemotaxis network of a single bacterium
11.45-12.30	Dekel Erez	Optimality and evolutionary tuning of the expression level of a protein
12.30-14.00		Lunch
14.00-14.45	Frank Jülicher	Cell dynamics and cellular oscillations
14.45-15.30	Klaus Kroy	How a deterministic response emerges from Brownian polymer dynamics
15.30-16.00		Coffee-Break
16.00-16.45	Andreas Bausch	Cytoskeletal polymer networks: relating molecular structure to macroscopic properties
16.45-17.30	Thomas Franosch	The localization transition of the 3D Lorentz model and continuum percolation



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Wednesday

9.00-9.45	Georg Maret	Conformation and stretching of tethered DNA
9.45-10.30	Ulrich Gerland	Coupled dynamics of DNA/RNA base-pairing and nanopore translocation
10.30-11.00		Coffee-Break
11.00-11.45	Dieter Braun	What drives molecules along thermal gradients?
11.45-12.30	Igor Sokolov	Diffusion in complex molecular systems: nonlocality and memory
12.30-14.00		Lunch
14.00-14.45	Ralf Metzler	Breathing dynamics of local DNA-denaturation zones- Sequencing and nano-sensing
14.45-15.30	Holger Stark	Hydrodynamic Interactions in Colloidal Physics and the Locomotion in Biology



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