

NTZ-Workshop
Soft Matters in Biological Physics

Universität Leipzig, 20.-21. September 2005

organized by Klaus Kroy (kroy@itp.uni-leipzig.de)

Kleiner Hörsaal (R. 281/389), Linnéstr. 5

20. September 2005

Sackmann	Membranes and Vesicles
9:15-9:30	<i>Welcome</i>
9:30-10:05	<i>Crystalline Domains in Fluid Vesicles: Shapes, Defects, and Budding</i> G. Gompper (Jülich)
10:05-10:30	<i>Lipid Membranes</i> V. Gordon (Edinburgh)
10:30-10:55	<i>Coarse-grained fluid membranes without solvent: Why? How? Wow!</i> M. Deserno (Mainz)
10:55-11:20	<i>Ordered domains control diffusion in model membranes</i> C. Selle (Leipzig)
11:20-11:50	Coffee break
Frey	Stick and Creep
11:50-12:15	<i>Force induced unbinding of specifically adhered vesicles</i> A. Smith (Stuttgart)
12:15-12:50	<i>Stochastic dynamics of adhesion clusters</i> U. Schwarz (Heidelberg)
12:50-13:15	<i>Three-ball animals: a family of biomimetic colloidal machines</i> W. Lobaskin (Mainz)
13:15-14:15	Lunch break
Liverpool	Single Polymers I
14:15-14:50	<i>Relating the viscoelasticity of complex actin networks to single filament dynamics</i> A. Bausch (München)
14:50-15:15	<i>Bimodality in the fluctuations of a grafted semiflexible polymer and the diffusion-convection analogy</i> P. Benetatos (Göttingen)
15:15-15:40	<i>Actin filaments confined in microchannels</i> K. Mecke (Erlangen)
15:40-16:10	Coffee break
Kroy	Single Polymers II
16:10-16:35	<i>Anisotropic semiflexible polymer dynamics</i> O. Hallatschek (Harvard)
16:35-17:10	<i>Tricks with genes: Recent patents on DNA</i> T. Fraps (EPO München)
17:00-19:30	Posters and Coffee
20:00	Dinner

21. September 2005

Gompper	Complexes ...
9:00-9:35	<i>Microscopic modelling of DNA: From Chromatin to Nanomachines</i> R. Netz (München)
9:35-10:10	<i>Optical tweezers to study the acting of DNA-binding proteins on single chains of DNA</i> F. Kremer (Leipzig)
10:10-10:45	<i>The nucleosome: A transparent, slippery, sticky and yet stable DNA-protein complex</i> H. Schiessel (Leiden)
10:45-11:15	Coffee break
Käs	... and Bundles
11:15-11:40	<i>Depletion-induced bundling of actin filaments</i> T. Gisler (Konstanz)
11:40-12:05	<i>Discontinuous unbinding transitions of filament bundles</i> J. Kierfeld (Potsdam)
Netz	Mikado and Tensegrity
12:05-12:40	<i>Intracellular space as active viscoplastic body: Do cells behave as Tensegrity Structures?</i> E. Sackmann (München)
12:40-13:15	<i>Stiff Polymers, Foams and Fiber Networks</i> E. Frey (München)
13:15-14:15	Lunch break
Schwarz	Gels, Dead and Alive I
14:15-14:50	<i>Dynamics of Gelation</i> A. Zippelius (Göttingen)
14:50-15:25	<i>Intracellular Molecular Machines Formed by Polymeric Films and Active Nanoelements</i> J. Käs (Leipzig)
15:25-15:55	Coffee break
Bausch	Gels, Dead and Alive II
15:55-16:30	<i>Order and Flow in Active Filament Solutions</i> T.B. Liverpool (Leeds)
16:30-16:55	<i>Hydrodynamic theory of active polar gels</i> K. Kruse (Dresden)
16:55-17:20	<i>Spontaneous flows and instabilities in active gels : applications to cytoskeleton dynamics</i> R. Voituriez (Paris)
17:20-17:50	Coffee break
Schiessel	Light at the End of the Tunnel
17:50-18:15	<i>Probing slow dynamics in time and space with multiple light scattering</i> F. Scheffold (Fribourg)
18:15-18:40	<i>Living Optical Fibers in the Retina</i> J. Guck (Leipzig)
18:40-19:05	<i>Fundamentals of Thermophoresis for Bioanalysis</i> D. Braun (München)