PROGRAM

Sunday, May 13, 2018

17:00   *Registration*
18:30   *Supper/ Get-together*

19:45   Opening
Jens-Uwe Sommer und Stefan Grill

20:00   Jean-Francois Joanny
Physico Chimie Curie, Institut Curie/ ESPCI Paris, Paris, France
Passive and active polymers in cells

Monday, May 14, 2018

9:00   Ramin Golestanian
University of Oxford, Oxford, United Kingdom
Diffusion of an enzyme: The role of fluctuation-induced hydrodynamic coupling

9:40   Fred MacKintosh
Rice University, Houston, USA
Mechanical phase transitions and the rheology of stiff polymers

10:20   Guillaume Salbreux
The Francis Crick Institute, London, United Kingdom
Physics of active surfaces and epithelial folding

11:00   *Break*

11:30   Abhinav Sharma
Leibniz-Institut für Polymerforschung Dresden e. V., Dresden, Germany
Green-Kubo approach to active Brownian particles

12:10   Michael Rubinstein
Duke University, Durham, USA
Molecular design of super-soft and super-lastic solvent-free networks

12:50   *Lunch*

13:50   Vladimir Baulin
Rovira i Virgili University, Tarragona, Spain
Polymer design with mean field methods

14:30   Michael Kozlov
Tel Aviv University, School of Medicine, Tel Aviv, Israel
Modeling membrane superstructures formed by caveolae

15:10   *Break*

15:40   David Andelmann
Tel Aviv University, School of Physics and Astronomy, Tel Aviv, Israel
Charge regulation in colloid solutions and other complex fluids

16:20   Thomas Heimburg
University of Copenhagen, Niels Bohr Institute, Copenhagen, Denmark
The free energy of biomembrane and nerve excitation and the role of anesthetics

17:00   Poster Discussion

18:30   *Supper*

Tuesday, May 15, 2018

9:00   Christoph Weber
Max Planck Institute for the Physics of Complex Systems, Dresden, Germany
Strategies combating cellular protein aggregates:
Spatial organization of aggregates via liquid compartments

9:40   Jan Brugués
Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany
Long-range anisotropic extensile stress and the emergence of a rigidity transition in spindles

10:20   Sissi de Beer
Materials Science and Technology of Polymers and Mesa+ Institute for Nanotechnology,
University of Twente, Enschede, The Netherlands
Switching surface functionality by stimulus response polymer brushes

11:00   Lars Renner
Leibniz-Institut für Polymerforschung Dresden e. V., Dresden, Germany
Synthesis of defined polymer architectures

11:40   *Break & Poster Discussion*

12:50   *Lunch*

13:50   Helmut Schiessel
University of Leiden, Institute Lorentz for Theoretical Physics, Leiden,
The Netherlands
How to read and write mechanical information in DNA molecules

14:30   Martin Depken
Delft University of Technology, Delft, The Netherlands
Bottom-up modelling for CRISPR/CAS target prediction

16:00   *Start sightseeing tour to Porcellain Manufacture Meißen*

19:00   *Dinner in restaurant Vincenz Richter*
(entry from 18:30)

Wednesday, May 16, 2018

9:00   Anton Zilman
University of Toronto, Department of Physics, Toronto, Canada
Selective transport by the polymer assemblies of the nuclear pore complex

9:40   Dino Osmanovic
Massachusetts Institute of Technology, Department of Physics, Cambridge, USA
Physical modelling of the nuclear pore complex

10:20   Jennifer Curtis
          Georgia Institute of Technology, Atlanta, USA
          Pressing forward with hyaluronan: Where polymer physics governs biology and biology helps
          polymer physics

11:00   *Break*

11:30   Stephan Grill
          Technische Universität Dresden, BIOTEC, Dresden, Germany
          Entropic collapse of endosomal tethers

12:10   Andre Galuschko
          Leibniz-Institut für Polymerforschung Dresden e. V., Dresden, Germany
          Polymer brushes in competitive solvents

12:50   Concluding remarks

13:00   *Lunch*

LIST OF POSTERS

number	title	authors
1	A minimal model to study pH-dependent phase separation	O. Adame-Arana[*], C. A. Weber, V. Zaburdaev, J. Prost, F. Jülicher
2	Positioning of droplets in inhomogeneous fluids	S. Krüger[*], C. A. Weber, F. Jülicher, J.-U. Sommer
3	The action of Feringa-type engines in polymer model systems: Molecular Stirling engines and active gels	R. Dockhorn[*], M. Lang, C. Schuster, M. Wengenmayr, J.-U. Sommer
4	Entropic segregation in mixtures of dendrimers and linear polymer solutions	M. Wengenmayr[*], R. Dockhorn, J.-U. Sommer
5	Green-Kubo approach to the average swim speed in active Brownian systems	H.D. Vuijk, A. Sharma, J.M. Brader
6	Cononsolvency transition of polymer brushes	H. Yong, S. Rauch, K.-J. Eichhorn, P. Uhlmann, A. Fery[*], J.-U. Sommer[*]
7	How do immobilized cell-adhesive Arg-Gly-Asp-containing peptides behave at the PAA brush surface?	V. Savchenko, U. König, P. Uhlmann, O. Guskova[*]
8	MD simulation: Nanopores as switchable gates	C.-W. Li, H. Merlitz, J.-U. Sommer, C.-X. Wu
9	Silica-polyamine interactions: A combined study of solid-state NMR and molecular dynamics simulations	M. Montagna[*], S.I. Brückner, S. Donets, A. Dianat, R. Gutierrez, E. Brunner, G. Cuniberti
10	Hydrogel microbead *in vivo* force sensors	N. Träber, J. Friedrichs, S. Girardo, K. Wagner, R. Goswami, G. Kesavan, K. Uhlmann, D. Balzani, J. Guck, C. Werner
11	Molecular structure, charging, and non-fouling properties of poly(ethylene oxide) brushes for biomimetic surface engineering	R. Zimmermann[*], O. Pop-Georgievski, I. Kotelnikov, V. Proks, D. Romeis, J. Kučka, A. Caspari, F. Rypáček, C. Werner
12	Fluidity modulation of phospholipid bilayers by electrolyte ions	R. Zimmermann[*], D. Küttner, L. Renner, M. Kaufmann, C. Werner