Program

Sunday, 29 July 2012

16:00 – 20:00	Registration	
18:30 – 20:00	BUFFET SUPPER / *Informal get together*	
20:00 – 20:10	Scientific Organizers	**Welcome and introduction**
20:10 – 20:50	Attila Szabo	**Theory of single-molecule fluorescence spectroscopy**
20:50 – 21:30	William Eaton	**Toward observing protein-folding transition paths by singlemolecule FRET**

Monday, 30 July 2012

8:00	*BREAKFAST*	
9:00 – 9:40	Helmut Grubmüller	**Structural heterogeneity and quantitative FRET efficiency distributions of polyprolines through a hybrid atomistic simulation and Monte Carlo approach**
9:40 – 10:20	Pavel Jungwirth	**Single molecule and global effects of lipid oxidation on phospholipid membranes**
10:20 – 11:00	Martin Zacharias	**Advanced sampling simulations to study single biomolecule structure and dynamics**
11:00 – 11:20	*COFFEE BREAK*	

Program

Monday, 30 July 2012

11:20 – 12:00	Erwin Peterman	**Twist, stretch, and melt: Quantifying and visualizing how DNA complies to tension**
12:00 – 12:40	Edward Lemke	**Tools to decipher protein plasticity at the single molecule level**
12:40	**Conference photo** (in front of the Physikzentrum)	
12:50	*LUNCH*	
14:20 – 15:00	Ben Schuler	**Single-molecule spectroscopy of protein folding dynamics from nanoseconds to megaseconds**
15:00 – 15:40	Claus Seidel	**New fluorescence tools for studying conformational dynamics of biomolecules with high temporal and spatial resolution**
15:40 – 16:20	Achillefs Kapanidis	**DNA polymerase conformations and the fidelity of DNA synthesis**
16:20 – 16:40	*COFFEE BREAK*	
16:40 – 17:20	Jens Michaelis	**Mechanistic insight into eukaryotic gene expression from single molecule experiments**
17:20 – 18:00	Don Lamb	**Mining for dynamics using SpFRET**
18:00 – 18:40	Gerhard Schütz	**Single molecule biology – studying movements and meetings within the plasma membrane**
19:00 – 20:00	**Poster session I**	
20:00	*CONFERENCE DINNER*	
	Followed by a social evening on invitation of the Wilhelm and Else Heraeus Foundation in the "Lichtenberg cellar" of the Physikzentrum	

Program

Tuesday, 31 July 2012

8:00	*BREAKFAST*	
9:00 – 9:40	Stephan Grill	**Fully automated single molecule optical tweezer experiments**
9:40 – 10:20	Nancy Forde	**Designing novel molecular motors**
10:20 – 11:00	Michael Woodside	**Folding dynamics and kinetic schemes from single-molecule trajectories using signal-pair correlation analysis**
11:00 – 11:20	*COFFEE BREAK*	
11:20 – 12:00	Felix Ritort	**Recent progress in free energy recovery from irreversible pulling experiments**
12:00 – 12:40	Dave Thirumalai	**From mechanical folding trajectories to intrinsic folding landscapes of biomolecules**
12:45	*LUNCH*	
14:20 – 16:20	**Discussion**	
16:20 – 16:40	*COFFEE BREAK*	
16:40 – 17:20	Thorsten Hugel	**Evolution of energy conversion in Hsp90s**
17:20 – 18:00	Lene Oddershede	**Forced unfolding of mRNA pseudoknots**
18:00 – 18:40	Hongbin Li	**Protein unfolding-folding dynamics probed by single molecule force spectroscopy**
18:45	*DINNER*	
20:00 – 21:30	**Poster session II**	

Program

Wednesday, 1 August 2012

8:00	*BREAKFAST*	
9:00 – 9:40	Phillip Tinnefeld	**DNA origami meets single-molecule spectroscopy**
9:40 – 10:20	Jörg Enderlein	**Single molecule electrodynamics: From spectroscopy to imaging**
10:20 – 11:00	Marcia Levitus	**The photophysical properties of single-molecule dyes and its impact in the interpretation of single-molecule data**
11:00 – 11:20	*COFFEE BREAK*	
11:20 – 12:00	Dominik Horinek	**Statics and dynamics of surface-adsorbed peptides**
12:00 – 12:40	Giorgio Colombo	**Corresponding functional dynamics across the Hsp90 chaperone family: Insights from a multiscale analysis of MD simulations**
12:40 – 12:50	Scientific Organizers	**Concluding remarks and poster awards**
13:00	*LUNCH and GOODBYE COFFEE*	

End of the seminar and departure