Welcome

15:00  Registration

16:30-17:00  Joachim P. Spatz  
University of Heidelberg and Max Planck Institute for Intelligent Systems Stuttgart  
Opening remarks

Single Molecule Spectroscopy

17:00-18:00  Stefan Hell  
Max Planck Institute for Biophysical Chemistry and German Cancer Research Center  
Nanoscopy with focused light

18:00-18:20  Furqan Fazal  
Stanford University, USA  
Binding and Translocation of Termination Factor Rho Studied at the Single-Molecule Level

18:20-18:40  Vera Böhm  
German Cancer Research Center  
Chromatin at the Nanolevel – Single Molecule Fluorescence of Nucleosome Dynamics

18:40-19:00  Stefan Winheim  
German Cancer Research Center  
Early Assembly Kinetics of Vimentin Assembly by Stopped Flow

19:00  WELCOME RECEPTION
**Monday July 4th, 2011**

**Cell Mechanics and Adhesion I**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker</th>
<th>Institution</th>
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<tr>
<td>09:00-10:00</td>
<td>Special EMBO lecture</td>
<td>Benjamin Geiger</td>
<td>Weizmann Institute, Israel</td>
<td>The molecular basis for multi-sensory mechanisms of cell adhesion</td>
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<td>10:00-11:00</td>
<td>Viola Vogel</td>
<td>ETH, Zürich</td>
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<td>Mechano-Chemical Switches</td>
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<td>11:00-11:30</td>
<td>COFFEE BREAK</td>
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<td>11:30-12:30</td>
<td>Kit Parker</td>
<td>Harvard University, USA</td>
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<td>Protein Based Nanotextiles</td>
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<td>12:30-12:50</td>
<td>Duncan Sutherland</td>
<td>Aarhus University, Denmark</td>
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<td>Focal Complex Maturation and Bridging on 200nm Vitronectin but not Fibronectin Patches Reveal Different Mechanisms of Focal Adhesion Formation</td>
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<td>13:00-14:00</td>
<td>LUNCH</td>
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<td>14:00-14:20</td>
<td>Julien Pollieux</td>
<td>Max Planck Institute for Biochemistry, Martinsried</td>
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<td>Thermoplasmonic Nanoarrays to Manipulate Cell Adhesion</td>
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<td>14:20-15:20</td>
<td>Hongkun Park</td>
<td>Harvard University, USA</td>
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<td>Vertical Nanowire Arrays: A Universal Platform for Interfacing with Living Cells</td>
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<td>15:30-17:30</td>
<td>POSTER SESSION WITH COFFEE</td>
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<td>17:30-17:50</td>
<td>Henrik Persson</td>
<td>Lund University, Sweden</td>
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<td>Oxide Nanotubes for Single Cell Analysis</td>
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<td>17:50-18:10</td>
<td>Marco Cecchini</td>
<td>NEST, Istituto Nanoscienze-CNR and Scuola Normale Superiore, Italy</td>
<td>Nanotopographic Control of Neuronal Polarity</td>
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18:10-18:30 Thomas Fuhs
University of Leipzig, Germany
*Inherently Slow and Weak Forward Forces of Neuronal Growth Cones Measured by a Drift-Stabilized AFM*

**Tuesday July 5th, 2011**

**Cell Mechanics and Adhesion II**

09:00-10:00 Jaques Prost
Institute Curie, Paris
*The physics of tissue dynamics*

10:00-11:00 Christian Böhm
University of Heidelberg and Max Planck Institute for Intelligent Systems Stuttgart
*System Properties of Biological Micro-Systems Interplay of Physics, Chemistry and Biology*

11:00-11:30 **COFFEE BREAK**

11:30-11:50 Bin Chen
IHPC, Singapore
*Motor Force Homeostasis in Skeletal Muscle Contraction*

**Nanomaterial Interactions**

11:50-12:10 Ching-Hsuan Wu
Northwestern University, USA
*Bioengineering Single Crystal Growth*

12:10-12:30 Stephanie Müller
University of Cologne, Germany
*DNA Import in Helicobacter pylori is Reversible Upon Application of External Force*

12:30-12:50 Sebastian Kruss
University of Heidelberg and Max Planck Institute for Intelligent Systems Stuttgart
*Investigating receptor-ligand interactions on tunable nanostructured surfaces under flow*

13:00-14:00 **LUNCH**

14:00-14:20 Maren Funk
14:20-14:40  Susanne Seidel  
LMU, Germany  
*Kinetics in Living Cells*

14:40-15:00  Ralf Kemkemer  
University of Heidelberg and Max Planck Institute for Intelligent Systems Stuttgart  
*TBA*

15:00-16:00  Naomi Halas  
Rice University, USA  
*Multifunctional plasmonic nanoparticles for biomedical theranostics and intracellular chemistry*

16:00-17:00  **POSTER SESSION WITH COFFEE**

17:00-17:20  Rainer Kurre  
University of Cologne, Germany  
*Oxygen Depletion Triggers Switching of a Bacterial Motor between Discrete Velocities*

17:20-17:40  Axel Rosenhahn  
Karlsruhe Institute of Technology, Germany  
*Chemical and Physical Cues in Marine Fouling*

17:40-18:00  Karl-Heinz Heffels  
University of Würzburg, Germany  
*Bioactivation and Functionalisation of Degradable Polyester Scaffolds*

18:00-18:20  Smriti Singh  
RWTH Aachen, Germany  
*Redox Sensitive Nanogels for Protein Delivery*

20:00  **CONFERENCE DINNER at the „Kulturbrauerei Heidelberg“**
Wednesday July 6th, 2011

Bioinspired Nanomaterials

09:00-10:00  Harald Fuchs  
University of Münster, Germany  
*Bioactive Interfaces Generated by DPN*

10:00-11:00  Xiaodong Chen  
Nanyang Tech. University, Singapore  
*Chemically Enabled Nano-Biointerfaces*

11:00-11:30  COFFEE BREAK

11:30-11:50  Michael Hirtz  
Karlsruhe Institute of Technology, Germany  
*Dip-Pen Nanolithography „Click-Chemistry“ for Biological Applications*

11:50-12:50  Ulrich Schwarz  
University of Heidelberg, Germany  
*Forces at the cell-material interface*