



TECHNISCHE  
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# IAP-SEMINAR

## EINLADUNG

- Termin: **Dienstag, 18.5.2010 um 16:30 Uhr**  
Ort: **Technische Universität Wien,**  
Freihaus Hörsaal 6, Turm A (grüne Leitfarbe), 2. OG  
1040 Wien, Wiedner Hauptstraße 8-10
- Vortragender: **Thomas Surrey**  
European Molecular Biology Laboratory (EMBL), Heidelberg/D
- Thema: **Molecular systems biophysics of the cytoskeleton**

### Kurzfassung

The cytoskeleton is a dynamic network of protein filaments present throughout the interior of eukaryotic cells. One class of filaments are microtubules. Their spatial arrangement provides an internal coordinate system for intracellular organization and one of their major roles is to generate a bipolar array, the mitotic spindle, during cell division essential for the segregation of the genetic material to the daughter cells. Crucial for microtubule organization in space are the activities of microtubule-crosslinking proteins. Molecular motors and non-motor microtubule bundlers are of importance. We study how system properties of mixtures of microtubules, motors and bundlers emerge from their collective action. Using in vitro reconstitution approaches in combination with fluorescence microscopy, we address questions of how shape and size of self-organized cytoskeletal structures at the micrometer scale are determined by the biophysical properties of nanometer-sized molecular machines which arrange microtubules in space.

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*Alle interessierten Kolleginnen und Kollegen sind zu diesem Seminar (60 min)  
im Rahmen des Berufungsverfahrens Biophysik  
herzlich eingeladen.*

*H. Störi e.h.  
(LVA-Leiter)*