


**Donnerstag**

 09.01. um 16 Uhr  
Studentinnen/Studenten  
sind herzlich willkommen

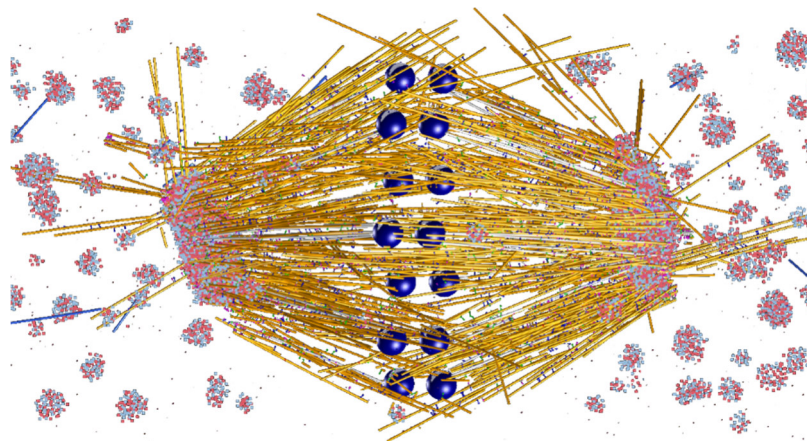
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# Simple Chromosome Partitioning Mechanisms and a Mitotic Spindle

 Thursday, January 9<sup>th</sup>, 2025, at 4.00 p.m. c.t.  
Building C6.4, Lecture Hall II (0.09)

We are using theory to explore simple mechanisms of chromosome partitioning with the aim of understanding the design principles of mitotic spindle assembly. Firstly, I will present how artificial evolution in a computer can uncover simple combinations of cytoskeletal elements that will self-organize to pull on a kinetochore pair symmetrically and reliably. I will then discuss the requirements to extend such elementary mechanisms to build a mitotic spindle that can handle multiple chromosomes. Secondly, I will present the characteristics of the mitotic spindles found in the roots of *Arabidopsis thaliana*, and argue that given these quantities, this plant spindle stands out as an ideal subject to build a quantitatively accurate 3D simulation. I will present our attempts to build such a model, detailing some key assumptions and using a simulation to illustrate the remarkable dynamics of metaphase mitotic spindles.



Philipp Hövel takes care of the speaker.

 You can participate online via TEAMS: <https://tinyurl.com/nedelec0901>

Interested people are cordially invited.

Coffee and cookies are served at 4.00 p.m. in front of the Lecture Hall