Alex Mogilner
Courant Institute, New York University

Physics of mitotic spindle assembly

Mitotic spindle is a remarkable molecular machine that self-assembles prior to cell division in order to segregate chromosomes. The spindle looks simple: two centrosomes organize two microtubule asters, and the microtubules connect to the chromosomes. However, there is an enormous molecular and mechanical complexity behind this machine, and the physics behind its self-organization became clear only recently. I will first discuss a many-body mechanics approach to the spindle that helped to understand the earliest stage of the spindle assembly, and then will show how stochastic tug-of-war models shed light on error correction process in mitosis.

Monday
March 25, 2024
Starts at 12:15 PM
Coffee at 12:00 PM
Physics Conference Room, SB B326
This talk is accessible via Zoom or use meeting ID 829 2687 2594 and passcode 866995 to join