Molecular Mechanism of Cytokinesis Mechanics

Molecular and cellular mechanics both play important roles in cytokinesis during cell division.

Sample questions:
1. How is the force transmitted from myosin to the furrow cortex?
2. Molecular mechanism for dynamics regulation?
3. How to reproduce the mutational effects on the cleavage rate?

Computational approaches:
1. Continuum model for cellular level.
2. Kinetic or Fokker-Planck model for molecular interactions.
3. Bayesian network model to find missing links.