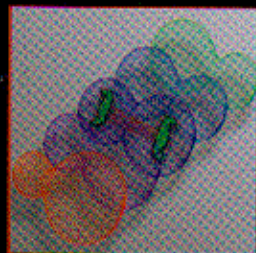


BIOPHYSICAL METHODS IN CELL BIOLOGY



Edited by

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With the expansion of optical microscopy techniques in cell biology, biophysical approaches have been complemented with optical perturbation and quantitative imaging. In this volume of *Methods in Cell Biology*, a variety of biophysical methods are explored, allowing for the quantification and perturbation of the organization, dynamics and mechanics of structures at the sub-cellular, cellular and tissue scales. Topics include different aspects of how high-end optical techniques can be used for quantitative cell and developmental biology, methods for the measurement of cellular mechanical properties and biophysical techniques to perturb and manipulate cell behavior.

KEY FEATURES

- Contributions from leading experts in this specialized field of research
- Topics cover aspects of the cell biophysics toolbox and highlight recent developments in the field
- Focus on the flexibility and adaptability of computer software in cell biology

Cover image: Illustration of cell division as an inherently mechanical process, where cell shape change is driven by the contractile actin cortex (here represented by 3-dimensional wireframes). When cortex contractility is misregulated, the cell can display shape instabilities (Sedzinski, Biro et al, *Nature* 2011). Credit: Maté Biro.

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