

Trends in Biophysics

From Cell Dynamics Toward Multicellular Growth Phenomena

A Review of the Book

"This is a unique book that brings together the most prominent papers that use biophysical and computational approaches to answer fundamental questions in cell biology. Each paper is a milestone in the development of a novel biophysical technique or computational strategy that allows understanding molecular and cellular mechanisms of major cellular activities such as locomotion, division, segregation of genetic material, and cell cycle progression. This is a must have book for every cell biologist who wants to use biophysical and computational approaches in research."

Vladimir Rodionov, PhD, Professor, University of Connecticut Health Center, Center for Cell Analysis and Modeling and Department of Cell Biology, Farmington, Connecticut, USA

Over the past two decades, biologists have generated large sets of experimental data and discovered a lot of facts that need explanation. This biological boom attracts physicists who believe they can help to develop a theoretical framework in biology and explain complete biological phenomena using basic principles. This book covers a wide scope of biological approaches to such biological phenomena as cell division, motility, collective cell behavior, multicellular structures, morphogenesis, and tumor development. This is the first book to present recent advances in biophysical studies of the different aspects of cell life.

About the Editor

Pavel Kraikivski, PhD, is a research faculty member in the Department of Biological Sciences at Virginia Polytechnic Institute and State University, Blacksburg, Virginia, USA. He has a unique academic background from his education at Russian, German, and American universities and extensive scientific research education. He has conducted research at the Max-Planck Institute for Colloids and Interfaces in Germany, where his research focused on active biopolymers, and has also worked at the Center for Cell Analysis and Modeling at the University of Connecticut Health Center. He has made significant contributions in computational cell biology and biophysics, particularly in the areas of intracellular transport and cytoskeleton dynamics.



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