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Titolo	Cell Movement : Modeling and Applications / / edited by Magdalena Stolarska, Nicoleta Tarfulea
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2018
ISBN	3-319-96842-4
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (312 pages)
Collana	Modeling and Simulation in Science, Engineering and Technology, , 2164-3679
Disciplina	571.67
Soggetti	Mathematical models Biomathematics Cytology Mathematical physics Mathematical Modeling and Industrial Mathematics Physiological, Cellular and Medical Topics Cell Biology Mathematical Applications in the Physical Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Two-Scale Moving Boundary Dynamics of Cancer Invasion: Heterotypic Cell Populations Evolution in Heterogeneous ECM -- The Role of Microenvironment in Regulation of Cell Infiltration in Glioblastoma -- A Multiscale Model of Cell Migration in Three-Dimensional Extracellular Matrix -- Bayesian Uncertainty Quantification for Particle-Based Simulation of Lipid Bilayer Membranes -- From Random Walks to Fully Anisotropic Diffusion Models for Cell and Animal Movement -- Bacterial Chemotaxis: A Classic Example of Multiscale Modeling in Biology -- Sperm Motility: Models for Dynamic Behavior in Complex Environments -- Lamellipodia in Stationary and Fluctuating States -- Intracellular Membrane Trafficking: Modeling Local Movements in Cells.
Sommario/riassunto	This book contains a collection of original research articles and review articles that describe novel mathematical modeling techniques and the application of those techniques to models of cell motility in a variety of

contexts. The aim is to highlight some of the recent mathematical work geared at understanding the coordination of intracellular processes involved in the movement of cells. This collection will benefit researchers interested in cell motility as well graduate students taking a topics course in this area. .
