

Computational systems biology is a field that aims to develop a systems-level understanding of biological processes using computational techniques. This book presents a timely compendium of the state of the art in this new era of biological understanding. A distinguished group of contributors reviews bioinformation engineering and data integration technologies along with biomedical applications. Different computational approaches to model and simulate biological systems are discussed. Current computational research efforts, comprehensively covered in this volume, are focused on regulatory, signaling and metabolic networks. As an exciting outlook new concepts for computer representations on multi-scales predicting emergent properties of biological systems are introduced.

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