
CONTENTS PREFACE

Recently there has been a huge interest in the development of computational methodologies for modeling and simulating biological processes. The book facilitates the design of effective and efficient techniques by introducing key elements of the emerging field of computational systems biology. It gives an in-depth description of core subjects including biological network modeling, analysis, and inference. It presents a measured introduction to foundational topics such as genomics and describes state-of-the-art software tools.

The collaborations between experts from highly diverse areas ranging from biology to computer science are crucial for the progress in computational systems biology. The book is aimed at fostering close collaborations between biologists, chemists, physicists, mathematicians and computer scientists by providing ground-breaking research. It provides an inspiration and basis for the future development and applications of novel computational and mathematical methods to solving complex and unsolved problems in biology.

The book is intended for researchers and scientists from the fields of biology, chemistry, mathematics, physics, and computer science who are interested in computational systems biology or focused on developing, refining, and applying computational and mathematical approaches to solving biological problems. It is organized in a way so that the experts from the industry such as biotechnology and pharmaceutical companies will find it very useful and stimulating. The book is accessible to students and provides knowledge that he/she requires.

We wish to thank Wiley for the support and help in the processing of the book. We would also like to thank Yanqing Zhang, Bart Bijnens, Antti Honkela, Zhongming Zhao, Nicos Angelopoulos, Roman Rosipal, Jae-Hyung Lee, Zhaolei Zhang, Ying Liu, Wenyan Li, Dong Xu, Giovanni Gomez Estrada, Li Liao, Leming Zhou, and Etienne Birmele for their help in the reviewing process.

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February, 2009