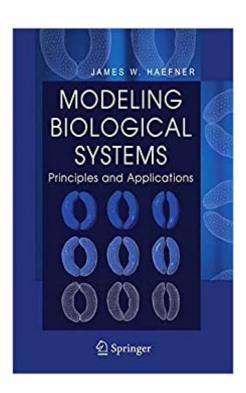


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# Modeling Biological Systems:: Principles And Applications





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## **Book Information**

Hardcover: 475 pages

Publisher: Springer; 2nd edition (May 6, 2005)

Language: English

ISBN-10: 0387250115

ISBN-13: 978-0387250113

Product Dimensions: 6.1 x 1.1 x 9.2 inches

Shipping Weight: 2.2 pounds (View shipping rates and policies)

Average Customer Review: 4.0 out of 5 stars 5 customer reviews

Best Sellers Rank: #1,643,305 in Books (See Top 100 in Books) #56 inà Books > Science & Math > Mathematics > Applied > Biomathematics #393 inà Books > Computers & Technology > Computer Science > Bioinformatics #479 inà Â Books > Computers & Technology > History & Culture > History

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This extensively revised second edition of Modeling Biological Systems: Principles and Applications describes the essentials of creating and analyzing mathematical and computer simulation models for advanced undergraduates and graduate students. It offers a comprehensive understanding of the underlying principle, as well as details and equations applicable to a wide variety of biological systems and disciplines. Students will acquire from this text the tools necessary to produce their own models. The text contains two major sections: Principles and Applications. The first section discusses the principles of biological systems with a thorough description of the essential modeling activities of formulation, implementation, validation, and analysis. These activities are illustrated by a set of example models taken from recent and classical literature, chosen for their breadth of coverage and current timeliness. The new edition updates extensively many of these topics, especially quantitative model formulation, validation and model discrimination using information theory measures and Bayesian probability, and stability analysis and non-dimensionalization.

Exactly as described.

This textbook, although listed in "Good" condition is like brand new and only minor highlights are visible on 2 pages. Excellent!!

This book is a complete dissapointment. It does not offer any real scientific physical models which then can be transformed in an algorithm and being simulated but is is merely a conglomerate of several statistical procedures commonly used in Biology for interpreting data (maybe copied by the author and collected from other books, as nothing that he presents is new!). This book does not offer any scientific, fundamental insight in how to really model and simulate properly complex biological systems, it is also written in a very unscientific, popular style. The mathematical level

corresponds to High-School and as the author says in the preface: "The process of modeling biological systems is certainly not a science, but neither is it as unconstrained as the creation of a work of pure art that is evaluated solely on its esthetic content". I think that nonsense speaks for itself. This author should rather write novels instead of cobbling something together that gets the label "scientific" on the cover. The book is not trash, the author does have collected some of the simplest "models" there are to describe collections of data in statistical terms, but this has NOTHING to do with proper scientific numerical and mathematical modeling and even less with scientific Computing in the field of biological complex systems, e.g. how to simulate membranes, proteins using Quantum Chemistry or Molecular dynamics techniques. All in all I judge this book as a complete waste of money and as completely superfluous.

This book is great, it provides a extense presentation of concepts of modelling and various examples and applications.

Very fast to get it. The package is strong enough to protect the book.

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