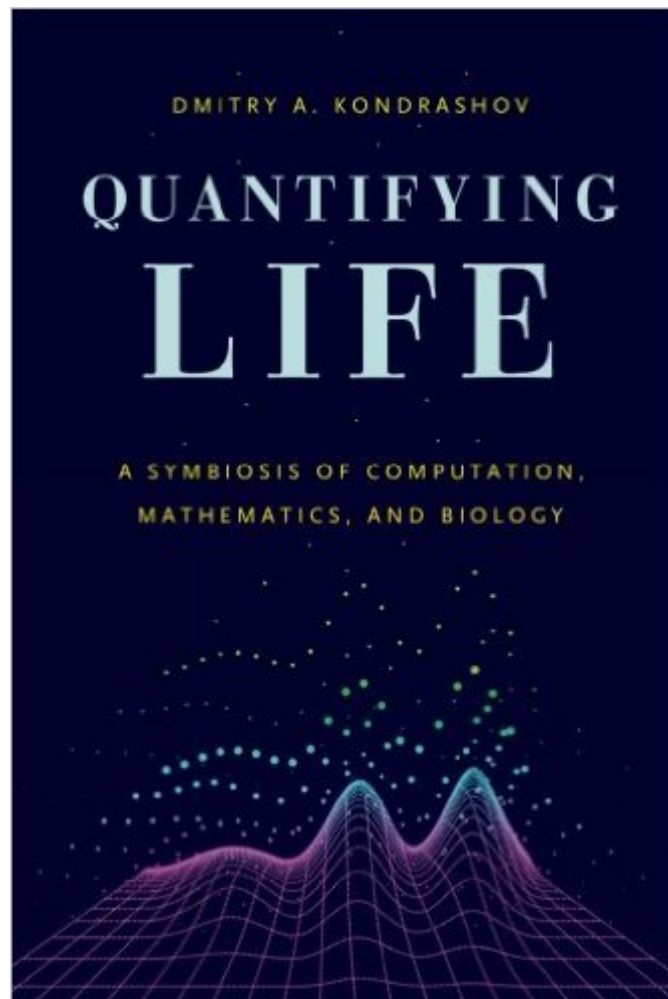


The book was found

Quantifying Life: A Symbiosis Of Computation, Mathematics, And Biology



Synopsis

Since the time of Isaac Newton, physicists have used mathematics to describe the behavior of matter of all sizes, from subatomic particles to galaxies. In the past three decades, as advances in molecular biology have produced an avalanche of data, computational and mathematical techniques have also become necessary tools in the arsenal of biologists. But while quantitative approaches are now providing fundamental insights into biological systems, the college curriculum for biologists has not caught up, and most biology majors are never exposed to the computational and probabilistic mathematical approaches that dominate in biological research. With *Quantifying Life*, Dmitry A. Kondrashov offers an accessible introduction to the breadth of mathematical modeling used in biology today. Assuming only a foundation in high school mathematics, *Quantifying Life* takes an innovative computational approach to developing mathematical skills and intuition. Through lessons illustrated with copious examples, mathematical and programming exercises, literature discussion questions, and computational projects of various degrees of difficulty, students build and analyze models based on current research papers and learn to implement them in the R programming language. This interplay of mathematical ideas, systematically developed programming skills, and a broad selection of biological research topics makes *Quantifying Life* an invaluable guide for seasoned life scientists and the next generation of biologists alike.

Book Information

Paperback: 418 pages

Publisher: University Of Chicago Press (August 4, 2016)

Language: English

ISBN-10: 022637176X

ISBN-13: 978-0226371764

Product Dimensions: 6 x 1.4 x 9 inches

Shipping Weight: 1.2 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #1,365,216 in Books (See Top 100 in Books) #285 in Books > Science & Math > Mathematics > Reference #31541 in Books > Science & Math > Biological Sciences #311689 in Books > Reference

[Download to continue reading...](#)

Quantifying Life: A Symbiosis of Computation, Mathematics, and Biology Biology: The Ultimate Self

Teaching Guide - Introduction to the Wonderful World of Biology - 3rd Edition (Biology, Biology Guide, Biology For Beginners, Biology For Dummies, Biology Books) A Practical Guide to Measuring Usability: 72 Answers to the Most Common Questions about Quantifying the Usability of Websites and Software Quantifying the User Experience: Practical Statistics for User Research Modern Fortran Explained (Numerical Mathematics and Scientific Computation) Volume 1 - Cell Biology and Genetics (Biology: the Unity & Diversity of Life) Some Mathematical Questions in Biology: The Dynamics of Excitable Media (Lectures on Mathematics in the Life Sciences) Quantum Computing: A Gentle Introduction (Scientific and Engineering Computation) Evolutionary Algorithms for Solving Multi-Objective Problems (Genetic and Evolutionary Computation) Evolutionary Computation 1: Basic Algorithms and Operators Linear Genetic Programming (Genetic and Evolutionary Computation) Introduction to Computation and Programming Using Python (MIT Press) Introduction to Computation and Programming Using Python: With Application to Understanding Data (MIT Press) Structural Dynamics: Theory and Computation Good Math: A Geek's Guide to the Beauty of Numbers, Logic, and Computation (Pragmatic Programmers) Quantum Computation and Quantum Information: 10th Anniversary Edition Theory and Computation of Electromagnetic Fields Neuropilin: From Nervous System to Vascular and Tumor Biology (Advances in Experimental Medicine and Biology) Understanding Computation: From Simple Machines to Impossible Programs Quantum Computation with Topological Codes: From Qubit to Topological Fault-Tolerance (SpringerBriefs in Mathematical Physics)

[Dmca](#)