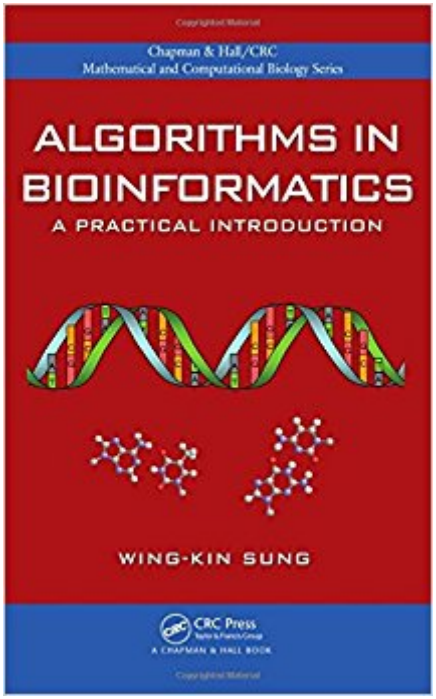
Algorithms In Bioinformatics: A Practical Introduction (Chapman & Hall/CRC Mathematical And Computational Biology)



Synopsis

Thoroughly Describes Biological Applications, Computational Problems, and Various Algorithmic Solutions Developed from the authorÃ¢â ¬â„¢s own teaching material, Algorithms in Bioinformatics: A Practical Introduction provides an in-depth introduction to the algorithmic techniques applied in bioinformatics. For each topic, the author clearly details the biological motivation and precisely defines the corresponding computational problems. He also includes detailed examples to illustrate each algorithm and end-of-chapter exercises for students to familiarize themselves with the topics. Supplementary material is available at http://www.comp.nus.edu.sg/~ksung/algo_in_bioinfo/ This classroom-tested textbook begins with basic molecular biology concepts. It then describes ways to measure sequence similarity, presents simple applications of the suffix tree, and discusses the problem of searching sequence databases. After introducing methods for aligning multiple biological sequences and genomes, the text explores applications of the phylogenetic tree, methods for comparing phylogenetic trees, the problem of genome rearrangement, and the problem of motif finding. It also covers methods for predicting the secondary structure of RNA and for reconstructing the peptide sequence using mass spectrometry. The final chapter examines the computational problem related to population genetics.

Book Information

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Customer Reviews

This aptly titled book is a timely publication that details several algorithms widely used in

bioinformatics. Ã¢â ¬Â¦ This work can serve as a reference guide for students and researchers attempting to implement or learn algorithms relevant to bioinformatics. Although some concepts referenced in the book specifically target advanced bioinformatics experts, general users should not be discouraged from reading this work. Ã¢â ¬Â¦Summing Up: Recommended.Ã¢â ¬â ¢CHOICE, June 2010 Ã¢â ¬Â¦ an excellent guide. The book is appropriate for advanced undergraduates and graduates in mathematics or CS. Ã¢â ¬Â¦ The 27-page introduction is the most efficient concept-building summary and explication of molecular biology that I have encountered. Ã¢â ¬Â¦ Section 1.8 sets a new, high standard for science-history exposition, covering Gregor Mendel to the present. Ã¢â ¬Â¦This self-contained, well-designed, and well-written book, with its many good exercises, bibliographic references, and photo-quality figures, is an ideal introduction to bioinformatics.Ã¢â ¬â ¢George Hacken, Computing Reviews, March 2010

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good looking. 95% new

Great book in the topic.

the book is very nice and good, it just arrive one month after I order it,but it was international shipping, it’s understandablethe book starts with molecular biology background and then explains the importance of the algorithms, and how to implement them

(Computational Molecular Biology) Data Classification: Algorithms and Applications (Chapman & Hall/CRC Data Mining and Knowledge Discovery Series) Computational Statistics Handbook with MATLAB, Third Edition (Chapman & Hall/CRC Computer Science & Data Analysis) Practical Statistics for Medical Research (Chapman & Hall/CRC Texts in Statistical Science) Measure and Integral: An Introduction to Real Analysis, Second Edition (Chapman & Hall/CRC Pure and Applied Mathematics) Introduction to Set Theory, Third Edition, Revised and Expanded (Chapman & Hall/CRC Pure and Applied Mathematics) Introduction to Scientific Programming and Simulation Using R (Chapman & Hall/CRC The R Series) Introduction to Scientific Programming and Simulation Using R, Second Edition (Chapman & Hall/CRC The R Series) Introduction to Modern Cryptography, Second Edition (Chapman & Hall/CRC Cryptography and Network Security Series) Design of Experiments: An Introduction Based on Linear Models (Chapman & Hall/CRC Texts in Statistical Science) Introduction to Stochastic Processes (Chapman & Hall/CRC Probability Series) A Concise Introduction to Pure Mathematics (Chapman Hall/Crc Mathematics)