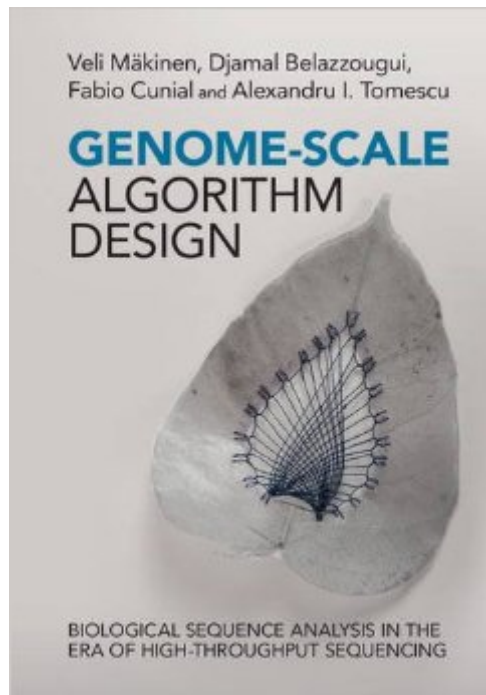


The book was found

Genome-Scale Algorithm Design: Biological Sequence Analysis In The Era Of High-Throughput Sequencing



Synopsis

High-throughput sequencing has revolutionised the field of biological sequence analysis. Its application has enabled researchers to address important biological questions, often for the first time. This book provides an integrated presentation of the fundamental algorithms and data structures that power modern sequence analysis workflows. The topics covered range from the foundations of biological sequence analysis (alignments and hidden Markov models), to classical index structures (k-mer indexes, suffix arrays and suffix trees), Burrows-Wheeler indexes, graph algorithms and a number of advanced omics applications. The chapters feature numerous examples, algorithm visualisations, exercises and problems, each chosen to reflect the steps of large-scale sequencing projects, including read alignment, variant calling, haplotyping, fragment assembly, alignment-free genome comparison, transcript prediction and analysis of metagenomic samples. Each biological problem is accompanied by precise formulations, providing graduate students and researchers in bioinformatics and computer science with a powerful toolkit for the emerging applications of high-throughput sequencing.

Book Information

Hardcover: 413 pages

Publisher: Cambridge University Press; 1 edition (June 24, 2015)

Language: English

ISBN-10: 1107078539

ISBN-13: 978-1107078536

Product Dimensions: 6.8 x 0.9 x 9.7 inches

Shipping Weight: 2.1 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #632,574 in Books (See Top 100 in Books) #6 in Books > Computers & Technology > Programming > Algorithms > Genetic #506 in Books > Science & Math > Experiments, Instruments & Measurement > Methodology & Statistics #847 in Books > Medical Books > Basic Sciences > Genetics

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

Genome-Scale Algorithm Design: Biological Sequence Analysis in the Era of High-Throughput Sequencing
The \$1,000 Genome: The Revolution in DNA Sequencing and the New Era of Personalized Medicine
Biological Sequence Analysis: Probabilistic Models of Proteins and Nucleic Acids
Power Laws, Scale-Free Networks and Genome Biology (Molecular Biology Intelligence Unit)

Location Determination within Wireless Networks: Dynamic indoor/outdoor Localization Systems:
Algorithm Design, Performance Analysis and Comparison Study Pocket Neighborhoods: Creating
Small-Scale Community in a Large-Scale World Scale Studies for Viola: Based on the Hrimaly
Scale Studies for the Violin Rand McNally 2017 Large Scale Road Atlas (Rand McNally Large Scale
Road Atlas USA) L590 - Progressive Scale Studies - Scale Study and Practical Theory in Major and
Minor Keys for the Young Violinist Data Structures and Algorithm Analysis in Ada Data Structures
and Algorithm Analysis in Java (3rd Edition) At War with the Weather: Managing Large-Scale Risks
in a New Era of Catastrophes (MIT Press) The Algorithm Design Manual Genome: The
Autobiography of a Species in 23 Chapters The Spiritual Genome (Middle English Edition)
Molecular and Genome Evolution Molecular Biology: Principles of Genome Function Battletech Era
Report 3062 (Clan Invasion Era Sourcebooks) Sequence Knitting: Simple Methods for Creating
Complex Reversible Fabrics The Imago Sequence and Other Stories

[Dmca](#)