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PART IV GENETIC VARIATION ANALYSIS16 Phasing Genotypes Using a Hidden Markov Model; 17 Analytical and Algorithmic Methods for Haplotype Frequency Inference: What Do They Tell Us?; 18 Optimization Methods for Genotype Data Analysis in Epidemiological Studies; PART V STRUCTURAL AND SYSTEMS BIOLOGY; 19 Topological Indices in Combinatorial Chemistry; 20 Efficient Algorithms for Structural Recall in Databases; 21 Computational Approaches to Predict Protein-Protein and Domain-Domain Interactions; Index

Sommario/riassunto	Presents algorithmic techniques for solving problems in bioinformatics, including applications that shed new light on molecular biology This book introduces algorithmic techniques in bioinformatics, emphasizing their application to solving novel problems in post-genomic molecular biology. Beginning with a thought-provoking discussion on the role of algorithms in twenty-first-century bioinformatics education, Bioinformatics Algorithms covers: General algorithmic techniques, including dynamic programming, graph-theoretical methods, hidden Markov models, the fast Fourier transform, se