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Nota di contenuto	Front cover; Contents; Editor; Contributors; Chapter 1: Algorithms for Bioinformatics; Chapter 2: Introduction to GPGPUs andMassively Threaded Programming; Chapter 3: FPGA: Architecture and Programming; Chapter 4: Parallel Algorithms forAlignments on the Cell BE; Chapter 5: Orchestrating the PhylogeneticLikelihood Function on EmergingParallel Architectures; Chapter 6: Parallel Bioinformatics Algorithmsfor CUDA-Enabled GPUs; Chapter 7: CUDA Error Correction Method forHigh-Throughput Short-Read Sequencing Data; Chapter 8: FPGA Acceleration of SeededSimilarity Searching Chapter 9: Seed-Based Parallel Protein SequenceComparison Combining Multithreading,GPU, and FPGA TechnologiesChapter 10: Database Searching with Profi le-HiddenMarkov Models on Reconfi gurableand Many-Core Architectures; Chapter 11: COPACOBANA: A Massively ParallelFPGA-Based Computer Architecture; Chapter 12: Accelerating String Set Matching forBioinformatics Using FPGA Hardware; Chapter 13: Reconfi gurable Neural System and ItsApplication to Dimeric ProteinBinding Site Identification; Chapter 14: Parallel FPGA Search Enginefor Protein Identification; Index; Back cover
Sommario/riassunto	New sequencing technologies have broken many experimental barriers to genome scale sequencing, leading to the extraction of huge

quantities of sequence data. This expansion of biological databases established the need for new ways to harness and apply the astounding amount of available genomic information and convert it into substantive biological understanding. A complilation of recent approaches from prominent researchers, Bioinformatics: High Performance Parallel Computer Architectures discusses how to take advantage of bioinformatics applications and algorithms o