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Altri autori (Persone)	KurzakJakub BaderDavid A DongarraJ. J
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Dense linear algebra -- 2. Sparse linear algebra -- 3. Multigrid methods -- 4. Fast Fourier transforms -- 5. Combinatorial algorithms -- 6. Stencil algorithms -- 7. Bioinformatics -- 8. Molecular modeling -- 9. Complementary topics.
Sommario/riassunto	The current trend in microprocessor architecture is toward powerful multicore designs in which a node contains several full-featured processing cores, private and shared caches, and memory. The IBM Cell Broadband Engine (B.E.) and Graphics Processing Units (GPUs) are two accelerators that are used for a variety of computations, including signal processing and quantum chemistry. This is the first reference on the use of Cell B.E. and GPUs as accelerators for numerical kernels, algorithms, and computational science and engineering applications. With contributions from leading experts, the book covers a broad range of topics on the increased role of these accelerators in scientific computing--

