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Nota di contenuto	Numerical Methods -- Algorithms and Computational Kernels -- Nonnumerical Algorithms -- Parallel Algorithms -- Environments and Libraries -- Performance and Scalability -- Programming Techniques -- Networks and Distributed Algorithms -- Parallel and Distributed Computing -- Grid Computing -- Failure Handling -- Optimization -- Modeling and Simulation -- Image Analysis and Processing -- Graphics and Visualization -- Computation as a Scientific Paradigm -- Hybrid Computational Methods -- Complex Systems -- Applications --

Sommario/riassunto

The Fifth International Conference on Computational Science (ICCS 2005) held in Atlanta, Georgia, USA, May 22–25, 2005, continued in the tradition of previous conferences in the series: ICCS 2004 in Krakow, Poland; ICCS 2003 held simultaneously at two locations, in Melbourne, Australia and St. Petersburg, Russia; ICCS 2002 in Amsterdam, The Netherlands; and ICCS 2001 in San Francisco, California, USA. Computational science is rapidly maturing as a mainstream discipline. It is central to an ever-expanding variety of fields in which computational methods and tools enable new discoveries with greater accuracy and speed. ICCS 2005 was organized as a forum for scientists from the core disciplines of computational science and numerous application areas to discuss and exchange ideas, results, and future directions. ICCS participants included researchers from many application domains, including those interested in advanced computational methods for physics, chemistry, life sciences, engineering, economics and finance, arts and humanities, as well as computer system vendors and software developers. The primary objectives of this conference were to discuss problems and solutions in all areas, to identify new issues, to shape future directions of research, and to help users apply various advanced computational techniques. The event highlighted recent developments in algorithms, computational kernels, next generation computing systems, tools, advanced numerical methods, data-driven systems, and emerging application fields, such as complex systems, finance, bioinformatics, computational aspects of wireless and mobile networks, graphics, and hybrid computation.
