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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 p- vious 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 ?elds in which computational methods and tools enable new discoveries with greater accuracy and speed. ICCS 2005 wasorganizedasaforumforscientistsfromthecoredisciplinesofcomputatio nal science and numerous application areas to discuss and exchange ideas, results, and future directions. ICCS participants included researchers from many app- cation domains, including those interested in advanced computational methods for physics, chemistry, life sciences, engineering, economics and ?nance, 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 allareas, toidentify new issues, to shape future directions of research, andtohelp users apply various advanced computational techniques. The event highlighted recent developments in algorithms, computational kernels, next generation c- puting systems, tools, advanced numerical methods, data-driven systems, and emerging application ?elds, such as

complex systems, ?nance, bioinformatics, computational aspects of wireless and mobile networks, graphics, and hybrid computation.