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Nota di contenuto	Fifth International Workshop on OpenMP IWOMP 2009 -- Parallel Simulation of Bevel Gear Cutting Processes with OpenMP Tasks -- Evaluation of Multicore Processors for Embedded Systems by Parallel Benchmark Program Using OpenMP -- Extending Automatic Parallelization to Optimize High-Level Abstractions for Multicore --

Scalability Evaluation of Barrier Algorithms for OpenMP -- Use of Cluster OpenMP with the Gaussian Quantum Chemistry Code: A Preliminary Performance Analysis -- Evaluating OpenMP 3.0 Run Time Systems on Unbalanced Task Graphs -- Dynamic Task and Data Placement over NUMA Architectures: An OpenMP Runtime Perspective -- Scalability of Gaussian 03 on SGI Altix: The Importance of Data Locality on CC-NUMA Architecture -- Providing Observability for OpenMP 3.0 Applications -- A Microbenchmark Suite for Mixed-Mode OpenMP/MPI -- Performance Profiling for OpenMP Tasks -- Tile Reduction: The First Step towards Tile Aware Parallelization in OpenMP -- A Proposal to Extend the OpenMP Tasking Model for Heterogeneous Architectures -- Identifying Inter-task Communication in Shared Memory Programming Models.

Sommario/riassunto

OpenMP is an application programming interface (API) that is widely accepted as a de facto standard for high-level shared-memory parallel programming. It is a portable, scalable programming model that provides a simple and flexible interface for developing shared-memory parallel applications in Fortran, C, and C++. Since its introduction in 1997, OpenMP has gained support from the majority of high-performance compiler and hardware vendors. Under the direction of the OpenMP Architecture Review Board (ARB), the OpenMP specification is undergoing further improvement. Active research in OpenMP compilers, run-time systems, tools, and environments continues to drive OpenMP evolution. To provide a forum for the dissemination and exchange of information about and experiences with OpenMP, the community of OpenMP researchers and developers in academia and industry is organized under cOMPunity (www.compunity.org). This organization has held workshops on OpenMP since 1999. This book contains the proceedings of the 5th International Workshop on OpenMP held in Dresden in June 2009. With sessions on tools, benchmarks, applications, performance and runtime environments it covered all aspects of the current use of OpenMP. In addition, several contributions presented proposed extensions to OpenMP and evaluated reference implementations of those extensions. An invited talk provided the details on the latest specification development inside the Architecture Review Board. Together with the two keynotes about OpenMP on hardware accelerators and future generation processors it demonstrated that OpenMP is suitable for future generation systems.
