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   Soggetti   Microprocessors
                   Computer architecture
                   Computer programming
                   Software engineering
                   Algorithms
                   Computer science - Mathematics
                   Computer simulation
                   Processor Architectures
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                   Computer Modelling

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

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   Note generali   Includes index.

   Nota di bibliografia   Includes bibliographical references and index.

   Nota di contenuto   High Performance Computing -- Multiple Stream Prediction -- Enhanced Loop Coalescing: A Compiler Technique for Transforming Non-uniform Iteration Spaces -- Folding Active List for High Performance and Low Power -- Reducing Misspeculation Penalty in Trace-Level Speculative Multithreaded Architectures -- Exploiting Execution Locality with a Decoupled Kilo-Instruction Processor -- Decoupled State-Execute Architecture -- A Scalable Methodology for Computing Fault-Free Paths in InfiniBand Torus Networks -- Using a

Way Cache to Improve Performance of Set-Associative Caches -- Design of Fast Collective Communication Functions on Clustered Workstations with Ethernet and Myrinet -- Dynamic Load Balancing in MPI Jobs -- Workload Characterization of Stateful Networking Applications -- Using Recursion to Boost ATLAS's Performance -- Towards Generic Solver of Combinatorial Optimization Problems with Autonomous Agents in P2P Networks -- New Evaluation Index of Incomplete Cholesky Preconditioning Effect -- T-Map: A Topological Approach to Visual Exploration of Time-Varying Volume Data -- Cross-Line — A Globally Adaptive Control Method of Interconnection Network -- The Bandwidth Expansion Effectiveness of Cache Levels Block Prefetch -- Implementation and Evaluation of the Mechanisms for Low Latency Communication on DIMMnet-2 -- Computationally Efficient Parallel Matrix-Matrix Multiplication on the Torus -- A New Dynamic Load Balancing Technique for Parallel Modified PrefixSpan with Distributed Worker Paradigm and Its Performance Evaluation -- Performance-Based Loop Scheduling on Grid Environments -- Reconfigurable Middleware for Grid Environment -- : An Enhanced Stream-Based Communication Mechanism -- Performance of Coupled Parallel Finite Element Analysis in Grid Computing Environment.-Photo-Realistic Visualization for the Blast Wave of TNT Explosion by Grid-Based Rendering -- Development of an Interactive Visual Data Mining System for Atmospheric Science -- A Calculus Effectively Performing Event Formation with Visualization -- A Similarity Evaluation Method for Volume Data Sets by Using Critical Point Graph -- Hybrid Parallelization and Flat Parallelization in HPF (High Performance Fortran) -- Mapping Normalization Technique on the HPF Compiler fhpf -- Development of Electromagnetic Particle Simulation Code in an Open System -- Development of Three-Dimensional Neoclassical Transport Simulation Code with High Performance Fortran on a Vector-Parallel Computer -- Distributed Parallelization of Exact Charge Conservative Particle Simulation Code by High Performance Fortran -- Pipelined Parallelization in HPF Programs on the Earth Simulator -- Sampling of Protein Conformations with Computers to Predict the Native Structure -- Spacecraft Plasma Environment Analysis Via Large Scale 3D Plasma Particle Simulation -- PetaFLOPS Computing and Computational Nanotechnology on Industrial Issues -- 16.14 TFLOPS Eigenvalue Solver on the Earth Simulator: Exact Diagonalization for Ultra Largescale Hamiltonian Matrix -- Numerical Simulation of Combustion Dynamics at ISTA/JAXA -- Realization of a Computer Simulation Environment Based on ITBL and a Large Scale GW Calculation Performed on This Platform -- Computations of Global Seismic Wave Propagation in Three Dimensional Earth Model -- Lattice QCD Simulations as an HPC Challenge -- Energy-Efficient Embedded System Design at 90nm and Below – A System-Level Perspective – -- Empirical Study for Optimization of Power-Performance with On-Chip Memory -- Performance Evaluation of Compiler Controlled Power Saving Scheme -- Program PhaseDetection Based Dynamic Control Mechanisms for Pipeline Stage Unification Adoption -- Reducing Energy in Instruction Caches by Using Multiple Line Buffers with Prediction.

| Sommario/riassunto | This is the joint post-proceedings of the 6th International Symposium on High Performance Computing (ISHPC-VI) and the First International Workshop on Advanced Low Power Systems 2006 (ALPS2006). The post-proceedings also contain the papers presented at the Second HPF International Workshop: - periences and Progress (HiWEP2005) and the Workshop on Applications for PetaFLOPS Computing (APC2005), which are workshops of ISHPC-VI. ISHPC-VI, HiWEP2005 and APC2005 were held in Nara, Japan during September 7–9, 2005. Fifty-eight papers |

from 11 countries were submitted to ISHPC-VI. After the reviews of the submitted papers, the ISHPC-VI Program Committee selected 15 regular (12-page) papers for oral presentation. In ad- tion, several other papers with favorable reviews were recommended for poster presentation, and 14 short (8-page) papers were also selected. Twenty-eight papers out of 29 ISHPC-VI papers are contained in the post-proceedings. Hi- WEP2005 and APC2005 received eight and ten submissions, with six and eight papers being accepted for oral presentation after reviews, respectively. All the HiWEP2005 and APC2005 papers are included in the post-proceedings. ALPS2006 was held in Cairns, Australia on July 1, 2006 in conjunction with the ACM 20th International Conference on Supercomputing. The number of submitted papers was 15, and eight papers were accepted for oral presentation. The post-proceedings contain six of the eight papers.