1. Record Nr. UNISA996466033603316

Titolo	High Performance Computing [[electronic resource]] : Third International Symposium, ISHPC 2000 Tokyo, Japan, October 16-18, 2000 Proceedings / / edited by Mateo Valero, Kazuki Joe, Masaru Kitsuregawa, Hidehiko Tanaka
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2000
ISBN	3-540-39999-2
Edizione	[1st ed. 2000.]
Descrizione fisica	1 online resource (XV, 598 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 1940
Disciplina	004.3
Soggetti	Microprocessors Software engineering Computer programming Programming languages (Electronic computers) Algorithms Computer science—Mathematics Processor Architectures Software Engineering/Programming and Operating Systems Programming Techniques Programming Languages, Compilers, Interpreters Algorithm Analysis and Problem Complexity Mathematics of Computing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Papers -- Instruction Level Distributed Processing: Adapting to Future Technology -- Macroservers: An Object-Based Programming and Execution Model for Processor-in-Memory Arrays -- The New DRAM Interfaces: SDRAM, RDRAM and Variants -- Blue Gene -- Earth Simulator Project in Japan -- Compilers, Architectures and Evaluation -- Limits of Task-based Parallelism in Irregular Applications -- The Case for Speculative Multithreading on SMT Processors -- Loop Termination Prediction -- Compiler-Directed Cache Assist Adaptivity

-- Skewed Data Partition and Alignment Techniques for Compiling Programs on Distributed Memory Multicomputers -- Processor Mechanisms for Software Shard Memory -- An Evaluation of Page Aggregation Technique on Different DSM Systems -- Nanothreads vs. Fibers for the Support of Fine Grain Parallelism on Windows NT/2000 Platforms -- Algorithms, Models and Applications -- Partitioned Parallel Radix Sort -- Transonic Wing Shape Optimization Based on Evolutionary Algorithms -- A Common CFD Platform UPACS -- On Performance Modeling for HPF Applications with ASL -- A “Generalized k-Tree-Based Model to Sub-system Allocation” for Partitionable Multi-dimensional Mesh-Connected Architectures -- An Analytic Model or Communication Latency in Wormhole-Switched k -Ary n -Cube Interconnection Networks with Digit-Reversal Traffic -- Performance Sensitivity of Routing Algorithms to Failures in Networks of Workstations -- Short Papers -- Decentralized Load Balancing in Multi-node Broadcast Schemes for Hypercubes -- Design and Implementation of an Efficient Thread Partitioning Algorithm -- A Flexible Routing Scheme for Networks of Workstations -- Java Bytecode Optimization with Advanced Instruction Folding Mechanism -- Performance Evaluation of a Java Based Chat System -- Multi-node Broadcasting in All-Ported 3-D Wormhole-Routed Torus Using Aggregation-then-Distribution Strategy -- On the Influence of the Selection Function on the Performance of Networks of Workstations -- Combining In-Transit Buffers with Optimized Routing Schemes to Boost the Performance of Networks with Source Routing -- A Comparison of Locality-Based and Recency-Based Replacement Policies -- The Filter Data Cache: A Tour Management Comparison with Related Split Data Cache Schemes Sensitive to Data Localities -- Global Magneto-Hydrodynamic Simulations of Differentially Rotating Accretion Disk by Astrophysical Rotational Plasma Simulator -- Exploring Multi-level Parallelism in Cellular Automata Networks -- Orgel: An Parallel Programming Language with Declarative Communication Streams -- BS?ppp: Functional BSP Programs on Enumerated Vectors -- Ability of Classes of Dataow Schemata with Timing Dependency -- A New Model of Parallel Distributed Genetic Algorithms for Cluster Systems: Dual Individual DGAs -- International Workshop on OpenMP: Experiences and Implementations (WOMPEI) -- An Introduction to OpenMP 2.0 -- Implementation and Evaluation of OpenMP for Hitachi SR8000 -- Performance Evaluation of the Omni OpenMP Compiler -- Leveraging Transparent Data Distribution in OpenMP via User-Level Dynamic Page Migration -- Formalizing OpenMP Performance Properties with ASL -- Automatic Generation of OpenMP Directives and Its Application to Computational Fluid Dynamics Codes -- Coarse-grain Task Parallel Processing Using the OpenMP Backend of the OSCAR Multigrain Parallelizing Compiler -- Impact of OpenMP Optimizations for the MGCG Method -- Quantifying Differences between OpenMP and MPI Using a Large-Scale Application Suite -- International Workshop on Simulation and Visualization (IWSV) -- Large Scale Parallel Direct Numerical Simulation of a Separating Turbulent Boundary Layer Flow over a Flat Plate Using NAL Numerical Wind Tunnel -- Characterization of Disorderd Networks in Vitreous SiO2 and Its Rigidity by Molecular-Dynamics Simulations on Parallel Computers -- Direct Numerical Simulation of Coherent Structure in Turbulent Open-Channel Flows with Heat Transfer -- High Reynolds Number Computation for Turbulent Heat Transfer in a Pipe Flow -- Large-Scale Simulation System and Advanced Photon Research -- Parallelization, Vectorization and Visualization of Large Scale Plasma Particle Simulations and Its Application to Studies of Intense Laser Interactions -- Fast LIC Image

Generation Based on Significance Map -- Fast Isosurface Generation Using the Cell-Edge Centered Propagation Algorithm -- Fast Ray-Casting for Irregular Volumes -- A Study on the Effect of Air on the Dynamic Motion of a MEMS Device and Its Shape Optimization -- A Distributed Rendering System “On Demand Rendering System”.

Sommario/riassunto

I wish to welcome all of you to the International Symposium on High Perf- mance Computing 2000 (ISHPC 2000) in the megalopolis of Tokyo. After having two great successes with ISHPC’97 (Fukuoka, November 1997) and ISHPC’99 (Kyoto, May 1999), many people have requested that the symposium would be held in the capital of Japan and we have agreed. I am very pleased to serve as Conference Chair at a time when high p- formance computing (HPC) has a signi?cant in?uence on computer science and technology. In particular, HPC has had and will continue to have a signi?cant - pact on the advanced technologies of the “IT” revolution. The many conferences and symposiums that are held on the subject around the world are an indication of the importance of this area and the interest of the research community. One of the goals of this symposium is to provide a forum for the discussion of all aspects of HPC (from system architecture to real applications) in a more informal and personal fashion. Today we are delighted to have this symposium, which includes excellent invited talks, tutorials and workshops, as well as high quality technical papers.