1. Record Nr. UNINA9910483062903321

Titolo	High Performance Computing - HiPC 2008 : 15th International Conference, Bangalore, India, December 17-20, 2008, Proceedings / / edited by P. Sadayappan, Manish Parashar, Ramamurthy Badrinath, Viktor K. Prasanna
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2008
ISBN	3-540-89894-8
Edizione	[1st ed. 2008.]
Descrizione fisica	1 online resource (XXV, 596 p.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 5374
Disciplina	004.11
Soggetti	Software engineering Computer science Computer engineering Computer networks Computers Software Engineering Theory of Computation Computer Engineering and Networks Hardware Performance and Reliability
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 author index.
Nota di contenuto	Keynote Addresses -- Extreme Computing on the Distributed European Infrastructure for Supercomputing Applications - DEISA -- Towards Networked Computers: What Can Be Learned from Distributed Computing? -- Computational Environments for Coupling Multiphase Flow, Transport, and Mechanics in Porous Media -- The Excitement in Parallel Computing -- Session I: Performance Optimization -- Improving Performance of Digest Caches in Network Processors -- Optimization of BLAS on the Cell Processor -- Fine Tuning Matrix Multiplications on Multicore -- The Design and Architecture of MAQAOAdvisor: A Live Tuning Guide -- A Load Balancing Framework for Clustered Storage Systems -- Construction and Evaluation of Coordinated Performance Skeletons -- Session II: Parallel Algorithms

and Applications -- Data Sharing Analysis of Emerging Parallel Media Mining Workloads -- Efficient PDM Sorting Algorithms -- Accelerating Cone Beam Reconstruction Using the CUDA-Enabled GPU -- Improving the Performance of Tensor Matrix Vector Multiplication in Cumulative Reaction Probability Based Quantum Chemistry Codes -- Experimental Evaluation of Molecular Dynamics Simulations on Multi-core Systems -- Parsing XML Using Parallel Traversal of Streaming Trees -- Session III: Scheduling and Resource Management -- Performance Analysis of Multiple Site Resource Provisioning: Effects of the Precision of Availability Information -- An Open Computing Resource Management Framework for Real-Time Computing -- A Load Aware Channel Assignment and Link Scheduling Algorithm for Multi-channel Multi-radio Wireless Mesh Networks -- Multi-round Real-Time Divisible Load Scheduling for Clusters -- Energy-Efficient Dynamic Scheduling on Parallel Machines -- A Service-Oriented Priority-Based Resource Scheduling Scheme for Virtualized Utility Computing -- Session IV: Sensor Networks -- Scalable Processing of Spatial Alarms -- Coverage Based Expanding Ring Search for Dense Wireless Sensor Networks -- An Energy-Balanced Task Scheduling Heuristic for Heterogeneous Wireless Sensor Networks -- Energy Efficient Distributed Algorithms for Sensor Target Coverage Based on Properties of an Optimal Schedule -- In-Network Data Estimation for Sensor-Driven Scientific Applications -- Localization in Ad Hoc and Sensor Wireless Networks with Bounded Errors -- Session V: Energy-Aware Computing -- Optimization of Fast Fourier Transforms on the Blue Gene/L Supercomputer -- ScELA: Scalable and Extensible Launching Architecture for Clusters -- Parallel Information Theory Based Construction of Gene Regulatory Networks -- Communication Analysis of Parallel 3D FFT for Flat Cartesian Meshes on Large Blue Gene Systems -- Scalable Multi-cores with Improved Per-core Performance Using Off-the-critical Path Reconfigurable Hardware -- Session VI: Distributed Algorithms -- TrustCode: P2P Reputation-Based Trust Management Using Network Coding -- Design, Analysis, and Performance Evaluation of an Efficient Resource Unaware Scheduling Strategy for Processing Divisible Loads on Distributed Linear Daisy Chain Networks -- A Novel Learning Based Solution for Efficient Data Transport in Heterogeneous Wireless Networks -- Scalable Data Collection in Sensor Networks -- Task Scheduling on Heterogeneous Devices in Parallel Pervasive Systems (P 2 S) -- A Performance Guaranteed Distributed Multicast Algorithm for Long-Lived Directional Communications in WANETs -- Session VII: Communication Networks -- Maintaining Quality of Service with Dynamic Fault Tolerance in Fat-Trees -- Designing a High-Performance Clustered NAS: A Case Study with pNFS over RDMA on InfiniBand -- Sockets Direct Protocol for Hybrid Network Stacks: A Case Study with iWARP over 10G Ethernet -- Making a Case for Proactive Flow Control in Optical Circuit-Switched Networks -- FBICM: Efficient Congestion Management for High-Performance Networks Using Distributed Deterministic Routing -- Achieving 10Gbps Network Processing: Are We There Yet? -- Session VIII: Architecture -- SAIL: Self-Adaptive File Reallocation on Hybrid Disk Arrays -- Directory-Based Conflict Detection in Hardware Transactional Memory -- Fault-Tolerant Cache Coherence Protocols for CMPs: Evaluation and Trade-Offs -- SDRM: Simultaneous Determination of Regions and Function-to-Region Mapping for Scratchpad Memories -- An Utilization Driven Framework for Energy Efficient Caches.

Sommario/riassunto

This book constitutes the refereed proceedings of the 15th International Conference on High-Performance Computing, HiPC 2008, held in Bangalore, India, in December 2008. The 46 revised full papers presented together with the abstracts of 5 keynote talks were carefully

reviewed and selected from 317 submissions. The papers are organized in topical sections on applications performance optimizazion, parallel algorithms and applications, scheduling and resource management, sensor networks, energy-aware computing, distributed algorithms, communication networks as well as architecture.