1. Record Nr. UNISA996465328203316

Titolo	Parallel Computing Technologies [[electronic resource]] : 10th International Conference, PaCT 2009, Novosibirsk, Russia, August 31-September 4, 2009, Proceedings / / edited by Victor Malyshkin
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2009
ISBN	3-642-03275-3
Edizione	[1st ed. 2009.]
Descrizione fisica	1 online resource (XII, 476 p.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 5698
Disciplina	004n/a
Soggetti	Computer systems Software engineering Algorithms Numerical analysis Computer simulation Computers Computer System Implementation Software Engineering Numerical Analysis Computer Modelling 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 index.
Nota di contenuto	Models of Parallel Computing -- Asynchronous Language and System of Numerical Algorithms Fragmented Programming -- Analyzing Metadata Performance in Distributed File Systems -- Towards Parametric Verification of Prioritized Time Petri Nets -- Software Transactional Memories: An Approach for Multicore Programming -- Sparse Matrix Operations on Multi-core Architectures -- Multi-granularity Parallel Computing in a Genome-Scale Molecular Evolution Application -- Methods and Algorithms -- Efficient Parallelization of the Preconditioned Conjugate Gradient Method -- Parallel FFT with Eden Skeletons -- Parallel Implementation of Generalized Newton Method for Solving Large-Scale LP Problems -- Dynamic Real-Time

Resource Provisioning for Massively Multiplayer Online Games -- 2D Fast Poisson Solver for High-Performance Computing -- Solution of Large-Scale Problems of Global Optimization on the Basis of Parallel Algorithms and Cluster Implementation of Computing Processes -- DEEP - Differential Evolution Entirely Parallel Method for Gene Regulatory Networks -- Efficiency of Parallel Monte Carlo Method to Solve Nonlinear Coagulation Equation -- Parallel Algorithm for Triangular Mesh Reconstruction by Deformation in Medical Applications -- Parallel Algorithms of Numeric Integration Using Lattice Cubature Formulas -- Fine-Grained Parallelism -- A CA-Based Self-organizing Environment: A Configurable Adaptive Illumination Facility -- A Lattice-Gas Model of Fluid Flow through Tortuous Channels of Hydrophilous and Hydrophobic Porous Materials -- Solving All-to-All Communication with CA Agents More Effectively with Flags -- The GCA-w Massively Parallel Model -- Implementation of Fine-Grained Algorithms on Graphical Processing Unit -- Parallel Implementation of Lattice Boltzmann Flow Simulation in Fortran-DVM Language -- Parallel Discrete Event Simulation with AnyLogic -- LGA Method for 1D Sound Wave Simulation in Inhomogeneous Media -- Cellular-Automaton Simulation of a Cumulative Jet Formation -- Associative Version of the Ramalingam Decremental Algorithm for Dynamic Updating the Single-Sink Shortest-Paths Subgraph -- Cellular Automata-Based S-Boxes vs. DES S-Boxes -- Hierarchical Dependency Graphs: Abstraction and Methodology for Mapping Systolic Array Designs to Multicore Processors -- Parallel Programming Tools and Support -- A Tool for Detecting First Races in OpenMP Programs -- Load Balancing of Parallel Block Overlapped Incomplete Cholesky Preconditioning -- Distributions and Schedules of CPU Time in a Multiprocessor System When the Users' Utility Functions Are Linear -- Visualizing Potential Deadlocks in Multithreaded Programs -- Fragmentation of Numerical Algorithms for the Parallel Subroutines Library -- Object-Oriented Parallel Image Processing Library -- Application-Level and Job-Flow Scheduling: An Approach for Achieving Quality of Service in Distributed Computing -- Filmification of Methods: Representation of Particle-In-Cell Algorithms -- Parallel Evidence Propagation on Multicore Processors -- Applications -- Parallelization of Temperature Distribution Simulations for Semiconductor and Polymer Composite Material on Distributed Memory Architecture -- Implementation of a Non-bonded Interaction Calculation Algorithm for the Cell Architecture -- A Parallel 3D Code for Simulation of Self-gravitating Gas-Dust Systems -- Supercomputer Simulation of an Astrophysical Object Collapse by the Fluids-in-Cell Method -- High-Performance Tsunami Wave Propagation Modeling -- Parallel Object Motion Prediction in a Robotic Navigational Environment -- Numerical Simulations of Unsteady Shock Wave Interactions Using SaC and Fortran-90 -- Parallel Medical Image Reconstruction: From Graphics Processors to Grids.

Sommario/riassunto

This book constitutes the proceedings of the 10th International Conference on Parallel Computing Technologies, PaCT 2009, held in Novosibirsk, Russia on August 31-September 4, 2009. The 34 full papers presented together with 2 invited papers and 7 poster papers were carefully reviewed and selected from 72 submissions. The papers are organized in topical sections on models of parallel computing, methods and algorithms, fine-grained parallelism, parallel programming tools and support, and applications.