

1. Record Nr.	UNINA9910483683503321
Titolo	Parallel Computing Technologies : 9th International Conference, PaCT 2007, Pereslavl-Zalessky, Russia, September 3-7, 2007, Proceedings / / edited by Victor Malyskin
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2007
ISBN	3-540-73940-8
Edizione	[1st ed. 2007.]
Descrizione fisica	1 online resource (XIV, 638 p.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 4671
Disciplina	004.35
Soggetti	Computer programming Computer systems Software engineering Computer engineering Computer networks Computer science Algorithms Programming Techniques Computer System Implementation Software Engineering Computer Engineering and Networks Theory of Computation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Models and Languages -- Looking for a Definition of Dynamic Distributed Systems -- Adaptive Workflow Nets for Grid Computing -- A Stochastic Semantics for BioAmbients -- A Categorical Observation of Timed Testing Equivalence -- From Unreliable Objects to Reliable Objects: The Case of Atomic Registers and Consensus -- A Functional Programming System SFP: Sisal 3.1 Language Structures Decomposition -- Towards a Computing Model for Open Distributed Systems -- Enhancing Online Computer Games for Grids -- Applications -- Optimized Parallel Approach for 3D Modelling of Forest Fire Behaviour

-- A High-Level Toolkit for Development of Distributed Scientific Applications -- Orthogonal Organized Finite State Machine Application to Sensor Acquired Information -- Parallel Broadband Finite Element Time Domain Algorithm Implemented to Dispersive Electromagnetic Problem -- Strategies for Development of a Parallel Program for Protoplanetary Disc Simulation -- Generation of SMACA and Its Application in Web Services -- Enhancing Fault-Tolerance of Large-Scale MPI Scientific Applications -- Study of 3D Dynamics of Gravitating Systems Using Supercomputers: Methods and Applications -- Transient Mechanical Wave Propagation in Semi-infinite Porous Media Using a Finite Element Approach with Domain Decomposition Technology -- The Location of the Gene Regions Under Selective Pressure: Plato Algorithm Parallelization -- Techniques for Parallel Programming Supporting -- Object Serialization and Remote Exception Pattern for Distributed C++/MPI Application -- Improving Job Scheduling Performance with Dynamic Replication Strategy in Data Grids -- Address-Free All-to-All Routing in Sparse Torus -- On the Parallel Technologies of Conjugate and Semi-conjugate Gradient Methods for Solving Very Large Sparse SLAEs -- TRES-CORE: Content-Based Retrieval Based on the Balanced Tree in Peer to Peer Systems -- Efficient Race Verification for Debugging Programs with OpenMP Directives -- Adaptive Scheduling and Resource Assessment in GRID -- Dynamic Load Balancing of Black-Box Applications with a Resource Selection Mechanism on Heterogeneous Resources of the Grid -- A Novel Algorithm of Optimal Matrix Partitioning for Parallel Dense Factorization on Heterogeneous Processors -- Parallel Pseudorandom Number Generator for Large-Scale Monte Carlo Simulations -- Dynamic Job Scheduling on the Grid Environment Using the Great Deluge Algorithm -- Parallelism Granules Aggregation with the T-System -- Toward a Distributed Implementation of OpenMP Using CAPE -- Multicriteria Scheduling Strategies in Scalable Computing Systems -- Latencies of Conflicting Writes on Contemporary Multicore Architectures -- A Novel Self-Similar (S<sup>2</sup>) Traffic Filter to Enhance E-Business Success by Improving Internet Communication Channel Fault Tolerance -- Accelerating the Singular Value Decomposition of Rectangular Matrices with the CSX600 and the Integrable SVD -- Parallel Dynamic SPT Update Algorithm in OSPF -- Cellular Automata -- Pedestrian and Crowd Dynamics Simulation: Testing SCA on Paradigmatic Cases of Emerging Coordination in Negative Interaction Conditions -- Coarse-Grained Parallelization of Cellular-Automata Simulation Algorithms -- Cellular Automata Models for Complex Matter -- Hysteresis in Oscillatory Behaviour in CO Oxidation Reaction over Pd (110) Revealed by Asynchronous Cellular Automata Simulation -- CAOS: A Domain-Specific Language for the Parallel Simulation of Cellular Automata -- Parallel Hardware Architecture to Simulate Movable Creatures in the CA Model -- Comparison of Evolving Uniform, Non-uniform Cellular Automaton, and Genetic Programming for Centroid Detection with Hardware Agents -- Associative Version of Italiano's Decremental Algorithm for the Transitive Closure Problem -- Support for Fine-Grained Synchronization in Shared-Memory Multiprocessors -- Self-organised Criticality in a Model of the Rat Somatosensory Cortex -- Control of Fuzzy Cellular Automata: The Case of Rule 90 -- Methods and Tools of Parallel Programming of Multicomputers -- Intensive Atmospheric Vortices Modeling Using High Performance Cluster Systems -- Dynamic Strategy of Placement of the Replicas in Data Grid -- ISO: Comprehensive Techniques Toward Efficient GEN\_BLOCK Redistribution with Multidimensional Arrays -- A New Memory Slowdown Model for the Characterization of Computing

Systems -- SCRF – A Hybrid Register File Architecture -- Model Based Performance Evaluation for MPI Programs -- Runtime System for Parallel Execution of Fragmented Subroutines -- Application of Simulation Approaches to Creation of Decision Support System for IT Service Management -- Using Analytical Models to Load Balancing in a Heterogeneous Network of Computers -- Block-Based Allocation Algorithms for FLASH Memory in Embedded Systems -- Variable Reassignment in the T++ Parallel Programming Language -- Parallel Construction of Moving Adaptive Meshes Based on Self-organization -- Data Transfer in Advance on Cluster -- A Trust-Oriented Heuristic Scheduling Algorithm for Grid Computing -- 3-Points Relationship Based Parallel Algorithm for Minimum Ultrametric Tree Construction -- Load Balancing Approach Parallel Algorithm for Frequent Pattern Mining.

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Sommario/riassunto

This book constitutes the refereed proceedings of the 9th International Conference on Parallel Computing Technologies, PaCT 2007, held in conjunction with the Russian-Taiwan symposium on Methods and Tools of Parallel Programming of Multicomputers. It covers models and languages, applications, techniques for parallel programming supporting, cellular automata, as well as methods and tools of parallel programming of multicomputers.

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