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Nota di contenuto	Web- and Grid-Based Applications -- A Virtual Data Grid for LIGO -- A Multidisciplinary Scientific Data Portal -- Migratable Sockets for Dynamic Load Balancing -- Toward Realizable Restricted Delegation in Computational Grids1 -- Profiling Facility on a Metasystem -- Utilizing Supercomputer Power from Your Desktop -- Tertiary Storage System for Index-Based Retrieving of Video Sequences -- Data and Metadata Collections for Scientific Applications -- The VLAM-G Abstract Machine: A Data and Process Handling System on the Grid -- Optimal

Caching Policies for Web Objects -- A Computational Web Portal for the Distributed Marine Environment Forecast System -- Role of Aging, Frequency, and Size in Web Cache Replacement Policies -- A Java-Based Model of Resource Sharing among Independent Users on the Internet -- The GRB Library: Grid Computing with Globus in C -- Certificate Use for Supporting Merging and Splitting of Computational Environments? -- Data Management for Grid Environments -- Mobile Agents for Distributed and Dynamically Balanced Optimization Applications -- End User Applications -- A Comparison of Three Parallel Algorithms for 3D Reconstruction -- Parallel 3D Adaptive Compressible Navier-Stokes Solver in GeoFEM with Dynamic Load-Balancing by DRAMA Library -- Parallel Models for Reactive Scattering Calculations -- The Use of Intrinsic Properties of Physical System for Derivation of High-Performance Computational Algorithms -- Parallel DEM Simulations of Granular Materials -- A Generic Support for Distributed Deliberations -- Using Streaming and Parallelization Techniques for 3D Visualization in a High Performance Computing and Networking Environment -- Performance Evaluation of Parallel GroupBy-Before-Join Query Processing in High Performance Database Systems -- Design and Implementation of an RPC-Based ARC Kernel -- Computer Science -- Application-Controlled Coherence Protocols for Scope Consistent Software DSMs -- Source Code and Task Graphs in Program Optimization -- Event Manipulation for Nondeterministic Shared-Memory Programs -- An Open Distributed Shared Memory System¹ -- Two Layers Distributed Shared Memory -- Influence of Compiler Optimizations on Value Prediction -- Experiments with Sequential Prefetching -- Code Positioning for VLIW Architectures -- Selective Register Renaming: A Compiler-Driven Approach to Dynamic Register Renaming -- An Adaptive Space-Sharing Policy for Heterogeneous Parallel Systems -- Orthogonal Processor Groups for Message-Passing Programs -- Scheduling Task Graphs on Arbitrary Processor Architectures Considering Contention -- PIO: Parallel I/O System for Massively Parallel Processors -- Fast "Short" Messages on a Linux Cluster -- Computational Science -- Efficient Monte Carlo Linear Solver with Chain Reduction and Optimization Using PLFG -- On-Line Tool Support for Parallel Applications -- Cluster Computation for Flood Simulations¹ -- Advanced Library Support for Irregular and Out-of-Core Parallel Computing -- A Parallel ADI Method for Linear and Non-linear Equations -- Study of the Parallel Block One-Sided Jacobi Method? -- A Practical Approach to Efficient Use of Heterogeneous PC Network for Parallel Mathematical Computation -- An Hierarchical MPI Communication Model for the Parallelized Solution of Multiple Integrals -- Impact of Data Distribution on Performance of Irregular Reductions on Multithreaded Architectures? -- Implementing and Benchmarking Derived Datatypes in Metacomputing -- MPC++ Performance for Commodity Clustering -- Dynamic Instrumentation and Performance Prediction of Application Execution -- Improving Load Balancing in a Parallel Cluster Environment Using Mobile Agents -- Posters -- Simulation and 3D Visualization of Bioremediation Interventions in Polluted Soils -- Resource Planning in Converged Networks -- Parallelization of the STEM-II Air Quality Model -- Simulating Parallel Architectures with BSPlab -- A Blocking Algorithm for FFT on Cache-Based Processors -- Monte Carlo Simulations of a Biaxial Liquid Crystal Model Using the Condor Processing System -- Generic Approach to the Design of Simulation- Visualization Complexes -- On Parallel Programming Language Caper -- Increased Efficiency of Parallel Calculations of Fragment Molecular Orbitals by Using Fine-Grained Parallelization on a HITACHI SR8000 Supercomputer -- Customer-

Centered Models for Web-Sites and Intra-Nets -- A Prototype for a Distributed Image Retrieval System -- Data-Object Oriented Design for Distributed Shared Memory¹ -- Using Virtual User Account System for Managing Users Account in Polish National Cluster -- Performance Evaluation of XTP and TCP Transport Protocols for Reliable Multicast Communications -- Parallelization of the Continuous Global Optimization Problem with Inequality Constraints by Using Interval Arithmetic? -- Workshops -- A Distributed Platform with Features for Supporting Dynamic and Mobile Resources -- Implementing an Efficient Java Interpreter -- Efficient Dispatch of Java Interface Methods -- Implementation of a CORBA-Based Metacomputing System? -- JOINT: An Object Oriented Message Passing Interface for Parallel Programming in Java -- A Framework for Opportunistic Cluster Computing Using JavaSpaces¹) -- Scientific Computation with JavaSpaces -- Computational Communities: A Marketplace for Federated Resources -- A Compiler Infrastructure for High-Performance Java? -- Optimizing Java-Specific Overheads: Java at the Speed of C? -- Combining Batch and Streaming Paradigms for Metacomputing Applications -- Identification and Quantification of Hotspots in Java Grande Programs -- HEPGRID2001: A Model of a Virtual Data Grid Application -- Grid Services for Fast Retrieval on Large Multidimensional Databases.

Sommario/riassunto

This book constitutes the refereed proceedings of the 9th International Conference on High-Performance Computing and Networking, HPCN Europe 2001, held in Amsterdam, The Netherlands in June 2001. The 67 revised papers and 15 posters presented were carefully reviewed and selected from a total of almost 200 submissions. Among the areas covered are Web/grid applications of HPCN, end user applications, computational science, computer science, and Java in HPCN.
