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Titolo	Recent Advances in Parallel Virtual Machine and Message Passing Interface [[electronic resource] ] : 9th European PVM/MPI User's Group Meeting Linz, Austria, September 29 - October 2, 2002, Proceedings // edited by Dieter Kranzlmüller, Peter Kacsuk, Jack Dongarra, Jens Volkert
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Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 2474
Disciplina	004/.35
Soggetti	Computer communication systems Architecture, Computer Computer programming Programming languages (Electronic computers) Computers Numerical analysis Computer Communication Networks Computer System Implementation Programming Techniques Programming Languages, Compilers, Interpreters Computation by Abstract Devices Numeric 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 at the end of each chapters and index.
Nota di contenuto	Invited Talks -- High Performance Computing, Computational Grid, and Numerical Libraries -- Performance, Scalability, and Robustness in the Harness Metacomputing Framework -- Surfing the Grid - Dynamic Task Migration in the Polder Metacomputer Project -- Petascale Virtual Machine: Computing on 100,000 Processors -- MPICH2: A New Start for MPI Implementations -- Making Grid Computing Mainstream -- Process Management for Scalable Parallel Programs -- A Security Attack and Defense in the Grid Environment -- Performance Analysis:

Necessity or Add-on in Grid Computing -- Tutorials -- MPI on the Grid -- Parallel Application Development with the Hybrid MPI+OpenMP Programming Model -- Special Session: CrossGrid -- CrossGrid and Its Relatives in Europe -- Towards the CrossGrid Architecture -- Application of Component-Expert Technology for Selection of Data-Handlers in CrossGrid -- Training of Neural Networks: Interactive Possibilities in a Distributed Framework -- An Infrastructure for Grid Application Monitoring -- The CrossGrid Performance Analysis Tool for Interactive Grid Applications -- Special Session: ParSim -- Current Trends in Numerical Simulation for Parallel Engineering Environments -- Automatic Runtime Load Balancing of Dedicated Applications in Heterogeneous Environments -- A Contribution to Industrial Grid Computing -- Parallel Computing for the Simulation of 3D Free Surface Flows in Environmental Applications -- Testbed for Adaptive Numerical Simulations in Heterogeneous Environments -- Simulating Cloth Free-Form Deformation with a Beowulf Cluster\* -- Applications Using MPI and PVM -- Concept of a Problem Solving Environment for Flood Forecasting -- A Comprehensive Electric Field Simulation Environment on Top of SCI -- Application of a Parallel Virtual Machine for the Analysis of a Luminous Field -- Solving Engineering Applications with LAMGAC over MPI-2 -- Distributed Image Segmentation System by a Multi-agents Approach (Under PVM Environment) -- Parallel Algorithms Using Message Passing -- Parallel Global Optimization of High-Dimensional Problems -- Adjusting the Lengths of Time Slices when Scheduling PVM Jobs with High Memory Requirements -- A PVM-Based Parallel Implementation of the REYES Image Rendering Architecture -- Enhanced File Interoperability with Parallel MPI File-I/O in Image Processing -- Granularity Levels in Parallel Block-Matching Motion Compensation -- An Analytical Model of Scheduling for Conservative Parallel Simulation -- Parallel Computation of Pseudospectra Using Transfer Functions on a MATLAB-MPI Cluster Platform -- Development and Tuning of Irregular Divide-and-Conquer Applications in DAMPVM/DAC -- Observations on Parallel Computation of Transitive and Max-Closure Problems -- Evaluation of a Nearest-Neighbor Load Balancing Strategy for Parallel Molecular Simulations in MPI Environment -- Programming Tools for MPI and PVM -- Application Recovery in Parallel Programming Environment -- IP-OO : A Parallel Remeshing Toolkit -- Modular MPI and PVM Components -- Communication Infrastructure in High-Performance Component-Based Scientific Computing -- On Benchmarking Collective MPI Operations -- Implementations of MPI and PVM -- Building Library Components that Can Use Any MPI Implementation -- Stampi-I/O: A Flexible Parallel-I/O Library for Heterogeneous Computing Environment -- (Quasi-) Thread-Safe PVM and (Quasi-) Thread-Safe MPI without Active Polling -- An Implementation of MPI-IO on Expand: A Parallel File System Based on NFS Servers -- Design of DMPI on DAWNING-3000 -- MPICH-CM: A Communication Library Design for a P2P MPI Implementation -- Design and Implementation of MPI on Portals 3.0 -- Porting PVM to the VIA Architecture Using a Fast Communication Library -- LICO: A Multi-platform Channel-Based Communication Library -- Notes on Nondeterminism in Message Passing Programs -- Extensions of MPI and PVM -- Web Remote Services Oriented Architecture for Cluster Management -- Improving Flexibility and Performance of PVM Applications by Distributed Partial Evaluation -- Ready-Mode Receive: An Optimized Receive Function for MPI -- Improved MPI All-to-all Communication on a Gigaset SMP Cluster -- Fujitsu MPI-2: Fast Locally, Reaching Globally -- Performance Analysis and Optimization -- Communication and Optimization Aspects on Hybrid Architectures --

Performance Analysis for MPI Applications with SCALEA -- A  
Performance Study of Load Balancing Strategies for Approximate String  
Matching on an MPI Heterogeneous System Environment -- An  
Analytical Model for Pipeline Algorithms on Heterogeneous Clusters --  
Architectures for an Efficient Application Execution in a Collection of  
HNOWS.

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Sommario/riassunto

This book constitutes the refereed proceedings of the 9th European PVM/MPI Users'Group Meeting held in Linz, Austria in September/October 2002. The 50 revised full papers presented together with abstracts of 11 invited contributions were carefully reviewed and selected. The papers are organized in topical sections on Corss Grid, Par Sim, application using MPI and PVM, parallel algorithms using message passing, programming tools for MPI and PVM, implementations of MPI and PVM, extensions of MPI and PVM, and performance analysis and optimization.

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