1. Record Nr. UNINA9910484945603321

Titolo	Recent advances in parallel virtual machine and message passing interface : 13th European PVM/MPI User's Group Meeting, Bonn, Germany, September 17-20, 2006 : proceedings / / Bernd Mohr ... [et al.] (eds.)
Pubbl/distr/stampa	Berlin, : Springer, 2006
ISBN	3-540-39112-6
Edizione	[1st ed. 2006.]
Descrizione fisica	1 online resource (XVI, 416 p.)
Collana	Lecture notes in computer science, , 0302-9743 ; ; 4192 LNCS sublibrary. SL 2, Programming and software engineering
Altri autori (Persone)	MohrBernd
Disciplina	004/.35
Soggetti	Parallel computers Virtual computer systems Data transmission systems
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	Invited Talks -- Too Big for MPI? -- Approaches for Parallel Applications Fault Tolerance -- Where Does MPI Need to Grow? -- Peta-Scale Supercomputer Project in Japan and Challenges to Life and Human Simulation in Japan -- Resource and Application Adaptivity in Message Passing Systems -- Performance Advantages of Partitioned Global Address Space Languages -- Tutorials -- Using MPI-2: A Problem-Based Approach -- Performance Tools for Parallel Programming -- High-Performance Parallel I/O -- Hybrid MPI and OpenMP Parallel Programming -- Outstanding Papers -- Issues in Developing a Thread-Safe MPI Implementation -- Scalable Parallel Suffix Array Construction -- Formal Verification of Programs That Use MPI One-Sided Communication -- Collective Communication -- MPI Collective Algorithm Selection and Quadtree Encoding -- Parallel Prefix (Scan) Algorithms for MPI -- Efficient Allgather for Regular SMP-Clusters -- Efficient Shared Memory and RDMA Based Design for MPI_Allgather over InfiniBand -- Communication Protocols -- High Performance RDMA Protocols in HPC -- Implementation and Shared-Memory Evaluation of MPICH2 over the Nemesis Communication

Subsystem -- MPI/CTP: A Reconfigurable MPI for HPC Applications -- Debugging and Verification -- Correctness Checking of MPI One-Sided Communication Using Marmot -- An Interface to Support the Identification of Dynamic MPI 2 Processes for Scalable Parallel Debugging -- Modeling and Verification of MPI Based Distributed Software -- Fault Tolerance -- FT-MPI, Fault-Tolerant Metacomputing and Generic Name Services: A Case Study -- Scalable Fault Tolerant Protocol for Parallel Runtime Environments -- An Intelligent Management of Fault Tolerance in Cluster Using RADICMPI -- Extended mpiJava for Distributed Checkpointing and Recovery -- Metacomputing and Grid -- Running PVM Applications on Multidomain Clusters -- Reliable Orchestration of Distributed MPI-Applications in a UNICORE-Based Grid with MetaMPICH and MetaScheduling -- The New Multidevice Architecture of MetaMPICH in the Context of Other Approaches to Grid-Enabled MPI -- Using an Enterprise Grid for Execution of MPI Parallel Applications – A Case Study -- Parallel I/O -- Self-adaptive Hints for Collective I/O -- Exploiting Shared Memory to Improve Parallel I/O Performance -- High-Bandwidth Remote Parallel I/O with the Distributed Memory Filesystem MEMFS -- Effective Seamless Remote MPI-I/O Operations with Derived Data Types Using PVFS2 -- Implementation Issues -- Automatic Memory Optimizations for Improving MPI Derived Datatype Performance -- Improving the Dynamic Creation of Processes in MPI-2 -- Object-Oriented Message Passing -- Non-blocking Java Communications Support on Clusters -- Modernizing the C++ Interface to MPI -- Limitations and Extensions -- Can MPI Be Used for Persistent Parallel Services? -- Observations on MPI-2 Support for Hybrid Master/Slave Applications in Dynamic and Heterogeneous Environments -- What MPI Could (and Cannot) Do for Mesh-Partitioning on Non-homogeneous Networks -- Performance -- Scalable Parallel Trace-Based Performance Analysis -- TAUg: Runtime Global Performance Data Access Using MPI -- Tracing the MPI-IO Calls' Disk Accesses -- Measuring MPI Send and Receive Overhead and Application Availability in High Performance Network Interfaces -- Challenges and Issues in Benchmarking MPI -- Implementation and Usage of the PERUSE-Interface in Open MPI -- ParSim -- 5th International Special Session on Current Trends in Numerical Simulation for Parallel Engineering Environments -- MPJ Express Meets Gadget: Towards a Java Code for Cosmological Simulations -- An Approach for Parallel Fluid-Structure Interaction on Unstructured Meshes -- Optimizing a Conjugate Gradient Solver with Non-Blocking Collective Operations -- Parallel DSMC Gasflow Simulation of an In-Line Coater for Reactive Sputtering -- Parallel Simulation of T-M Processes in Underground Repository of Spent Nuclear Fuel -- Poster Abstracts -- On the Usability of High-Level Parallel IO in Unstructured Grid Simulations -- Automated Performance Comparison -- Improved GROMACS Scaling on Ethernet Switched Clusters -- Asynchronity in Collective Operation Implementation -- PARUS: A Parallel Programming Framework for Heterogeneous Multiprocessor Systems -- Application of PVM to Protein Homology Search.