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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Talks -- The X-Scale Challenge -- Sustained Petascale: The Next MPI Challenge -- MPI: Past, Present and Future -- New and Old Tools and Programming Models for High-Performance Computing -- The TSUBAME Cluster Experience a Year Later, and onto Petascale TSUBAME 2.0 -- To Infinity and Beyond?! On Scaling Performance Measurement and Analysis Tools for Parallel Programming -- Tutorials -- Using MPI-2: A Problem-Based Approach -- Verifying Parallel Programs with MPI-Spin -- Advanced MPI Programming -- Outstanding

Papers -- Full Bandwidth Broadcast, Reduction and Scan with Only Two Trees -- Process Cooperation in Multiple Message Broadcast -- Self-consistent MPI Performance Requirements -- Test Suite for Evaluating Performance of MPI Implementations That Support MPI_THREAD_MULTIPLE -- Applications -- An Improved Parallel XSL-FO Rendering for Personalized Documents -- An Extensible Framework for Distributed Testing of MPI Implementations -- A Virtual Test Environment for MPI Development: Quick Answers to Many Small Questions -- Multithreaded Tomographic Reconstruction -- Parallelizing Dense Linear Algebra Operations with Task Queues in llc -- ParaLEX: A Parallel Extension for the CPLEX Mixed Integer Optimizer -- Performance Analysis and Tuning of the XNS CFD Solver on Blue Gene/L -- (Sync|Async)?+? MPI Search Engines -- Collective Operations -- A Case for Standard Non-blocking Collective Operations -- Optimization of Collective Communications in HeteroMPI -- Fault Tolerance -- Low Cost Self-healing in MPI Applications -- Fault Tolerant File Models for MPI-IO Parallel File Systems -- Library Internals -- An Evaluation of Open MPI's Matching Transport Layer on the Cray XT -- Improving Reactivity and Communication Overlap in MPI Using a Generic I/O Manager -- Investigations on InfiniBand: Efficient Network Buffer Utilization at Scale -- Message Passing on Hierarchical Machines and Grids -- Improving MPI Support for Applications on Hierarchically Distributed Resources -- MetaLoRaS: A Re-scheduling and Prediction MetaScheduler for Non-dedicated Multiclusters -- Using CMT in SCTP-Based MPI to Exploit Multiple Interfaces in Cluster Nodes -- MPI-I/O -- Analysis of the MPI-IO Optimization Levels with the PIOViz Jumpshot Enhancement -- Extending the MPI-2 Generalized Request Interface -- Transparent Log-Based Data Storage in MPI-IO Applications -- One-Sided -- Analysis of Implementation Options for MPI-2 One-Sided -- MPI-2 One-Sided Usage and Implementation for Read Modify Write Operations: A Case Study with HPCC -- RDMA in the SiCortex Cluster Systems -- Revealing the Performance of MPI RMA Implementations -- PVM and Harness -- Distributed Real-Time Computing with Harness -- Frequent Itemset Minning with Trie Data Structure and Parallel Execution with PVM -- Tools -- Retrospect: Deterministic Replay of MPI Applications for Interactive Distributed Debugging -- Extended MPICC to Generate MPI Derived Datatypes from C Datatypes Automatically -- Timestamp Synchronization for Event Traces of Large-Scale Message-Passing Applications -- Verification of Message Passing Programs -- Verification of Halting Properties for MPI Programs Using Nonblocking Operations -- Correctness Debugging of Message Passing Programs Using Model Verification Techniques -- Practical Model-Checking Method for Verifying Correctness of MPI Programs -- ParSim -- 6th International Special Session on Current Trends in Numerical Simulation for Parallel Engineering Environments New Directions and Work-in-Progress ParSim 2007 -- Gyrokinetic Semi-lagrangian Parallel Simulation Using a Hybrid OpenMP/MPI Programming -- Automatic Parallelization of Object Oriented Models Executed with Inline Solvers -- 3D Parallel Elastodynamic Modeling of Large Subduction Earthquakes -- Posters Abstracts -- Virtual Parallel Machines Through Virtualization: Impact on MPI Executions -- Seshat Collects MPI Traces: Extended Abstract -- Dynamic Optimization of Load Balance in MPI Broadcast -- An Empirical Study of Optimization in Seamless Remote MPI-I/O for Long Latency Network -- Multithreaded and Distributed Simulation of Large Biological Neuronal Networks -- Grid Services for MPI.