

1. Record Nr.	UNISA996465909903316
Titolo	Recent Advances in the Message Passing Interface [[electronic resource] ] : 17th European MPI User's Group Meeting, EuroMPI 2010, Stuttgart, Germany, September12-15, 2010, Proceedings // edited by Rainer Keller, Edgar Gabriel, Jack Dongarra
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2010
ISBN	1-280-38885-4 9786613566775 3-642-15646-0
Edizione	[1st ed. 2010.]
Descrizione fisica	1 online resource (XIV, 308 p. 120 illus.)
Collana	Programming and Software Engineering ; ; 6305
Disciplina	005.11
Soggetti	Computer programming Algorithms Computer communication systems Software engineering Computer organization Computer simulation Programming Techniques Algorithm Analysis and Problem Complexity Computer Communication Networks Software Engineering Computer Systems Organization and Communication Networks Simulation and Modeling
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	Large Scale Systems -- A Scalable MPI_Comm_split Algorithm for Exascale Computing -- Enabling Concurrent Multithreaded MPI Communication on Multicore Petascale Systems -- Toward Performance Models of MPI Implementations for Understanding Application Scaling Issues -- PMI: A Scalable Parallel Process-Management Interface for Extreme-Scale Systems -- Run-Time Analysis and Instrumentation for

Communication Overlap Potential -- Efficient MPI Support for Advanced Hybrid Programming Models -- Parallel Filesystems and I/O -- An HDF5 MPI Virtual File Driver for Parallel In-situ Post-processing -- Automated Tracing of I/O Stack -- MPI Datatype Marshalling: A Case Study in Datatype Equivalence -- Collective Operations -- Design of Kernel-Level Asynchronous Collective Communication -- Network Offloaded Hierarchical Collectives Using ConnectX-2's CORE-Direct Capabilities -- An In-Place Algorithm for Irregular All-to-All Communication with Limited Memory -- Applications -- Massively Parallel Finite Element Programming -- Parallel Zero-Copy Algorithms for Fast Fourier Transform and Conjugate Gradient Using MPI Datatypes -- Parallel Chaining Algorithms -- MPI Internals (I) -- Precise Dynamic Analysis for Slack Elasticity: Adding Buffering without Adding Bugs -- Implementing MPI on Windows: Comparison with Common Approaches on Unix -- Compact and Efficient Implementation of the MPI Group Operations -- Characteristics of the Unexpected Message Queue of MPI Applications -- Fault Tolerance -- Dodging the Cost of Unavoidable Memory Copies in Message Logging Protocols -- Communication Target Selection for Replicated MPI Processes -- Transparent Redundant Computing with MPI -- Checkpoint/Restart-Enabled Parallel Debugging -- Best Paper Awards -- Load Balancing for Regular Meshes on SMPs with MPI -- Adaptive MPI Multirail Tuning for Non-uniform Input/Output Access -- Using Triggered Operations to Offload Collective Communication Operations -- MPI Internals (II) -- Second-Order Algorithmic Differentiation by Source Transformation of MPI Code -- Locality and Topology Aware Intra-node Communication among Multicore CPUs -- Transparent Neutral Element Elimination in MPI Reduction Operations -- Poster Abstracts -- Use Case Evaluation of the Proposed MPIT Configuration and Performance Interface -- Two Algorithms of Irregular Scatter/Gather Operations for Heterogeneous Platforms -- Measuring Execution Times of Collective Communications in an Empirical Optimization Framework -- Dynamic Verification of Hybrid Programs -- Challenges and Issues of Supporting Task Parallelism in MPI.

---