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Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 1497
Disciplina	004/.35
Soggetti	Artificial intelligence Computer programming Programming languages (Electronic computers) Computers Computer communication systems Microprocessors Artificial Intelligence Programming Techniques Programming Languages, Compilers, Interpreters Computation by Abstract Devices Computer Communication Networks Processor Architectures
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	On-line performance monitoring using OMIS -- Performance analysis of task-based algorithms on heterogeneous systems with message passing -- Automatic detection of PVM program performance problems -- Evaluating and modeling communication overhead of MPI primitives on the Meiko CS-2 -- A parallel I/O test suite -- Improving the PVM daemon network performance by direct network access -- SKaMPI: A detailed, accurate MPI benchmark -- MPI on NT: The current status and performance of the available environments -- Harness: The next

generation beyond PVM -- Advances in heterogeneous network computing -- MPL\_Connect managing heterogeneous MPI applications interoperation and process control -- An active layer extension to MPI -- Interconnecting PVM and MPI applications -- WMPI Message Passing Interface for Win32 clusters -- A Java interface for WMPI -- Porting CHAOS library to MPI -- Athapascan: An experience on mixing MPI communications and threads -- Developing message-passing applications on MPICH under ensemble -- The NAG Parallel Library and the PINEAPL project -- High Performance Fortran: A status report or: Are we ready to give up MPI? -- On the implementation of a portable, client-server based MPI-IO interface -- Distributed computing in a heterogeneous computing environment -- Rank reordering strategy for MPI topology creation functions -- Scalable and adaptive resource sharing in PVM -- Load balancing for network based multi-threaded applications -- Creation of Reconfigurable Hardware Objects in PVM environments -- Implementing MPI with the Memory-Based Communication Facilities on the SSS-CORE operating system -- PVM on Windows and NT clusters -- Java and network parallel processing -- A tool for the development of meta-applications supporting several message-passing programming environments -- Cross-platform parallel debugging and performance analysis tools -- Debugging point-to-point communication in MPI and PVM -- Monitoring PVM programs using the DAMS approach -- Functional message passing with OPAL-MPI -- An MPI-based run-time support to coordinate HPF tasks -- Dynamic visualization and steering using PVM and MPI -- A PVM-based library for sparse matrix factorizations -- On-line monitoring support in PVM and MPI -- Coarse grained parallel Monte Carlo algorithms for solving SLAE using PVM -- Parallel quantum scattering calculations applied to the dynamics of elementary reactions -- On the PVM computations of transitive closure and algebraic path problems -- Implementation of Monte Carlo algorithms for eigenvalue problem using MPI -- Running an advection-chemistry code on message passing computers -- A model for parallel one dimensional eigenvalues and eigenfunctions calculations -- Sparse LU factorization with partial pivoting overlapping communications and computations on the SP-2 multicomputer -- Use of parallel computing to improve the accuracy of calculated molecular properties -- A new model for the analysis of asynchronous parallel algorithms -- Portable randomized list ranking on multiprocessors using MPI -- A parallel algorithm for the simultaneous solution of direct and adjoint multigroup diffusion problems.

## Sommario/riassunto

This book constitutes the refereed proceedings of the 5th European Meeting of the Parallel Virtual Machine and Message Passing Interface Users' Group, PVM/MPI '98, held in Liverpool, UK, in September 1998. The 49 contributed and invited papers presented were carefully reviewed and revised for inclusion in the volume. All current aspects of PVM and MPI are addressed. The papers are organized in topical sections on evaluation and performance, extensions and improvements, implementation issues, tools, and algorithms.