

1. Record Nr.	UNINA9910260640203321
Autore	Gropp William
Titolo	Using MPI : portable parallel programming with the message-passing interface / / William Gropp, Ewing Lusk, Anthony Skjellum
Pubbl/distr/stampa	Cambridge, Massachusetts : , : MIT Press, , c1999 [Piscataqay, New Jersey] : , : IEEE Xplore, , [1999]
ISBN	1-282-09634-6 0-262-25628-2 0-585-17383-4
Edizione	[2nd ed.]
Descrizione fisica	1 PDF (xxii, 371 pages) : illustrations
Collana	Scientific and engineering computation
Altri autori (Persone)	LuskEwing SkjellumAnthony
Disciplina	005.2/75
Soggetti	Parallel programming (Computer science) Parallel computers - Programming Computer interfaces Electronic books.
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.
Sommario/riassunto	The Message Passing Interface (MPI) specification is widely used for solving significant scientific and engineering problems on parallel computers. There exist more than a dozen implementations on computer platforms ranging from IBM SP-2 supercomputers to clusters of PCs running Windows NT or Linux ("Beowulf" machines). The initial MPI Standard document, MPI-1, was recently updated by the MPI Forum. The new version, MPI-2, contains both significant enhancements to the existing MPI core and new features. Using MPI is a completely up-to-date version of the authors' 1994 introduction to the core functions of MPI. It adds material on the new C++ and Fortran 90 bindings for MPI throughout the book. It contains greater discussion of datatype extents, the most frequently misunderstood feature of MPI-1, as well as material on the new extensions to basic MPI functionality added by the MPI-2 Forum in the area of MPI datatypes and collective

operations. Using MPI-2 covers the new extensions to basic MPI. These include parallel I/O, remote memory access operations, and dynamic process management. The volume also includes material on tuning MPI applications for high performance on modern MPI implementations.
