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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.