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Nota di contenuto	Combinatorial preconditioning for sparse linear systems -- A threaded sliding window executor for irregular computation on a NOW -- Parallel profile matching for large scale webcasting -- Large-scale SVD and subspace-based methods for information retrieval -- Thick-restart Lanczos method for symmetric eigenvalue problems -- Portable parallel adaptation of unstructured 3D meshes -- Partitioning sparse rectangular matrices for parallel processing -- Locality preserving load balancing with provably small overhead -- Tree-based parallel load-

balancing methods for solution-adaptive unstructured finite element models on distributed memory multicomputers -- Coarse-grid selection for parallel algebraic multigrid -- Overlapping and short-cutting techniques in loosely synchronous irregular problems -- Control volume meshes using sphere packing -- Using multithreading for the automatic load balancing of adaptive finite element meshes -- Dynamic load balancing for parallel adaptive mesh refinement -- A robust and scalable library for parallel adaptive mesh refinement on unstructured meshes -- Quality balancing for parallel adaptive FEM -- Parallelization of an unstructured grid, hydrodynamic-diffusion code -- Exchange of messages of different sizes -- The distributed object-oriented threads system DOTS -- Graph partitioning and parallel solvers: Has the emperor no clothes? -- Parallel simulation of particulate flows -- Parallel vertex-to-vertex radiosity on a distributed shared memory system -- Load balancing in parallel molecular dynamics -- COMPASSION: A parallel I/O runtime system including chunking and compression for irregular applications -- Transformations of Cauchy matrices, Trummer's problem and a Cauchy-like linear solver -- A parallel GRASP for the Steiner problem in graphs -- A new simple parallel tree contraction scheme and its application on distance-hereditary graphs -- Cooperative multi-thread parallel tabu search with an application to circuit partitioning -- Experiments with mpC: Efficient solving regular problems on heterogeneous networks of computers via Irregularization -- Balancing the load in large-scale distributed entity-level simulations -- Modeling dynamic load balancing in molecular dynamics to achieve scalable parallel execution -- Relaxed Implementation of spectral methods for graph partitioning -- S-HARP: A parallel dynamic spectral partitioner -- Information filtering using the Riemannian SVD (R-SVD) -- Parallel run-time system for adaptive mesh refinement.

Sommario/riassunto

This book constitutes the refereed proceedings of the 5th International Symposium on Solving Irregularly Structured Problems in Parallel, IRREGULAR'98, held in Berkeley, California, in August 1998. The 26 revised full papers presented were carefully reviewed and selected for inclusion from several dozen submissions. Also included are abstracts of four invited talks and 6 invited presentations given during minisymposia held in parallel. The book presents a unique overview on algorithmic, applicational, and systems aspects arising in the development of efficient parallel solutions to irregularly structured problems.