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Disciplina	003.3
Soggetti	Architecture, Computer Computers Computer programming Programming languages (Electronic computers) Arithmetic and logic units, Computer Computer graphics Computer System Implementation Computation by Abstract Devices Programming Techniques Programming Languages, Compilers, Interpreters Arithmetic and Logic Structures Computer Graphics
Lingua di pubblicazione	Inglese
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Nota di contenuto	Fine-grain scheduling under resource constraints -- Mutation scheduling: A unified approach to compiling for fine-grain parallelism -- Compiler techniques for fine-grain execution on workstation clusters using PAPERS -- Solving alignment using elementary linear algebra -- Detecting and using affinity in an automatic data distribution tool -- Array distribution in data-parallel programs -- Communication-free parallelization via affine transformations -- Finding legal reordering transformations using mappings -- A new

algorithm for global optimization for parallelism and locality -- Polaris: Improving the effectiveness of parallelizing compilers -- A formal approach to the compilation of data-parallel languages -- The data partitioning graph: Extending data and control dependencies for data partitioning -- Detecting value-based scalar dependence -- Minimal data dependence abstractions for loop transformations -- Differences in algorithmic parallelism in control flow and call multigraphs -- Flow-insensitive interprocedural alias analysis in the presence of pointers -- Incremental generation of index sets for array statement execution on distributed-memory machines -- A unified data-flow framework for optimizing communication -- Interprocedural communication optimizations for distributed memory compilation -- Analysis of event synchronization in parallel programs -- Computing communication sets for control parallel programs -- Optimizing parallel SPMD programs -- An overview of the Opus language and runtime system -- SIMPLE performance results in ZPL -- Cid: A parallel, "shared-memory" C for distributed-memory machines -- EQ: Overview of a new language approach for prototyping scientific computation -- Reshaping access patterns for generating sparse codes -- Evaluating two loop transformations for reducing multiple-writer false sharing -- Parallelizing tree algorithms: Overhead vs. parallelism -- Autoscheduling in a distributed shared-memory environment -- Optimizing array distributions in data-parallel programs -- Automatic reduction tree generation for fine-grain parallel architectures when iteration count is unknown.

Sommario/riassunto

This volume presents revised versions of the 32 papers accepted for the Seventh Annual Workshop on Languages and Compilers for Parallel Computing, held in Ithaca, NY in August 1994. The 32 papers presented report on the leading research activities in languages and compilers for parallel computing and thus reflect the state of the art in the field. The volume is organized in sections on fine-grain parallelism, alignment and distribution, postlinear loop transformation, parallel structures, program analysis, computer communication, automatic parallelization, languages for parallelism, scheduling and program optimization, and program evaluation.
