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Disciplina	003.3
Soggetti	Architecture, Computer Computers Computer programming Microprocessors Computer System Implementation Computation by Abstract Devices Programming Techniques Processor Architectures
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	Multiprocessor arrays: Topology, efficiency and fault-tolerance -- Unsolved theoretical problems in homogeneous structures -- On simultaneous realizations of boolean functions, with applications -- Parallel microprogramming as a tool for multi-microprocessor systems -- A survey of parallel computational geometry algorithms -- Parallel memories for straight line and rectangle access -- Programming with active data -- Prolog implementations for cellular architectures -- Modular highly-parallel computation and architectures -- Parallel computation and supercomputers and applications -- Fast parallel algorithms and the complexity of parallelism (basic issues and recent advances) -- Process-structured architectures to transform information flowing through -- Basic research for cellular processing -- Parallel algorithms in image processing -- VLSI arrays implementing parallel

line-drawing algorithms -- Parallel conflict-free optimal access to complete extended q-ary trees -- Systolic preconditioning algorithms for the jacobi iterative solution of sparse linear systems -- Multiprocessor systems for large numerical applications -- Systolic array for eigenvalue of jacobi matrix -- A transitive closure algorithm for a 16-state cellprocessor -- Control of sensory processing — A hypothesis on and simulation of the architecture of an elementary cortical processor -- Bounds for l-selection and related problems on grids of processors -- Recursive design of communication schemes for parallel computation with relacs -- Solution of dense systems of linear equations using cellular processors -- Running order statistics on a bit-level systolic array -- Realization of sets of permutations by permutation networks -- Simulation of learning networks -- Given's rotation on an instruction systolic array -- Worst case analysis for reducing algorithms on instruction systolic arrays with simple instruction sets -- Self-checking processing elements in cellular arrays -- Cellular diagnostic in parallel systems -- Reliable networks for boolean functions with small complexity -- Pipeline-automata — A model for acyclic systolic systems.

Sommario/riassunto

This volume contains selected papers for the Parcella '88, the Fourth International Workshop on "Parallel Processing by Cellular Automata and Arrays" held in Berlin from October 17 to 21, 1988. The profile of the Parcella workshop series is focused on problems of processing by regular structures, i.e. their "flexibilization" or adapting to "irregular" algorithms and, closely related to this, on the "regularization" of algorithms for their embedding into regular structures. It seems that these problems will have an increasing priority within the list of central problems in parallelization and will determine the profile of Parcella for the next years.
