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Nota di contenuto	Recent progress in string algorithms -- Selection networks -- Computing edge-connectivity in multiple and capacitated graphs -- Efficient sequential and parallel algorithms for planar minimum cost flow -- Structural analyses on the complexity of inverting functions -- Oracles versus proof techniques that do not relativize -- 20-Relative neighborhood graphs are Hamiltonian -- The K-Gabriel graphs and their applications -- Parallel algorithms for generating subsets and set partitions -- Parallel algorithms for linked list and beyond -- Local tournaments and proper circular arc graphs -- Fast algorithms for the dominating set problem on permutation graphs -- Two probabilistic results on merging -- Randomized broadcast in networks -- On the

construction of abstract voronoi diagrams, II -- Searching in higher dimension -- Finding extrema with unary predicates -- Implicitly searching convolutions and computing depth of collision -- Characterization for a family of infinitely many irreducible Equally Spaced Polynomials -- Distributed algorithms for deciphering -- An efficient algorithm for optimal loop parallelization (extended abstract) -- Another view on the SSS* algorithm -- Algorithms from complexity theory: Polynomial-time operations for complex sets -- Complexity cores and hard problem instances -- Spatial point location and its applications -- Sublinear merging and natural merge sort -- Constructing strongly convex approximate hulls with inaccurate primitives -- Computing puiseux-series solutions to determinantal equations via combinatorial relaxation -- A tight lower bound on the size of planar permutation networks -- Simultaneous solution of families of problems -- Algorithms for projecting points to give the most uniform distribution with applications to hashing -- Topological sweeping in three dimensions -- Finding least-weight subsequences with fewer processors -- Derandomization by exploiting redundancy and mutual independence -- Planar separators and the Euclidean norm -- On the complexity of isometric embedding in the hypercube -- Distributed function evaluation in the presence of transmission faults -- Optimal linear broadcast -- Graph augmentation problems for a specified set of vertices -- A heuristic algorithm for the k-center problem with vertex weight -- Parallel convexity algorithms for digitized images on a linear array of processors -- Parallel algorithms for labeling image components -- A hyperplane Incidence problem with applications to counting distances -- Splitting a configuration in a simplex -- Weaving patterns of lines and line segments in space -- Efficient parallel algorithms for path problems in planar directed graphs -- Parallel algorithms for finding Steiner forests in planar graphs -- Optimally managing the history of an evolving forest.

Sommario/riassunto

This is the proceedings of the SIGAL International Symposium on Algorithms held at CSK Information Education Center, Tokyo, Japan, August 16-18, 1990. SIGAL (Special Interest Group on Algorithms) was organized within the Information Processing Society of Japan in 1988 to encourage research in the field of discrete algorithms, and held 6-8 research meetings each year. This symposium is the first international symposium organized by SIGAL. In response to the call for papers, 88 papers were submitted from around the world. The program committee selected 34 for presentation at the symposium. The symposium also included 5 invited lectures and 10 invited presentations. The subjects of the papers range widely in the field of discrete algorithms in theoretical computer science. Keywords for these subjects are: computational geometry, graph algorithms, complexity theory, parallel algorithms, distributed computing, and computational algebra.
