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Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 3353
Disciplina	004.0151
Soggetti	Computers Computer simulation Algorithms Computer science - Mathematics Numerical analysis Data structures (Computer science) Theory of Computation Simulation and Modeling Algorithm Analysis and Problem Complexity Discrete Mathematics in Computer Science Numeric Computing Data Structures
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Papers -- Lexicographic Breadth First Search -- A Survey -- Wireless Networking: Graph Theory Unplugged -- Graph Algorithms: Trees -- Constant Time Generation of Trees with Specified Diameter -- Treelike Comparability Graphs: Characterization, Recognition, and Applications -- Elegant Distance Constrained Labelings of Trees -- Collective Tree Spanners and Routing in AT-free Related Graphs -- Graph Algorithms: Recognition and Decomposition -- On the Maximum Cardinality Search Lower Bound for Treewidth -- Fully-Dynamic

Recognition Algorithm and Certificate for Directed Cographs --
 Recognizing HHD-free and Welsh-Powell Opposition Graphs --
 Bimodular Decomposition of Bipartite Graphs -- Coloring a Graph
 Using Split Decomposition -- Graph Algorithms: Various Problems --
 Decremental Clique Problem -- A Symbolic Approach to the All-Pairs
 Shortest-Paths Problem -- Minimal de Bruijn Sequence in a Language
 with Forbidden Substrings -- A Graph-Theoretic Generalization of the
 Least Common Subsumer and the Most Specific Concept in the
 Description Logic -- Optimization and Approximation Algorithms --
 The Computational Complexity of the Minimum Weight Processor
 Assignment Problem -- A Stochastic Location Problem with
 Applications to Tele-diagnostic -- A Robust PTAS for Maximum Weight
 Independent Sets in Unit Disk Graphs -- Tolerance Based Algorithms
 for the ATSP -- Parameterized Complexity and Exponential Algorithms
 -- Finding k Disjoint Triangles in an Arbitrary Graph -- Exact
 (Exponential) Algorithms for the Dominating Set Problem -- Linear
 Kernels in Linear Time, or How to Save k Colors in $O(n^2)$ Steps --
 Counting, Combinatorics, and Optimization -- Planar Graphs, via Well-
 Orderly Maps and Trees -- Efficient Computation of the Lovász Theta
 Function for a Class of Circulant Graphs -- Unhooking Circulant
 Graphs: A Combinatorial Method for Counting Spanning Trees and
 Other Parameters -- Applications (Biology, Graph Drawing) --
 Computing Bounded-Degree Phylogenetic Roots of Disconnected
 Graphs -- Octagonal Drawings of Plane Graphs with Prescribed Face
 Areas -- Crossing Reduction in Circular Layouts -- Graph Classes and
 NP Hardness -- Characterization and Recognition of Generalized
 Clique-Helly Graphs -- Edge-Connectivity Augmentation and Network
 Matrices -- Partitioning a Weighted Graph to Connected Subgraphs of
 Almost Uniform Size -- The Hypocoloring Problem: Complexity and
 Approximability Results when the Chromatic Number Is Small -- Core
 Stability of Minimum Coloring Games.

Sommario/riassunto

During its 30-year existence, the International Workshop on Graph-Theoretic Concepts in Computer Science has become a distinguished and high-quality computer science event. The workshop aims at uniting theory and practice by demonstrating how graph-theoretic concepts can successfully be applied to various areas of computer science and by exposing new theories emerging from applications. In this way, WG provides a common ground for the exchange of information among people dealing with several graph problems and working in various disciplines. Thereby, the workshop contributes to forming an interdisciplinary research community. The original idea of the Workshop on Graph-Theoretic Concepts in Computer Science was ingenuity in all theoretical aspects and applications of graph concepts, wherever applied. Within the last ten years, the development has strengthened in particular the topic of structural graph properties in relation to computational complexity. This workshop has become pivotal for the community interested in these areas. An aim specific to the 30th WG was to support the central role of WG in both of the prementioned areas on the one hand and on the other hand to promote its originally broader scope. The 30th WG was held at the Physikzentrum Bad Honnef, which serves as the main meeting point of the German Physical Society. It offers a secluded setting for research conferences, seminars, and workshops, and has proved to be especially stimulating for fruitful discussions. Talks were given in the new lecture hall with a modern double rear projection, interactive electronic board, and full video conferencing equipment.

