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Nota di contenuto	Sharpening Constraint Programming approaches for Bit-Vector Theory -- Range-Consistent Forbidden Regions of Allen's Relations -- MDDs are Efficient Modeling Tools: An Application to Dispersion Constraints -- On Finding the Optimal Relaxed Decision Diagram -- Design and Implementation of Bounded-Length Sequence Variables -- In Search of Balance: The Challenge of Generating Balanced Latin Rectangles -- Debugging Unsatisfiable Constraint Models -- Learning Decision Trees

with Exible Constraints and Objectives Using Integer Optimization -- Relaxation Methods for Constrained Matrix Factorization Problems: Solving the Phase Mapping Problem in Materials Discovery -- Minimizing Landscape Resistance for Habitat Conservation -- A Hybrid Approach for Stator Winding Design Optimization -- A Distributed Optimal Method for the Geographically Distributed Data Centres Problem -- Explanation-Based-Weighted Degree -- Counting-Weighted Spanning Trees to Solve Constrained Minimum Spanning Tree Problems -- The WeightedArborescence Constraint -- Learning When to Use a Decomposition -- Experiments with Conict Analysis in Mixed Integer Programming -- A First Look at Picking Dual Variables for Maximizing Reduced-cost Based fixing -- Experimental Validation of Volume-based Comparison for Double-McCormick Relaxations -- Vehicle Routing Problem with Min-max Objective and Heterogeneous Fleet -- Solving the Traveling Salesman Problem with Time Windows with Dynamic Discretization Discovery -- A Fast Prize-collecting Steiner Forest Algorithm for Functional Analyses in Biological Networks -- Scenario Based Learning for Stochastic Combinatorial Optimization -- Optimal Stock Sizing in a Cutting Stock Problem with Stochastic Demands -- Stochastic Task Networks: Trading Performance for Stability -- Rescheduling Railway Traffic on Real Time Situations Using Time-Interval Variables -- A Multi-stage Simulated Annealing Algorithm for the Torpedo Scheduling Problem -- Combining CP and ILP in a Tree Decomposition of Bounded Height toSolve the Sum Coloring Problem -- A Free, Open-Source Framework for (Customized) Tree Decompositions and Beyond -- The Nemhauser-Trotter Reduction and Lifted Message Passing for Weighted CSPs -- A Local Search Approach for Incomplete Soft Constraint Problems: Experimental Results on Meeting Scheduling Problems.

Sommario/riassunto

This book constitutes the proceedings of the 14th International Conference on Integration of Artificial Intelligence and Operations Research Techniques in Constraint Programming for Combinatorial Optimization Problems, CPAIOR 2017, held in Padua, Italy, in June 2017. The 32 full papers presented together with 6 abstracts were carefully reviewed and selected from numerous submissions. The conference brings together interested researchers from constraint programming, artificial intelligence, and operations research to present new techniques or applications in the intersection of these fields and provides an opportunity for researchers in one area to learn about techniques in the others, and to show how the integration of techniques from different fields can lead to interesting results on large and complex problems.