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| Collana                 | Theoretical Computer Science and General Issues, , 2512-2029 ; ; 11494  |
| Disciplina              | 005.11  |
| Soggetti                | Numerical analysis<br>Artificial intelligence<br>Algorithms<br>Compilers (Computer programs)<br>Computer science<br>Numerical Analysis<br>Artificial Intelligence<br>Compilers and Interpreters<br>Models of Computation  |
| Lingua di pubblicazione | Inglese   |
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| Livello bibliografico   | Monografia  |
| Nota di contenuto       | Constraint Programming for Dynamic Symbolic Execution of JavaScript<br>-- Sequential and Parallel Solution-Biased Search for Subgraph Algorithms -- Core-Boosted Linear Search for Incomplete MaxSAT solving -- Binary Decision Diagrams for Bin Packing with Minimum Color Fragmentation -- Local Rapid Learning for Integer Programs -- A Status Report on Conflict Analysis in Mixed Integer Nonlinear Programming -- Generating Compound Moves in Local Search by Hybridisation with Complete Search -- SAT Encodings of Pseudo-Boolean Constraints with At-Most-One Relations -- A Constraint Programming Approach to Electric Vehicle Routing with Time Windows -- A Sampling-free Anticipatory Algorithm for the Kidney Exchange |

Problem -- Evaluating Ising Processing Units with Integer Programming  
-- Using Cost-Based Solution Densities from TSP Relaxations to Solve Routing Problems -- A Counting-Based Approach to Scalable Micro-service Deployment -- An Optimization Approach to the Ordering Phase of an Attended Home Delivery Service -- Consistency for 0-1 Programming -- Prediction + Optimization for the Knapsack Problem  
-- The maximum weighted submatrix coverage problem: A CP approach -- Learning MILP Resolution Outcomes Before Reaching Time-Limit -- An Improved Subsumption Testing Algorithm for the Optimal-Size Sorting Network Problem -- Investigating Constraint Programming for Real-World Industrial Test Laboratory Scheduling -- An Approach to Robustness in the Stable Roommates Problem and its Comparison with the Stable Marriage Problem -- Optimality Clue for Graph Coloring Problem -- Computing Wasserstein Barycenters via Linear Programming -- Repairing Learned Controllers with Convex Optimization: a Case Study -- A Hybrid Approach for Exact Coloring of Massive Graphs -- Modelling and Solving the Minimum Shift Design Problem -- A Computational Comparison of Optimization Methods for the Golomb Ruler Problem -- A new CP-approach for a parallel machine scheduling problem with time constraints on machine qualifications -- Efficient Solution Methods for the Cumulative-Interference Channel Assignment Problem Using Integer Optimization and Constraint Programming -- Heat Exchanger Circuitry Design by Decision Diagrams -- A Column Generation for Online Ride-Sharing Services -- Some experiments with submodular function maximization via integer programming -- Metric Hybrid Factored Planning in Nonlinear Domains with Constraint Generation -- Last-Mile Scheduling Under Uncertainty -- Building Optimal Steiner Trees on Supercomputers by using up to 43,000 Cores -- Deep Inverse Optimization -- A Study on the Traveling Salesman Problem with a Drone -- Lower Bounds for Uniform Machine Scheduling Using Decision Diagrams -- Extending Compact-MDD to Basic Smart Multi-Valued Variable Diagrams -- Arc Consistency Revisited -- Embedding Decision Diagrams into Generative Adversarial Networks -- Time Table Edge Finding with Energy Variables -- Quadratic Reformulation of Nonlinear Pseudo-Boolean Functions via the Constraint Composite Graph.

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#### Sommario/riassunto

This book constitutes the proceedings of the 16th International Conference on Integration of Constraint Programming, Artificial Intelligence, and Operations Research, CPAIOR 2019, held in Thessaloniki, Greece, in June 2019. The 34 full papers presented together with 9 short papers were carefully reviewed and selected from 94 submissions. The conference brings together interested researchers from Constraint Programming (CP), Artificial Intelligence (AI), and Operations Research (OR) to present new techniques or applications and to provide an opportunity for researchers in one area to learn about techniques in the others. A main objective of this conference series is also to give these researchers the opportunity to show how the integration of techniques from different fields can lead to interesting results on large and complex problems.

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