1. Record Nr. UNISA996466327303316

Titolo	Integration of Constraint Programming, Artificial Intelligence, and Operations Research [[electronic resource]] : 16th International Conference, CPAIOR 2019, Thessaloniki, Greece, June 4–7, 2019, Proceedings / / edited by Louis-Martin Rousseau, Kostas Stergiou
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
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Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XX, 662 p. 389 illus., 91 illus. in color.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 11494
Disciplina	005.11
Soggetti	Numerical analysis Artificial intelligence Algorithms Compilers (Computer programs) Computer science Numerical Analysis Artificial Intelligence Compilers and Interpreters Models of Computation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Constraint Programming for Dynamic Symbolic Execution of JavaScript -- 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.

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.

2. Record Nr. UNISA996464535103316

Titolo	Practical aspects of declarative languages : 24th international symposium, PADL 2022, Philadelphia, PA, USA, January 17-18, 2022 : proceedings / / James Cheney, Simona Perri (editors)
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2022] ©2022
ISBN	3-030-94479-4
Descrizione fisica	1 online resource (225 pages)
Collana	Lecture notes in computer science ; ; 13165
Disciplina	005.131
Soggetti	Declarative programming languages
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Intro -- Preface -- Organization -- Abstracts of Invited Talks -- People, Ideas, and the Path Ahead -- Declarative Programming and Education -- Contents -- Invited Talk -- People, Ideas, and the Path Ahead -- 1 Introduction -- 2 KR Methodology and Practical Applications -- 3 Hybrid Declarative Languages for Practical Applications -- 4 Intelligent Agents as Thought Partners -- 5 Conclusion -- References -- Answer Set Programming -- Modelling the Outlier Detection Problem in ASP(Q) -- 1 Introduction -- 2 Preliminaries -- 3 Outlier Detection -- 4 ASP(Q) Encoding -- 5 Experiments -- 6 Conclusion -- References -- Multi-agent Pick and Delivery with Capacities: Action Planning Vs Path Finding -- 1 Introduction -- 2 Related Work -- 3 MAPDC-P: Solving MAPDC with a Planning Approach -- 3.1 MAPDC as a Planning Problem -- 3.2 Solving MAPDC-P Using Multi-shot ASP -- 4 MAPDC-G: Solving MAPDC with a Path Finding Approach -- 4.1 MAPDC as a Graph Problem -- 4.2 Solving MAPDC-G Using Multi-shot ASP -- 5 Experimental Evaluations -- 6 Conclusions -- References -- Determining Action Reversibility in STRIPS Using Answer Set Programming with Quantifiers -- 1 Introduction -- 2 Background -- 3 Reversibility of Actions -- 4 ASP(Q) Encodings of Reversibility -- 4.1 the plasp Format -- 4.2 a Uniform Reversibility Encoding Using ASP(Q) -- 4.3 A Non-uniform Reversibility Encoding Using ASP(Q) -- 5 Experiments -- 6 Conclusions --

References -- Functional Programming -- Functional Programming on Top of SQL Engines -- 1 Recursive SQL UDFs: From 1000s of Plans to One Plan -- 2 Treating SQL UDFs Like Functions (Not Queries) -- 2.1 Transition from SQL to FP -- 2.2 From Recursion Towards Iteration: CPS and Defunctionalization -- 2.3 Trampolined Style: Single Loop Replaces Mutual Recursion -- 3 An Iterative SQL-Based Interpreter for Recursive UDFs.
3.1 Memoizing the Results of Recursive Calls -- 3.2 Optimizations: Slimmer/Shorter Working and Union Tables -- 4 Experiments: Functional Programming on Top of PostgreSQL -- 5 More Related Work -- 6 Wrap-Up -- References -- CircuitFlow: A Domain Specific Language for Dataflow Programming -- 1 Introduction -- 2 CircuitFlow Language -- 2.1 DataStores -- 2.2 Circuit Type -- 2.3 Circuit Constructors -- 2.4 CircuitFlow in Action -- 2.5 mapC Operator -- 3 CircuitFlow Under the Hood -- 3.1 Circuit API -- 3.2 Network Typeclass -- 3.3 The Basic Network Representation -- 3.4 Translation to a BasicNetwork -- 4 Benchmarks -- 5 Discussion and Related Work -- 6 Conclusion -- References -- Languages, Methods and Tools -- Timed Concurrent Language for Argumentation: An Interleaving Approach -- 1 Introduction -- 2 Background -- 3 Syntax and Semantics -- 4 Modelling a Dialogue -- 5 tcla Simulator -- 6 Related Work -- 7 Conclusion -- References -- Towards Dynamic Consistency Checking in Goal-Directed Predicate Answer Set Programming -- 1 Introduction -- 2 Background: S(CASP) -- 2.1 Execution Procedure of s(CASP) -- 2.2 Unsafe Variables and Uninterpreted Function Symbols -- 2.3 s(CASP) as a Conservative Extension of ASP -- 2.4 The s(CASP) Interpreter -- 3 Dynamic Consistency Checking in s(CASP) -- 3.1 Motivation -- 3.2 Outline of the DCC Approach -- 3.3 Implementation of DCC in s(CASP) -- 4 Evaluation -- 5 Conclusions -- References -- Implementing Stable-Unstable Semantics with ASPTOOLS and Clingo -- 1 Introduction -- 2 Preliminaries -- 2.1 Minimal and Stable Models -- 2.2 Stable-Unstable Semantics -- 3 Modularity -- 4 Translating NLPs into SAT -- 5 Saturation -- 6 Capturing Stable-Unstable Semantics -- 7 Implementation and Practical Modeling -- 7.1 Practical Modeling -- 7.2 Performance Analysis -- 8 Discussion and Conclusion -- References. Smart Devices and Large Scale Reasoning via ASP: Tools and Applications -- 1 Introduction -- 2 The DLV-LS System -- 3 A Use Case Application of DLV-LS -- 4 Conclusion -- References -- Declarative Solutions -- Decomposition-Based Job-Shop Scheduling with Constrained Clustering -- 1 Introduction -- 2 Job-Shop Scheduling Problem -- 3 Feature Extraction -- 4 Constrained Clustering Algorithm -- 5 Evaluation Results -- 6 Related Work -- 7 Conclusions -- References -- Modeling and Verification of Real-Time Systems with the Event Calculus and s(CASP) -- 1 Introduction -- 2 Background -- 2.1 Easy Approach to Requirement Syntax (EARS) -- 2.2 Basic Event Calculus (BEC) -- 2.3 Goal-Directed Answer Set Programming -- 3 Modeling and Verifying Cyber Physical Systems in EC -- 3.1 Train-Gate-Controller in EARS -- 3.2 Train-Gate-Requirements in EC Using s(CASP) -- 4 Checking Safety and Liveness of Train-Gate-Controller -- 4.1 Safety and Liveness Queries -- 5 Conclusion and Future Work -- References -- Parallel Declarative Solutions of Sequencing Problems Using Multi-valued Decision Diagrams and GPUs -- 1 Introduction -- 2 Background -- 2.1 Multi-valued Decision Diagrams -- 2.2 Large Neighborhood Search -- 2.3 GPGPU with CUDA -- 2.4 Related Works -- 3 Design and Implementation -- 3.1 Overview -- 3.2 LNS Parallelization -- 3.3 Implementation Details -- 4 Results and Analysis -- 4.1 Results -- 4.2 Analysis -- 5 Conclusions and Future Work -- References -- Green Application Placement in the