

1. Record Nr.	UNINA9910865238203321
Autore	Sevaux Marc
Titolo	Metaheuristics : 15th International Conference, MIC 2024, Lorient, France, June 4-7, 2024, Proceedings, Part I
Pubbl/distr/stampa	Cham : , : Springer, , 2024 ©2024
ISBN	9783031629129 9783031629112
Edizione	[1st ed.]
Descrizione fisica	1 online resource (404 pages)
Collana	Lecture Notes in Computer Science Series ; ; v.14753
Altri autori (Persone)	OlteanuAlexandru-Liviu PardoEduardo G SifalerasAngelo MakboulSalma
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Organization -- Contents - Part I -- Contents - Part II -- Advances in Combinatorial Optimization -- Breakout Local Search for Heaviest Subgraph Problem -- 1 Introduction -- 2 Breakout Local Search for HSP -- 2.1 General Framework -- 2.2 Initial Solution -- 2.3 Local Search -- 2.4 Adaptive Perturbation -- 3 Experimental Results -- 3.1 Test Instances -- 3.2 Results -- 4 Conclusion -- References -- A Biased Random Key Genetic Algorithm for Solving the -Neighbor p-Center Problem -- 1 Introduction -- 2 Biased Random Key Genetic Algorithm -- 2.1 Decoder -- 2.2 Local Improvement -- 3 Experiments and Results -- 4 Conclusions and Future Work -- References -- A Continuous-GRASP Random-Key Optimizer -- 1 Introduction -- 2 Random-Key Optimizer -- 3 Random-Key GRASP -- 3.1 GRASP -- 3.2 Continuous GRASP -- 3.3 Random-Key-GRASP -- 4 Experimental Results -- References -- Adaptive Ant Colony Optimization Using Node Clustering with Simulated Annealing -- 1 Introduction -- 2 Adaptive Ant Colony Optimization -- 3 Simulated Annealing -- 4 Numerical Experiment -- 5 Conclusion -- References -- Job-Shop Scheduling with Robot Synchronization for Transport Operations -- 1 Introduction

-- 2 Problem Description -- 3 Linear Formulation of the Problem -- 3.1 Data -- 3.2 Decision Variables -- 3.3 Objective Function -- 3.4 Constraints -- 4 Metaheuristic Based Resolution -- 4.1 Solution Modeling Based on Disjunctive Graph -- 4.2 Indirect Representation of a Solution Using Bierwith's Vector -- 4.3 Local Search -- 4.4 Metaheuristic -- 5 Numerical Experiments -- 6 Conclusion -- References -- AI and Metaheuristics for Routing -- SIRO: A Deep Learning-Based Next-Generation Optimizer for Solving Global Optimization Problems -- 1 Introduction -- 2 Model Description -- 2.1 SIRO Algorithm Modelling -- 2.2 SIRO Model. 2.3 Basic and Neural Network-Based Initialization Methods -- 2.4 SIRO Neural Network-Based Parameter Selection -- 2.5 SIRO Algorithms and Computational Complexity -- 3 System and Parameter Configuration -- 3.1 Results and Discussion -- 3.2 Analysis of Statistical Results -- 4 Conclusion and Future Work -- References -- Investigation of the Benefit of Extracting Patterns from Local Optima to Solve a Bi-objective VRPTW -- 1 Introduction -- 2 Multi-objective Optimization -- 3 Learning and Multi-objective Optimization -- 4 Hybridization Between Learning and MOEA/D -- 4.1 MOEA/D -- 4.2 Learning Within A and Variants -- 5 Problem and Related Knowledge -- 5.1 Vehicle Routing Problems with Time Windows (VRPTW) -- 5.2 Pattern Injection Local Search -- 6 Experimental Setup -- 6.1 The Solomon's Benchmark -- 6.2 Setup and Tuning -- 7 Experimental Design -- 8 Experimental Results -- 9 Conclusion -- References -- A Memetic Algorithm for Large-Scale Real-World Vehicle Routing Problems with Simultaneous Pickup and Delivery with Time Windows -- 1 Introduction -- 2 Related Works -- 3 VRPSPDTW Problem Formulation -- 4 Memetic Algorithm for the VRPSPDTW -- 4.1 Solution (Chromosome) Representation and Initialization -- 4.2 Crossover -- 4.3 Local Search -- 5 Computational Study and Experimental Analysis -- 5.1 Problem Instances from JD Logistics -- 5.2 Experimental Setup -- 5.3 Comparing BCRCDD with Other Crossovers -- 5.4 Comparing MA-BCRCDD with MATE with and Without Crossover -- 6 Conclusion -- References -- Tabu Search for Solving Covering Salesman Problem with Nodes and Segments -- 1 Introduction -- 2 Covering Salesman Problem with Nodes and Segments -- 3 Proposed Method -- 3.1 Local Search Method -- 3.2 Tabu Search -- 4 Simulations and Results -- 5 Conclusion -- References -- GRASP with Path Relinking. VNS with Path Relinking for the Profitable Close-Enough Arc Routing Problem -- 1 Introduction -- 2 Previous GRASP Approaches -- 3 A New Heuristic Algorithm Based on VNS -- 3.1 The Path Relinking Post-processing -- 4 Computational Experiments and Conclusions -- References -- Meta-Heuristics for Preference Learning -- A Simulated Annealing Algorithm to Learn an RMP Preference Model -- 1 Introduction -- 2 Ranking Based on Multiple Reference Profiles (RMP) -- 3 A Simulated Annealing Algorithm to Learn RMP/SRMP Models -- 4 Numerical Analysis -- 5 Conclusion and Future Work -- References -- New VRP and Extensions -- Iterative Heuristic over Periods for the Inventory Routing Problem -- 1 Introduction -- 2 The Inventory Routing Problem -- 3 The Iterative Heuristic over Periods -- 4 Computational Experiments -- 4.1 Instances -- 4.2 Results -- 5 Conclusion -- References -- Combining Heuristics and Constraint Programming for the Parallel Drone Scheduling Vehicle Routing Problem with Collective Drones -- 1 Introduction -- 2 Problem Description -- 3 Constraint Programming Models -- 4 Experimental Results -- References -- Operations Research for Health Care -- A Re-optimization Heuristic for a Dial-a-Ride Problem in the Transportation of Patients -- 1 Introduction -- 2 Literature Review -- 3 Problem

Description -- 4 Re-optimization Heuristic -- 5 Numerical Experiments -- 6 Conclusions and Future Works -- References -- Solving the Integrated Patient-to-Room and Nurse-to-Patient Assignment by Simulated Annealing -- 1 Introduction -- 2 Search Method -- 3 Preliminary Results -- 4 Conclusions -- References -- Enhancing Real-World Applicability in Home Healthcare: A Metaheuristic Approach for Advanced Routing and Scheduling -- 1 Introduction -- 2 Problem Formulation -- 2.1 Basic Formulation -- 2.2 Extended Formulation -- 3 Solution Technique -- 4 Experimental Results.

5 Conclusions and Future Work -- References -- Solving the Two-Stage Robust Elective Patient Surgery Planning Under Uncertainties with Intensive Care Unit Beds Availability -- 1 Introduction and Related Works -- 2 Solving the Two-Stage Robust Elective Surgery Planning -- 3 Computational Experience -- 4 Conclusion and Perspectives -- References -- Extracting White-Box Knowledge from Word Embedding: Modeling as an Optimization Problem -- 1 Introduction -- 2 Background on Word Embedding -- 3 A Combinatorial Optimization Model to Extract White-Box Knowledge from Word Embedding -- 3.1 Solution Modeling -- 3.2 Resolution with a Local Search -- 4 Experiments and Results -- 5 Conclusion and Further Research -- References -- A Hybrid Biased-Randomized Heuristic for a Home Care Problem with Team Scheme Selection -- 1 Introduction -- 2 Solution Methodology -- 3 Results -- 4 Conclusions and Future Work -- References -- Optimization for Forecasting -- Extended Set Covering for Time Series Segmentation -- 1 Introduction -- 2 An Extended Set Covering Model -- 3 Computational Experience -- 4 Conclusions -- References -- Quantum Meta-Heuristic for Operations Research -- Indirect Flow-Shop Coding Using Rank: Application to Indirect QAOA -- 1 Introduction -- 2 Indirect Flow-Shop Coding Using Rank -- 2.1 Graph Modeling -- 2.2 Quasi-Direct Representation -- 2.3 Indirect Representation of Solutions -- 2.4 Resolution of the Carlier 7 Jobs 7 Machines Instance -- 2.5 Resolution of the Carlier 8 Jobs 8 Machines Instance -- 2.6 Resolution of the Carlier 8 Jobs 9 Machines Instance -- 3 Conclusion -- References -- Utilizing Graph Sparsification for Pre-processing in Max Cut QUBO Solver -- 1 Introduction -- 1.1 Our Contributions -- 1.2 Related Works -- 2 Preliminaries -- 2.1 Max Cut Problem -- 2.2 QUBO Formulation for the Max Cut Problem. 2.3 Graph Sparsification by Effective Resistances ch22spielman2008graph -- 3 Proposed Method -- 4 Experimental Results -- 4.1 Gap in Solutions Due to Graph Sparsification -- 4.2 Computation Time in Classical Solver -- 4.3 Experiments on Quantum-Inspired Solvers -- 4.4 Discussions on Results on Classical and Quantum-Inspired Solvers -- 5 Conclusion and Future Works -- References -- Addressing Machine Unavailability in Job Shop Scheduling: A Quantum Computing Approach -- 1 Introduction -- 2 Problem Definition -- 3 Related Works -- 4 QUBO Formulation -- 5 Non Fixed Resource Availability Constraints -- 6 Computational Experiments -- 7 Discussion -- References -- Solving Edge-Weighted Maximum Clique Problem with DCA Warm-Start Quantum Approximate Optimization Algorithm -- 1 Introduction -- 2 Introduction to QAOA and Warm-Start Method -- 2.1 Introduction to QAOA -- 2.2 Introduction to the Warm-Start Method in Quantum Optimization -- 3 Warm Start Method for QAOA with Non-convex Relaxed Quadratic Binary Optimization Problem -- 3.1 General Warm-Start Method with DCA -- 3.2 Quadratic Formulation of Edge-Weighted Max Clique Problem -- 4 Numerical Simulation -- 5 Conclusion and Future Work -- References -- Comparing Integer Encodings in QUBO for Quantum and Digital Annealing: The Travelling Salesman Problem -- 1

Introduction -- 2 Quantum Annealing and QUBO -- 3 The Travelling Salesman Problem in QUBO -- 4 Experimental Results -- 5 Conclusion -- References -- Solving Quadratic Knapsack Problem with Biased Quantum State Optimization Algorithm -- 1 Introduction -- 2 Preliminary -- 2.1 Introduction to QAOA -- 2.2 Introduction to Quadratic Knapsack Problem and Its Reformulations for QAOA -- 3 Introduction to Biased Quantum State for Constrained Quadratic Binary Optimization -- 4 Numerical Simulation -- 5 Conclusion and Future Work -- References.

Quantum Optimization Approach for Feature Selection in Machine Learning.
