

# Table of Contents

|                                                                                                                                                         |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Dual Sequence Simulated Annealing with Round-Robin Approach for University Course Timetabling.....                                                      | 1   |
| <i>Salwani Abdullah, Khalid Shaker, Barry McCollum, and Paul McMullan</i>                                                                               |     |
| Heuristic and Exact Methods for the Discrete (r   p)-Centroid Problem .....                                                                             | 11  |
| <i>Ekaterina Alekseeva, Nina Kochetova, Yury Kochetov, and Alexandr Plyasunov</i>                                                                       |     |
| On the Benefit of Sub-optimality within the Divide-and-Evolve Scheme .....                                                                              | 23  |
| <i>Jacques Bibai, Pierre Savéant, Marc Schoenauer, and Vincent Vidal</i>                                                                                |     |
| A Real-Integer-Discrete-Coded Differential Evolution Algorithm: A Preliminary Study .....                                                               | 35  |
| <i>Dilip Datta and José Rui Figueira</i>                                                                                                                |     |
| Fitness Distance Correlation and Search Space Analysis for Permutation Based Problems .....                                                             | 47  |
| <i>Botond Draskoczy</i>                                                                                                                                 |     |
| A Genetic Algorithm to Minimize Chromatic Entropy .....                                                                                                 | 59  |
| <i>Greg Durrett, Muriel Médard, and Una-May O'Reilly</i>                                                                                                |     |
| Evolutionary Approaches to the Three-dimensional Multi-pipe Routing Problem: A Comparative Study Using Direct Encodings .....                           | 71  |
| <i>Marcus Furuholmen, Kyrre Glette, Mats Hovin, and Jim Torresen</i>                                                                                    |     |
| A Tabu Search Heuristic for Point Coverage, Sink Location, and Data Routing in Wireless Sensor Networks .....                                           | 83  |
| <i>Euren Güney, İ. Kuban Altınel, Necati Aras, and Cem Ersoy</i>                                                                                        |     |
| Ant Colony Optimization for Tree Decompositions .....                                                                                                   | 95  |
| <i>Thomas Hammerl and Nysret Musliu</i>                                                                                                                 |     |
| Iterated Local Search with Path Relinking for Solving Parallel Machines Scheduling Problem with Resource-Assignable Sequence Dependent Setup Times..... | 107 |
| <i>Edmar Hell Kampke, José Elias Claudio Arroyo, and André Gustavo Santos</i>                                                                           |     |

|                                                                                                                                  |     |
|----------------------------------------------------------------------------------------------------------------------------------|-----|
| Enhancing a Tabu Algorithm for Approximate Graph Matching by<br>Using Similarity Measures .....                                  | 119 |
| <i>Segla Kpodjedo, Philippe Galinier, and Giulio Antoniol</i>                                                                    |     |
| Characterizing Fault-Tolerance of Genetic Algorithms in Desktop Grid<br>Systems .....                                            | 131 |
| <i>Daniel Lombr  a Gonz  lez, Juan Lu  s Jim  nez Laredo,<br/>Francisco Fern  ndez de Vega, and Juan Juli  n Merelo Guerv  s</i> |     |
| The Office-Space-Allocation Problem in Strongly Hierarchized<br>Organizations .....                                              | 143 |
| <i>Rui Lopes and Daniela Girimonte</i>                                                                                           |     |
| A Study of Memetic Search with Multi-parent Combination for<br>UBQP .....                                                        | 154 |
| <i>Zhipeng L  , Jin-Kao Hao, and Fred Glover</i>                                                                                 |     |
| Bicriteria Scheduling Problem on the Two-Machine Flowshop Using<br>Simulated Annealing .....                                     | 166 |
| <i>Mohammad Mesgarpour, Nureddin Kirkavak, and Hakan Ozaktas</i>                                                                 |     |
| A Memetic Algorithm for Workforce Distribution in Dynamic<br>Multi-Skill Call Centres .....                                      | 178 |
| <i>David Mill  n-Ruiz and J. Ignacio Hidalgo</i>                                                                                 |     |
| Geometric Generalization of the Nelder-Mead Algorithm .....                                                                      | 190 |
| <i>Alberto Moraglio and Colin G. Johnson</i>                                                                                     |     |
| Guided Ejection Search for the Pickup and Delivery Problem with<br>Time Windows .....                                            | 202 |
| <i>Yuichi Nagata and Shigenobu Kobayashi</i>                                                                                     |     |
| An Evolutionary Algorithm Guided by Preferences Elicited According<br>to the ELECTRE TRI Method Principles .....                 | 214 |
| <i>Eunice Oliveira and Carlos Henggeler Antunes</i>                                                                              |     |
| Multilevel Variable Neighborhood Search for Periodic Routing<br>Problems .....                                                   | 226 |
| <i>Sandro Pirkwieser and G  nther R. Raidl</i>                                                                                   |     |
| Enhancing Genetic Algorithms by a Trie-Based Complete Solution<br>Archive .....                                                  | 239 |
| <i>G  nther R. Raidl and Bin Hu</i>                                                                                              |     |
| A New Primal-Dual Genetic Algorithm: Case Study for the Winner<br>Determination Problem .....                                    | 252 |
| <i>Madalina Raschip and Cornelius Croitoru</i>                                                                                   |     |

|                                                                                                                 |     |
|-----------------------------------------------------------------------------------------------------------------|-----|
| Local Search Algorithms on Graphics Processing Units. A Case Study:<br>The Permutation Perceptron Problem ..... | 264 |
| <i>Thé Van Luong, Nouredine Melab, and El-Ghazali Talbi</i>                                                     |     |
| Efficient Cycle Search for the Minimum Routing Cost Spanning Tree<br>Problem .....                              | 276 |
| <i>Steffen Wolf and Peter Merz</i>                                                                              |     |
| <b>Author Index</b> .....                                                                                       | 289 |