

# Table of Contents

A Hybrid Bin-Packing Heuristic to Multiprocessor Scheduling . . . . .	1
<i>Adriana C.F. Alvim, Celso C. Ribeiro</i>	
Efficient Edge-Swapping Heuristics for Finding Minimum Fundamental Cycle Bases . . . . .	14
<i>Edoardo Amaldi, Leo Liberti, Nelson Maculan, Francesco Maffioli</i>	
Solving Chance-Constrained Programs Combining Tabu Search and Simulation . . . . .	30
<i>Roberto Aringhieri</i>	
An Algorithm to Identify Clusters of Solutions in Multimodal Optimisation . . . . .	42
<i>Pedro J. Ballester, Jonathan N. Carter</i>	
On an Experimental Algorithm for Revenue Management for Cargo Airlines . . . . .	57
<i>Paul Bartodziej, Ulrich Derigs</i>	
Cooperation between Branch and Bound and Evolutionary Approaches to Solve a Bi-objective Flow Shop Problem . . . . .	72
<i>Mathieu Basseur, Julien Lemesre, Clarisse Dhaenens, El-Ghazali Talbi</i>	
Simple Max-Cut for Split-Indifference Graphs and Graphs with Few $P_4$ 's . . . . .	87
<i>Hans L. Bodlaender, Celina M.H. de Figueiredo, Marisa Gutierrez, Ton Kloks, Rolf Niedermeier</i>	
A Randomized Heuristic for Scene Recognition by Graph Matching . . . . .	100
<i>Maria C. Boeres, Celso C. Ribeiro, Isabelle Bloch</i>	
An Efficient Implementation of a Joint Generation Algorithm . . . . .	114
<i>Endre Boros, Khaled Elbassioni, Vladimir Gurvich, Leonid Khachiyan</i>	
Lempel, Even, and Cederbaum Planarity Method . . . . .	129
<i>John M. Boyer, Cristina G. Fernandes, Alexandre Noma, José C. de Pina*</i>	
A Greedy Approximation Algorithm for the Uniform Labeling Problem Analyzed by a Primal-Dual Technique . . . . .	145
<i>Evandro C. Bracht, Luis A.A. Meira, Flávio K. Miyazawa</i>	
Distributed Circle Formation for Anonymous Oblivious Robots . . . . .	159
<i>Ioannis Chatzigiannakis, Michael Markou, Sotiris Nikolettseas</i>	

Dynamic Programming and Column Generation Based Approaches for Two-Dimensional Guillotine Cutting Problems . . . . .	175
<i>Glauber Cintra, Yoshiko Wakabayashi</i>	
Engineering Shortest Path Algorithms . . . . .	191
<i>Camil Demetrescu, Giuseppe F. Italiano</i>	
How to Tell a Good Neighborhood from a Bad One: Satisfiability of Boolean Formulas . . . . .	199
<i>Tassos Dimitriou, Paul Spirakis</i>	
Implementing Approximation Algorithms for the Single-Source Unsplittable Flow Problem . . . . .	213
<i>Jingde Du, Stavros G. Kolliopoulos</i>	
Fingered Multidimensional Search Trees . . . . .	228
<i>Amalia Duch, Conrado Martínez</i>	
Faster Deterministic and Randomized Algorithms on the Homogeneous Set Sandwich Problem . . . . .	243
<i>Celina M.H. de Figueiredo, Guilherme D. da Fonseca, Vinícius G.P. de Sá, Jeremy Spinrad</i>	
Efficient Implementation of the BSP/CGM Parallel Vertex Cover FPT Algorithm . . . . .	253
<i>Erik J. Hanashiro, Henrique Mongelli, Siang W. Song</i>	
Combining Speed-Up Techniques for Shortest-Path Computations . . . . .	269
<i>Martin Holzer, Frank Schulz, Thomas Willhalm</i>	
Increased Bit-Parallelism for Approximate String Matching . . . . .	285
<i>Heikki Hyyrö, Kimmo Fredriksson, Gonzalo Navarro</i>	
The Role of Experimental Algorithms in Genomics . . . . .	299
<i>Richard M. Karp</i>	
A Fast Algorithm for Constructing Suffix Arrays for Fixed-Size Alphabets . . . . .	301
<i>Dong K. Kim, Junha Jo, Heejin Park</i>	
Pre-processing and Linear-Decomposition Algorithm to Solve the k-Colorability Problem . . . . .	315
<i>Corinne Lucet, Florence Mendes, Aziz Moukrim</i>	
An Experimental Study of Unranking Algorithms . . . . .	326
<i>Conrado Martínez, Xavier Molinero</i>	

An Improved Derandomized Approximation Algorithm for the Max-Controlled Set Problem . . . . .	341
<i>Carlos A. Martinhon, Fábio Protti</i>	
GRASP with Path-Relinking for the Quadratic Assignment Problem . . . .	356
<i>Carlos A.S. Oliveira, Panos M. Pardalos, Mauricio G.C. Resende</i>	
Finding Minimum Transmission Radii for Preserving Connectivity and Constructing Minimal Spanning Trees in Ad Hoc and Sensor Networks . . . . .	369
<i>Francisco Javier Ovalle-Martínez, Ivan Stojmenovic, Fabián García-Nocetti, Julio Solano-González</i>	
A Dynamic Algorithm for Topologically Sorting Directed Acyclic Graphs . . . . .	383
<i>David J. Pearce, Paul H.J. Kelly</i>	
Approximating Interval Coloring and Max-Coloring in Chordal Graphs . . . . .	399
<i>Sriram V. Pemmaraju, Sriram Penumatcha, Rajiv Raman</i>	
A Statistical Approach for Algorithm Selection . . . . .	417
<i>Joaquín Pérez, Rodolfo A. Pazos, Juan Frausto, Guillermo Rodríguez, David Romero, Laura Cruz</i>	
An Improved Time-Sensitive Metaheuristic Framework for Combinatorial Optimization . . . . .	432
<i>Vinhthuy Phan, Steven Skiena</i>	
A Huffman-Based Error Detecting Code . . . . .	446
<i>Paulo E.D. Pinto, Fábio Protti, Jayme L. Szwarcfiter</i>	
Solving Diameter Constrained Minimum Spanning Tree Problems in Dense Graphs . . . . .	458
<i>Andréa C. dos Santos, Abílio Lucena, Celso C. Ribeiro</i>	
An Efficient Tabu Search Heuristic for the School Timetabling Problem . . . . .	468
<i>Haroldo G. Santos, Luiz S. Ochi, Marccone J.F. Souza</i>	
Experimental Studies of Symbolic Shortest-Path Algorithms . . . . .	482
<i>Daniel Sawitzki</i>	
Experimental Comparison of Greedy Randomized Adaptive Search Procedures for the Maximum Diversity Problem . . . . .	498
<i>Geiza C. Silva, Luiz S. Ochi, Simone L. Martins</i>	
Using Compact Tries for Cache-Efficient Sorting of Integers . . . . .	513
<i>Ranjan Sinha</i>	

Using Random Sampling to Build Approximate Tries for Efficient  
String Sorting ..... 529  
*Ranjan Sinha, Justin Zobel*

The Datapath Merging Problem in Reconfigurable Systems: Lower  
Bounds and Heuristic Evaluation ..... 545  
*Cid C. de Souza, André M. Lima, Nahri Moreano, Guido Araujo*

An Analytical Model for Energy Minimization ..... 559  
*Claude Tadonki, Jose Rolim*

A Heuristic for Minimum-Width Graph Layering with Consideration  
of Dummy Nodes ..... 570  
*Alexandre Tarassov, Nikola S. Nikolov, Jürgen Branke*

**Author Index** ..... 585