

Table of Contents

EvoCOP Talks

Hyperheuristics: A Tool for Rapid Prototyping in Scheduling and Optimisation	1
<i>Peter Cowling, Graham Kendall, Eric Soubeiga</i>	
SavingsAnts for the Vehicle Routing Problem	11
<i>Karl Doerner, Manfred Gronalt, Richard F. Hartl, Marc Reimann, Christine Strauss, Michael Stummer</i>	
Updating ACO Pheromones Using Stochastic Gradient Ascent and Cross-Entropy Methods	21
<i>Marco Dorigo, Mark Zlochin, Nicolas Meuleau, Mauro Birattari</i>	
Non-parametric Estimation of Properties of Combinatorial Landscapes . . .	31
<i>Anton Eremeev, Colin R. Reeves</i>	
Performance of Evolutionary Approaches for Parallel Task Scheduling under Different Representations	41
<i>Susana Esquivel, Claudia Gatica, and Raúl Gallard</i>	
A Performance Comparison of Alternative Heuristics for the Flow Shop Scheduling Problem	51
<i>Susana Esquivel, Guillermo Leguizamón, Federico Zuppa, Raúl Gallard</i>	
Exploiting Fitness Distance Correlation of Set Covering Problems	61
<i>Markus Finger, Thomas Stützle, Helena Lourenço</i>	
A Population Based Approach for ACO	72
<i>Michael Guntsch, Martin Middendorf</i>	
Comparing Classical Methods for Solving Binary Constraint Satisfaction Problems with State of the Art Evolutionary Computation	82
<i>Jano I. van Hemert</i>	
Application of Genetic Algorithms in Nanoscience: Cluster Geometry Optimization	92
<i>Roy L. Johnston, Thomas V. Mortimer-Jones, Christopher Roberts, Sarah Darby, Frederick R. Manby</i>	
A Memetic Algorithm for Vertex-Biconnectivity Augmentation	102
<i>Sandor Kersting, Günther R. Raidl, Ivana Ljubić</i>	

Genetic, Iterated and Multistart Local Search for the Maximum Clique Problem	112
<i>Elena Marchiori</i>	
An Experimental Investigation of Iterated Local Search for Coloring Graphs	122
<i>Luis Paquete, Thomas Stützle</i>	
Solving Car Sequencing Problems by Local Optimization	132
<i>Markus Puchta, Jens Gottlieb</i>	
Evolution Strategies, Network Random Keys, and the One-Max Tree Problem	143
<i>Barbara Schindler, Franz Rothlauf, Hans-Josef Pesch</i>	
Evolutionary Computational Approaches to Solving the Multiple Traveling Salesman Problem Using a Neighborhood Attractor Schema	153
<i>Donald Sofge, Alan Schultz, Kenneth De Jong</i>	
Boosting ACO with a Preprocessing Step	163
<i>Christine Solnon</i>	
A Memetic Algorithm Guided by <i>Quicksort</i> for the Error-Correcting Graph Isomorphism Problem	173
<i>Rodolfo Torres-Velázquez, Vladimir Estivill-Castro</i>	
EvoIASP Talks	
Evolutionary Techniques for Minimizing Test Signals Application Time . . .	183
<i>Fulvio Corno, Matteo Sonza Reorda, Giovanni Squillero</i>	
Prediction and Modelling of the Flow of a Typical Urban Basin through Genetic Programming	190
<i>Julian Dorado, Juan R. Rabuñal, Jerónimo Puertas, Antonino Santos, Daniel Rivero</i>	
Using EAs for Error Prediction in Near Infrared Spectroscopy	202
<i>Cyril Fonlupt, Sébastien Cahon, Denis Robilliard, El-Ghazali Talbi, Ludovic Duponchel</i>	
The Prediction of Journey Times on Motorways Using Genetic Programming	210
<i>Daniel Howard, Simon C. Roberts</i>	
The Boru Data Crawler for Object Detection Tasks in Machine Vision . . .	222
<i>Daniel Howard, Simon C. Roberts, Conor Ryan</i>	
Surface Profile Reconstruction from Scattered Intensity Data Using Evolutionary Strategies	233
<i>Demetrio Macías, Gustavo Olague, Eugenio R. Méndez</i>	

Detection of Incidents on Motorways in Low Flow High Speed Conditions by Genetic Programming	245
<i>Simon C. Roberts, Daniel Howard</i>	
Image Filter Design with Evolvable Hardware	255
<i>Lukáš Sekanina</i>	
A Dynamic Fitness Function Applied to Improve the Generalisation when Evolving a Signal Processing Hardware Architecture	267
<i>Jim Torresen</i>	
Efficiently Computable Fitness Functions for Binary Image Evolution.....	280
<i>Róbert Ványi</i>	
Evolutionary Based Autocalibration from the Fundamental Matrix	292
<i>Anthony Whitehead, Gerhard Roth</i>	
Medical Image Registration Using Parallel Genetic Algorithms.....	304
<i>Yong Fan, Tianzi Jiang, David J. Evans</i>	
EvoSTIM/EvoPLAN Talks	
Disruption Management for an Airline – Rescheduling of Aircraft	315
<i>Michael Løve, Kim Riis Sørensen, Jesper Larsen, Jens Clausen</i>	
Ant Colony Optimization with the Relative Pheromone Evaluation Method	325
<i>Daniel Merkle, Martin Middendorf</i>	
Improving Street Based Routing Using Building Block Mutations	334
<i>Neil Urquhart, Peter Ross, Ben Paechter, Kenneth Chisholm</i>	
Author Index.....	343

<http://www.springer.com/978-3-540-43432-0>

Applications of Evolutionary Computing
EvoWorkshops 2002: EvoCOP, EvoIASP,
EvoSTIM/EvoPLAN Kinsale, Ireland, April 3-4, 2002.

Proceedings

Cagnoni, S.; Gottlieb, J.; Hart, E.; Middendorf, M.; Raidl,
G.R. (Eds.)

2002, XIV, 346 p., Softcover

ISBN: 978-3-540-43432-0