David Corne Jonathan L. Shapiro (Eds.)

Evolutionary Computing

AISB International Workshop Manchester, UK, April 7-8, 1997 Selected Papers



Table of Contents

Evolutionary Approaches to Issues in Biology and Economics
Simulating Pricing Behaviours Using a Genetic Algorithm
Biologically Inspired Computational Ecologies: A Case Study 11 Paul Devine, Ray Paton (University of Liverpool)
Modelling Bounded Rationality Using Evolutionary Techniques 31 Bruce Edmonds, Scott Moss (Manchester Metropolitan University)
The Abstract Theory of Evolution of the Living 43 V.L. Kalmykov (Russian Academy of Sciences)
Problem Structure and Fitness Landscapes
An Evolutionary Algorithm for Single Objective Nonlinear Constrained Optimization Problems
On Recombinative Sampling
The Evolution of Mutation, Plasticity and Culture in Cyclically Changing Environments 75 Tony Hirst (Open University)
On the Structure and Transformation of Landscapes
Island Model genetic Algorithms and Linearly Separable Problems 109 Darrell Whitley, Soraya Rana, Robert Heckendorn (Colorado State Uni- versity)
Evolutionary Machine Learning and Classifier Systems . 127
Empirical Validation of the Performance of a Class of Transient Detector . 129 Philip Jacob, Andrew Ball (University of Manchester)
The Construction and Evaluation of Decision Trees: a Comparison of Evo- lutionary and Concept Learning Methods

H. Kennedy, C. Chinniah, P. Bradbeer, L. Morss (Napier University)

Parallel Distributed Genetic Programming Applied to the Evolution of Natural Language Recognisers 1 Riccardo Poli (University of Birmingham)	.63
Progress in Evolutionary Scheduling 1	79
Scheduling Planned Maintenance of the South Wales Region of the Na- tional Grid 1 Bill Langdon (University of Birmingham)	81
Solving Generic Scheduling Problems with a Distributed Genetic Algorithm Malcolm McIlhagga (University of Sussex)	99
Directing the Search of Evolutionary and Neighbourhood-Search Optimis- ers for the Flowshop Sequencing Problem with an Idle-Time Heuristic 2 Peter Ross, Andrew Tuson (University of Edinburgh)	213
Multiobjective Genetic Algorithms for Pump Scheduling in Water Supply . 2 Dragan Savic, Godfrey Walters (University of Exeter), Martin Schwab (University of Stuttgart)	227
Use of Rules and Preferences for Schedule Builders in Genetic Algorithms for Production Scheduling	237
Novel techniques and Applications of Evolutionary Algorithms	251
A Voxel Based Approach to Evolutionary Shape Optimisation	253
Phase Transition Networks: A Modelling Technique Supporting the Evolution of Autonomous Agents' Tactical and Operational Activities 2 Anthony Deakin, Derek Yates (University of Liverpool)	263
An Evolutionary, Agent-Assisted Strategy for Conceptual Design Space Decomposition	275
Task Scheduling with use of Classifier Systems 2 Franciszek Seredyński (Polish Academy of Sciences)	287
Author Index	307

,

.