

Contents

Introduction	1
<i>Francisco Fernández de Vega, Erick Cantú-Paz</i>	
When Huge Is Routine: Scaling Genetic Algorithms and Estimation of Distribution Algorithms via Data-Intensive Computing	11
<i>Xavier Llorà, Abhishek Verma, Roy H. Campbell, David E. Goldberg</i>	
Evolvable Agents: A Framework for Peer-to-Peer Evolutionary Algorithms	43
<i>Juan Luis Jimenez Laredo, Juan Julian Merelo Guervos, Pedro Angel Castillo Valdivieso</i>	
Evolutionary Algorithms on Volunteer Computing Platforms: The MilkyWay@Home Project	63
<i>Nate Cole, Travis Desell, Daniel Lombrana González, Francisco Fernández de Vega, Malik Magdon-Ismail, Heidi Newberg, Boleslaw Szymanski, Carlos Varela</i>	
Self-coordinated On-Chip Parallel Computing: A Swarm Intelligence Approach	91
<i>Danilo Pani, Luigi Raffo</i>	
Large Scale Bioinformatics Data Mining with Parallel Genetic Programming on Graphics Processing Units	113
<i>William B. Langdon</i>	
A Review on Parallel Estimation of Distribution Algorithms	143
<i>Alexander Mendiburu, Jose Miguel-Alonso, Jose A. Lozano</i>	

Parallel Multi-objective Optimization Using Self-organized Heterogeneous Resources	165
<i>Sanaz Mostaghim</i>	
The Role of Explicit Niching and Communication Messages in Distributed Evolutionary Multi-objective Optimization ...	181
<i>Lam T. Bui, Daryl Essam, Hussein A. Abbass</i>	
Adaptive Scheduling Algorithms for the Dynamic Distribution and Parallel Execution of Spatial Agent-Based Models	207
<i>Matthias Scheutz, Jack Harris</i>	
On the Use of Distributed Genetic Algorithms for the Tuning of Fuzzy Rule Based-Systems	235
<i>Ignacio Robles, Rafael Alcalá, José M. Benítez, Francisco Herrera</i>	
Parallel and Distributed Optimization of Dynamic Data Structures for Multimedia Embedded Systems	263
<i>José L. Risco-Martín, David Atienza, J. Ignacio Hidalgo, Juan Lanchares</i>	
A Grid-Based Hybrid Hierarchical Genetic Algorithm for Protein Structure Prediction	291
<i>Alexandru-Adrian Tantar, Nouredine Melab, El-Ghazali Talbi</i>	
Laser Dynamics Modelling and Simulation: An Application of Dynamic Load Balancing of Parallel Cellular Automata ...	321
<i>J.L. Guisado, F. Jiménez-Morales, J.M. Guerra, F. Fernández de Vega, K.A. Iskra, P.M.A. Sloot, Daniel Lombraña González</i>	
Author Index	349