Genetic and Evolutionary Computation Conference 2007 Best Papers

The Track Chairs, Editor in Chief, and Conference Chair nominated the papers that received the most nominations from Program Committee members and/or the highest evaluation scores. Best Paper winners were determined by a ballot vote by attendees.

Ant Colony Optimization and Swarm Intelligence, and Artificial Immune Systems

On the Runtime Analysis of the 1-ANT ACO Algorithm
Benjamin Doerr, Frank Neumann, Dirk Sudholt, Carsten Witt

Artificial Life, Evolutionary Robotics, Adaptive Behavior, Evolvable Hardware

The Effect of Learning on Life History Evolution
John A. Bullinaria

Biological Applications

Discrimination of Metabolic Flux Profiles Using a Hybrid Evolutionary Algorithm
Stefan Bleuler, Eckart Zitzler

Coevolution

Objective Fitness Correlation
Edwin D. De Jong

Estimation of Distribution Algorithms

Towards Billion-Bit Optimization via a Parallel Estimation of Distribution Algorithm
Kumara Sastry, David E. Goldberg, Xavier Llorà

Evolution Strategies, Evolutionary Programming

Reducing the Space-Time Complexity of the CMA-ES
James N Knight, Monte Lunacek

Evolutionary Multiobjective Optimization

Convergence of Stochastic Search Algorithms to Gap-Free Pareto FrontApproximations
Oliver Schütze, Marco LaumannsEmilia Tantar, Carlos A. Coello Coello, El-ghazali Talbi

Formal Theory

Evolutionary Algorithms and Matroid Optimization Problems
Joachim Reichel, Martin Skutella

Generative and Developmental Systems

Acquiring Evolvability through Adaptive Representations
Joseph S Reisinger, Risto Miikkulainen

Genetic Algorithms

Fitness-Proportional Negative Slope Coefficient as a Hardness Measure for Genetic Algorithms
Riccardo Poli, Leonardo Vanneschi

Search-Based Software Engineering

The Multi-Objective Next Release Problem
Yuanyuan Zhang, Mark Harman, S. Afshin Mansouri

Genetic Programming

Learning Noise
Michael D Schmidt, Hod Lipson

Genetics-Based Machine Learning

Controlling Overfitting with Multi-Objective Support Vector Machines
Ingo Mierswa

Real-World Applications

Evolving Robust GP Solutions for Hedge Fund Stock Selection in Emerging Markets
Wei Yan, Christopher D. Clack