

ACM SIGEVO GECCO-2010 Awards

ACM SIGEVO GECCO Impact Award

Natalio Krasnogor and Jim Smith

A Memetic Algorithm with Self-Adaptive Local Search: TSP as a case study

Best Paper Award Winners

Ant Colony Optimization and Swarm Intelligence

Manuel López-Ibáñez, Thomas Stützle

The Impact of Design Choices of Multiobjective Ant Colony Optimization on Performance: An Experimental Study on the Biobjective TSP

Artificial Life, Evolutionary Robotics, Evolvable Hardware

Brian Connelly, Benjamin Beckmann, Philip McKinley

Resource Abundance Promotes the Evolution of Public Goods Cooperation

Bioinformatics, Computational, Systems and Synthetic Biology

Ryan Urbanowicz, Jason Moore

The Application of Michigan-Style Learning Classifier Systems to Address Genetic Heterogeneity and Epistasis in Association Studies

Combinatorial Optimization and Metaheuristics

Shelly X. Wu, Wolfgang Banzhaf

A Hierarchical Cooperative Evolutionary Algorithm

Estimation of Distribution Algorithms

Peter A. N. Bosman

The Anticipated Mean Shift and Cluster Registration in Mixture-based EDAs for Multi-Objective Optimization

Evolutionary Multiobjective Optimization

Tamara Ulrich, Johannes Bader, Eckart Zitzler

Integrating Decision Space Diversity Into Hypervolume-based Multiobjective Search

Karl Bringmann, Tobias Friedrich

The Maximum Hypervolume Set Yields Near-optimal Approximation

Evolution Strategies and Evolutionary Programming

Dirk Arnold, Nikolaus Hansen

Active Covariance Matrix Adaptation for the (1+1) CMA-ES

Generative and Developmental Systems

Sebastian Risi, Joel Lehman, Kenneth Stanley

Evolving the Placement and Density of Neurons in the HyperNEAT Substrate

Genetic Algorithms

Martin Pelikan

NK Landscapes, Problem Difficulty, and Hybrid Evolutionary Algorithms

Genetic Programming

Leonardo Trujillo, Pierrick Legrand, Jacques Lévy-Véhel

The Estimation of Hölderian Regularity using Genetic Programming

Genetics-Based Machine Learning

María A. Franco, Natalio Krasnogor, Jaume Bacardit

Speeding Up the Evaluation of Evolutionary Learning Systems Using GPGPUs

Parallel Evolutionary Systems

Jörg Lässig, Dirk Sudholt

The Benefit of Migration in Parallel Evolutionary Algorithms

Real World Applications

Leonardo Trujillo, Pierrick Legrand, Gustavo Olague, Cynthia Pérez
Optimization of the Hölder Image Descriptor using a Genetic Algorithm

Search Based Software Engineering

Alexander Conrad, Robert Roos, Gregory Kapfhammer
Empirically Studying the Role of Selection Operators During Search-Based Test Suite Prioritization

Theory

Benjamin Doerr, Daniel Johannsen, Carola Winzen
Multiplicative Drift Analysis

Per Kristian Lehre, Carsten Witt
Black-Box Search by Unbiased Variation

Graduate Student Workshop Award Winner

Adriana Lara, Carlos Coello Coello, Oliver Schuetze
Using Gradient Information for Multi-objective Problems in the Evolutionary Context

GECCO-2010 Competitions

Evolutionary Art Competition

Fernando Graça and Penousal Machado
Evolving Assemblages

GPUs for Genetic and Evolutionary Computation

Nicholas A. Sinnott-Armstrong , Delaney Granizo-Mackenzie, Jason H. Moore
High Performance Parallel Disease Detection: an Artificial Immune System for GPUs

2010 Simulated Racing Car Championship

E. Onieva
AUTOPIA

Human-Competitive Competition (HUMIES)

Bronze Medal

Michael Schmidt and Hod Lipson
Solving Iterated Functions Using Genetic Programming

Thomas Bäck et al.
Optimizing Medical Image Analysis Systems

Silver Medal

Marc Schoenauer et al.
An Evolutionary Metaheuristic for Domain-Independent Satisficing Planning

Gold Medal

Natalio Krasnogor et al.
Evolutionary Design of Energy Functions for Protein Structure Prediction