



**Genetic and Evolutionary Computation Conference 2009**  
**And the Winners are...**

**Ant Colony Optimization and Swarm Intelligence**

**Parallel Shared Memory Strategies for Ant-Based Optimization Algorithms**

Thang N Bui, ThanhVu Nguyen, Joseph R Rizzo Jr.

**Artificial Life, Evolutionary Robotics, Adaptive Behavior, Evolvable Hardware**

**How Novelty Search Escapes the Deceptive Trap of Learning to Learn**

Sebastian Risi, Sandy D Vanderbleek, Charles E Hughes, Kenneth O Stanley

**Bioinformatics and Computational Biology**

**Modeling Evolutionary Fitness for DNA Motif Discovery**

Sven Rahmann, Tobias Marschall, Frank Behler, Oliver Kramer

**Combinatorial Optimization and Metaheuristics**

**Fixed-Parameter Evolutionary Algorithms and the Vertex Cover Problem**

Stefan Kratsch, Frank Neumann

**Estimation of Distribution Algorithms**

**EDA-RL: Estimation of Distribution Algorithms for Reinforcement Learning Problems**

Hisashi Handa

**Approximating the Search Distribution to the Selection Distribution in EDAs**

S. Ivvan Valdez-Peña, Arturo Hernández-Aguirre, Salvador Botello-Rionda Tony E Lewis, George D Magoulas

**Evolution Strategies and Evolutionary Programming**

**Efficient Natural Evolution Strategies**

Yi Sun, Daan Wierstra, Tom Schaul, Juergen Schmidhuber

**Evolutionary Multiobjective Optimization**

**Multiplicative Approximations and the Hypervolume Indicator**

Tobias Friedrich, Christian Horoba, Frank Neumann

**Generative and Developmental Systems**

**The Sensitivity of HyperNEAT to Different Geometric Representations of a Problem**

Jeff Clune, Charles Ofria, Robert T Pennock



## **Genetic and Evolutionary Computation Conference 2009 And the Winners are...**

### **Genetic Algorithms**

#### **Tunneling Between Optima: Partition Crossover for the Traveling Salesman Problem**

Darrell Whitley, Adele Howe, Doug Hains

### **Genetic Programming**

#### **A Genetic Programming Approach to Automated Software Repair**

Stephanie Forrest, ThanhVu Nguyen, Westley Weimer, Claire Le Goues

### **Genetics-Based Machine Learning**

#### **Learning Sensorimotor Control Structures with XCSF**

Martin V. Butz, Gerulf K.M. Pedersen, Patrick O. Stalph

#### **New Entropy Model for Extraction of Structural Information from XCS Population**

WonKyung Park, Jae C. Oh

### **Parallel Evolutionary Systems**

#### **Strategies to Minimise the Total Run Time of Cyclic Graph Based Genetic Programming with GPUs**

Tony E Lewis, George D Magoulas

### **Real World Application**

#### **Optimizing Low-Discrepancy Sequences with an Evolutionary Algorithm**

François-Michel De Rainville, Christian Gagné, Olivier Teytaud, Denis Laurendeau

### **Search-Based Software Engineering**

#### **Software Project Planning for Robustness and Completion Time in the Presence of Uncertainty using Multi Objective Search Based Software Engineering**

Stefan Gueorguiev, Mark Harman, Giuliano Antoniol

### **Theory**

#### **Dynamic Evolutionary Optimisation: An Analysis of Frequency and Magnitude of Change**

Philipp Rohlfshagen, Per Kristian Lehre, Xin Yao