2005 Genetic and Evolutionary Computation COnference (GECCO-2005)

June 25-29, 2005 (Saturday-Wednesday), Washington, DC, USA

www.isgec.org/GECCO-2005

A recombination of the 10th Genetic Programming Conference (GP) and the 14th International Conference on Genetic Algorithms (ICGA)

The *Genetic and Evolutionary Computation Conference (GECCO-2005)* will present the latest high-quality results in the growing field of genetic and evolutionary computation. Topics include: genetic algorithms, genetic programming, evolution strategies, evolutionary programming, real-world application, learning classifier systems and other genetics-based machine learning methods, evolvable hardware, artificial life, adaptive behavior, ant colony optimization, swarm intelligence, biological applications, evolutionary robotics, evolutionary combinatorial optimization, coevolution, artificial immune systems and other areas to be announced.

CONFERENCE CHAIR: Una-May O'Reilly, CSAIL, MIT
PROCEEDINGS EDITOR-IN-CHIEF: Hans-Georg Beyer
BUSINESS COMMITTEE: U.M. O'Reilly, D. E. Goldberg, J.R. Koza, R. Poli

WORKSHOPS AND LATE BREAKING PAPERS CHAIR: Franz Rothlauf
COMPETITIONS CHAIR: Simon Lucas
LOCAL ARRANGEMENTS CHAIR: R. Paul Wiegand, Ron Morrison
STUDENT WORKSHOP: To be determined
EVOLUTIONARY COMPUTATION IN INDUSTRY: Lawrence "Dave" Davis

PROGRAM TRACKS AND CHAIRS

Genetic Programming: Terry Soule
Genetic Algorithms: Erick Cantu-Paz
Evolution Strategies, Evolutionary Programming: Dirk Arnold
Real World Applications: Eric Bonabeau, Icosystem
Learning Classifier Systems and other Genetics-Based Machine Learning Methods: Xavier Llora
Evolvable Hardware: Andy Tyrrell
Biological Applications: James Foster and Wolfgang Banzhaf
Evolutionary Robotics A-Life, Adaptive Behavior: Hod Lipson
AntColony Optimization and Swarm Intelligence.: Christian Blum
Evolutionary Combinatorial Optimization: Gunther Raidl
Evolutionary Multiobjective Optimization: Kalmanoy Deb and Eckart Zitzler
Coevolution: Edwin de Jong
Artificial Immune Systems: Dipankar Dasgupta

ONE CONFERENCE - MANY MINI-CONFERENCES

Each paper submitted to GECCO will be rigorously reviewed, in a blind review process, by one of at least thirteen separate and independent program committees specializing in various aspects of genetic and evolutionary computation. These committees make their own final decisions on submitted papers for their areas, subject only to conference-wide space limitations and procedures. Keywords will be used to help match referees to papers.

TUTORIALS

The conference will include dozens of free tutorials from some of the world's foremost experts in several topics of interest to genetic and evolutionary computation researchers and practitioners.

WORKSHOPS

Several workshops on a variety of EC-related topics will be held during GECCO-2004. See **www.isgec.org/GECCO-2005/workshops** for the latest list of topics and scheduling information, or suggest a workshop by contacting Franz Rothlauf (rothlauf@uni-mannheim.de)

FREE TUTORIALS

Introductory Tutorials

Genetic Algorithms	***Darrell Whitley***
Genetic Programming	***John Koza***
Evolution Strategies	***Thomas Bäck***
A Unified Approach to EC	***Ken De Jong***
Evolvable Hardware	***Tetsuya Higuchi***
Linear Genetic Programming	***Wolfgang Banzhaf***
Ant Colony Optimization	***Christian Blum***

Advanced Tutorials

Scalable Efficient GA Design	***David E. Goldberg***
Genetic Programming Theory	***Riccardo Poli***
Genetic Algorithm Theory	***Jonathan Rowe***
Bioinformatics	***James A. Foster***
Taxonomy and Coarse Graining in EC	***Chris Stephens***
Multiobjective Optimization with EC	***Eckart Zitzler***
Computational Complexity and EC	***Ingo Wegener***
Evolvable Hardward II	***Adrian Stoica***
Representations	***Franz Rothlauf***
Bionik: Building on Biological Evolution	***Ingo Rechenberg***
Principled Efficiency Enhancement	***Kumara Sastry***
Statistics for Evolutionary Computation	***Steffan Christensen*** ***Mark Wineberg***

Tutorials on Specialized Techniques & Applications

GP for Symbolic Regression	***Maarten Keijzer***
Grammatical Evolution	***Conor Ryan***
Quantum Computing	***Lee Spector***
Evolutionary Robotics	***Dario Floreano***
Evolutionary Music	***Al Biles***
Evolution and Resiliency	***Terry Soule***
Evolutionary Algorithms for Design	***Ian Parmee***
How to Start a GA Company	***Zbigniew Michalwicz***
Industrial Evolutionary Computing	***A. Kordon, G. Smits, M. Kotanchek***

Other tutorials to be announced

ADDITIONAL INFORMATION

For information concerning hotel reservations, travel discounts, student housing, student travel grants, graduate student workshop, proposals for workshops, proposals for additional tutorials, late-breaking papers, and other matters, visit **www.isgec.org/GECCO-2005**. For technical matters, email Una-May O'Reilly, GECCO-2005 General Chair: *unamay@csail.mit.edu*. For administrative matters, email *gecco@aaai.org*. This conference is administered by the American Association for Artificial Intelligence, 445 Burgess Drive, Menlo Park, CA 94025 USA. Phone: 650-328-3123. Fax: 650-321-4457. GECCO is operated by ISGEC, the International Society for Genetic and Evolutionary Computation, Inc., a not-for-profit corporation.