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## Electronic Forums and Other EC-Related Activities

The evolutionary computation community maintains a number of electronic mailing lists that provide timely interactions, exchange of information, and sharing of software. Participants submit articles on research issues, recent results, notices on new technical reports, workshop announcements, and calls for papers. A brief description of the more active ones follows.

Comp.AI.Genetic is a newsgroup intended for anyone interested in the general area of evolutionary computation. See your local systems administrator to obtain this news feed. A substantial FAQ sheet (frequently asked questions) on EC is maintained and is quite helpful.

EP-List is an electronic mailing focusing on Evolutionary Programming (EP) as defined by Fogel. To subscribe, send mail to [EP-List-Request@magenta.me.fau.edu](mailto:EP-List-Request@magenta.me.fau.edu).

Genetic-Programming is an electronic mailing list focusing on genetic programming (GP) as defined by Koza. To subscribe, send mail to [Genetic-Programming-Request@cs.stanford.edu](mailto:Genetic-Programming-Request@cs.stanford.edu).

GA-List is a moderated electronic digest for the interchange of information relating to genetic algorithms (GAs) as defined by Holland and general issues of evolutionary computation. Submissions are put into digest form and sent to subscribers approximately once a week. To subscribe, send mail to [GA-List-Request@aic.nrl.navy.mil](mailto:GA-List-Request@aic.nrl.navy.mil).

An ftp archive site is maintained with back issues of GA-List and other useful information, including source code for genetic algorithm and other evolutionary algorithm packages. The ftp site can be accessed using anonymous ftp to [ftp.aic.nrl.navy.mil](ftp://ftp.aic.nrl.navy.mil). Use a username of "anonymous" and use your own e-mail address as your password.

In addition to the ftp site, the archive is now available on the World Wide Web. This also

contains links to other GA and evolutionary computation information sources and links to the home pages of other research groups working in evolutionary computation. The URL is <http://www.aic.nrl.navy.mil/galist>.

The GA-List digest also includes a calendar of recent and upcoming EC-related events. The following listing of events is excerpted from a recent issue of GA-List. The volume/number designation refers to the GA-List issue where the full announcement can be found.

### 1 – 4 April, 1997

#### **Third International Conference on Artificial Neural Networks and Genetic Algorithms Norwich, England (v10n16)**

The main theme of the ICCANGA series is the development and application of software paradigms based on natural processes, principally artificial neural networks, genetic algorithms and hybrids thereof. However, the scope of the conference extends to cover many related topics including fuzzy logic, genetic programming and other evolutionary computation systems, classifier systems and adaptive agent systems, distributed intelligence and artificial life, generic optimization heuristics including simulated annealing and tabu search, and many more.

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### 7 – 8 April, 1997

#### **AISB97 Workshop on Evolutionary Computing, Manchester (v10n42)**

This is the fourth AISB Workshop on Evolutionary Computation. The aims are to give researchers in the area of evolutionary computing an opportunity to present the latest research and discuss current developments in an informal workshop atmosphere. Submissions are invited from researchers working in all areas of evolutionary computing. Submitted papers may describe: theoretical developments, experiments on performance or behavior of evolutionary algorithms, novel or high-performance applications of evolutionary computation, or computational models of evolutionary systems.

Timetable:

- 30th Sept: Call for papers
- 8th Dec: Last date for submission of extended abstracts/ papers
- 2nd Feb: Notification of accepted papers
- 1st Mar: Camera-ready papers due for workshop booklet.
- 15th May: Camera-ready papers due for published proceedings (revised re further reviewers recommendations and experience at the workshop)

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**13 - 16 April, 1997**

**1997 IEEE International Conference on Evolutionary Computation (ICEC '97)  
 Indiana University Purdue University,  
 Indianapolis (v10n27)**

Topics:

- Theory of evolutionary computation
- Applications of evolutionary computation
- Efficiency/robustness comparisons with other direct search algorithms
- Parallel implementations
- Artificial life and biologically inspired evolutionary computation
- Evolutionary algorithms for computational intelligence
- Comparisons among evolutionary algorithms
- Machine learning applications
- Genetic algorithms and self-organization
- Evolutionary computation for neural networks
- Fuzzy logic and evolutionary algorithms

Joint Conferences:

The ICEC '97 is being held in conjunction with the Evolutionary Programming Society's conference Evolutionary Programming '97 (EP '97). One registration fee will admit you to both conferences.

Important Dates:

- Proposal for tutorial/exhibits & special sessions: October 15, 1996
- Submission of papers: November 1, 1996
- Notification of acceptance: January 10, 1997
- Submission of camera-ready papers: February 10, 1997

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**21 – 25 June, 1997**

**ISMB97 International Conference on  
Intelligent Systems for Molecular Biology  
Halkidiki, Greece (v10n42)**

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<http://www.cse.ucsc.edu/research/compbio/ismb97/>

**13 – 16 July, 1997**

**GP 97 Genetic Programming Conference,  
Stanford, CA**

Genetic programming is an automatic programming technique for evolving computer programs that solve (or approximately solve) problems. Starting with a primordial ooze of thousands of randomly created computer programs, a population of programs has progressively evolved over many generations using the Darwinian principle of survival of the fittest, a sexual recombination operation, and occasional mutation.

Topics at the Second Annual Genetic Programming Conference to be held on July 13–16 (Sunday-Wednesday), 1997 at Stanford University include, but are not limited to, applications of genetic programming, theoretical foundations of genetic programming, implementation issues, technique extensions, cellular encoding, evolvable hardware, evolvable machine language programs, automated evolution of program architecture, evolution and use of mental models, automatic programming of multiagent strategies, distributed artificial

intelligence, autoparallelization of algorithms, automated circuit synthesis, automatic programming of cellular automata, induction, system identification, control, automated design, data and image compression, image analysis, pattern recognition, molecular biology applications, grammar induction, and parallelization. Papers describing recent developments are also solicited in the following additional areas: genetic algorithms, classifier systems, evolutionary programming and evolution strategies, artificial life and evolutionary robotics, DNA computing, and evolvable hardware.

Important Dates:

Submission deadline: January 8, 1997

<http://www-cs-faculty.stanford.edu/~koza/gp97.html>

**19 – 23 July, 1997**

**Seventh International Conference on  
Genetic Algorithms**

**Michigan State University, East Lansing, MI  
(v10n35)**

The Seventh International Conference on Genetic Algorithms (ICGA-97) will be held on July 19–23, 1997, at Michigan State University, East Lansing, MI. This meeting will bring together an international community from academia, government, and industry interested in the field of evolutionary computation, i.e., algorithms gleaned from the model of natural evolution. Examples of such algorithms are Evolutionary Programming, Evolution Strategies, Genetic Algorithms, Genetic Programming, Learning Classifier Systems, and similar paradigms as used in evolving, e.g., Artificial Life, Cellular Automata, Computational Ecosystems, Cultural Algorithms, Fuzzy Systems, Immune Networks, Machine Learning, Multiagent Systems, Neural Networks, Simulated Annealing.

Important Dates:

January 31, 1997: Submissions must be received

April 4, 1997: Notification to authors mailed

May 2, 1997: Revised, final camera-ready paper due

July 19, 1997: Tutorials and reception  
 July 20–23, 1997: Conference presentations  
 and workshops

Questions on submissions and the conference  
 program should be directed to:

icga97@icd.de

Web site: <http://isl.msu.edu/GA/icga97>

### 21 – 24 July, 1997

#### **MIC97 Metaheuristic International Conference, Sophia-Antipolis, France (v10n47)**

The objective of the MIC'97 conference is to bring together researchers in operations research, management science, artificial intelligence, computer science, and related fields to advance the understanding of basic principles and new developments in metaheuristics, including genetic algorithms, greedy randomized adaptive search procedures, neural networks, simulated annealing, tabu search, and other hybrid approaches to solving hard combinatorial problems. In an excellent atmosphere at Côte d'Azur in France, Metaheuristics MIC'97 will provide access to stimulating new research ideas on algorithms and problems, motivation for pursuing these ideas further, interaction among people who have the ideas, and an opportunity to meet with leaders in the field.

#### Important Dates:

|  |                  |
|--|------------------|
| Submission of<br>an extended abstract:   | Feb 28, 1997     |
| Notification of<br>acceptance:           | March 31, 1997   |
| Electronic submission<br>of full papers: | July 4, 1997     |
| Four (4) copies<br>of full papers:       | July 21–24, 1997 |
| Conference dates:                        | July 21–24 1997  |

<http://www.inria.fr/Colloques/MIC97-eng.html>

### 28 – 31 July, 1997

#### **ECAL97 Fourth European Conference on Artificial Life, Brighton England (v10n36)**

ECAL97 will foster further cross-fertilization and hopes to extend the Artificial Life community by encouraging contributions from

people involved in the arts and humanities. The conference will involve oral presentations, both invited and contributed, poster sessions, debates, exhibitions, demonstrations, installations and related activities.

Scientific topics to be covered will include, but not be limited to, the list below. Contributions from biologists are particularly welcome.

Self-organization, origins of life, prebiotic evolution, RNA systems, fitness landscapes, natural selection, sexual selection, ecosystem evolution, evolutionary optimization, evolutionary computation, immune networks, neural networks, multicellular development, natural and artificial morphogenesis, learning and development, communication, artificial worlds, simulations of ecological and evolving systems, mobile agents, autonomous robots, evolutionary robotics, software agents, collective behavior, swarm intelligence, cooperation, evolution of social behavior, philosophical issues in life, ethical problems.

#### Important Dates:

|                   |                                |
|-------------------|--------------------------------|
| Feb 28, 1997:     | Submission deadline            |
| Apr 28:           | Notification of acceptance     |
| May 16:           | Camera-ready due               |
| May 31:           | Early registration<br>deadline |
| July 28–31, 1997: | Conference dates               |

Conference organizers: Phil Husbands  
 and Inman Harvey

Local organization: Medeni Fordham  
 and Joseph Faith

Conference Secretariat: Medeni Fordham  
 ECAL97

COGS, University of Sussex  
 Brighton BN1 9QH, UK

Email: [ecal97@cogs.susx.ac.uk](mailto:ecal97@cogs.susx.ac.uk)

<http://www.cogs.susx.ac.uk/ecal97/>

### 18 – 20 August, 1997

#### **3NWGA Third Nordic Workshop on Genetic Algorithms, Helsinki, Finland (v10n43)**

The third Nordic meeting on genetic algorithms and their applications will be held Mon. 18–Fri.

20 August 1997 at University of Helsinki, Finland, concurrently with the Biannual Scandinavian Artificial Intelligence Conference SCAI-97.

Timetable:

|   |               |
|---|---------------|
| Title and extended abstract (ASCII, PostScript, or on paper): | 28 Feb 1997   |
| Notification of acceptance (oral representation, e-mail):     | 15 March 1997 |
| Full paper (PostScript or on paper):                          | 1 May 1997    |
| Notification of acceptance (paper):                           | 1 June 1997   |
| Final computer ready paper (LaTeX):                           | 15 June 1997  |

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**20 – 22 August, 1997**

**PATAT97 Second International Conference on the Practice and Theory of Automated Timetabling, University of Toronto, Canada (v10n42)**

This conference will serve as a forum for an international community of researchers, practitioners, and vendors on all aspects of computer-aided timetable generation. The themes of the conference include (but are not limited to): complexity issues, distributed timetabling systems, experiences, implementations, commercial packages, interactive vs batch timetabling, relationship with other scheduling problems, techniques, including constraint logic programming, genetic algorithms, graph coloring, expert systems, knowledge-based systems, operational research, simulated annealing, Tabu search

Deadlines:

Paper/abstract submissions: Jan 15, 1997  
Notification of acceptance: April 1  
(at the latest)

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**24 – 29 August, 1997**

**IMACS97 Special Session: 15th IMACS World Congress 1997 on Scientific Computation, Modelling and Applied Mathematics, Berlin, Germany (v10n42)**

The focus of the session will concentrate on the latest developments of state-of-the-art neurocontrol and evolutionary techniques. Today, many advanced intelligent control applications utilize methods like the above, and papers describing these are most welcome. Theoretical discussions on how these techniques can be proved to be stable are also highly welcome.

Important Dates:

Dec 5, 1996 Deadline for receiving papers.  
Jan 10, 1997 Notification of acceptance.  
Feb 1997 Author typing instructions, for camera-ready copies.

Session Chair:

Prof. Dimitris C. Dracopoulos  
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<http://www.first.gmd.de/imacs97/>

**24 – 29 August, 1997**

**IMACS97 Special Session: 15th IMACS World Congress 1997 on Evolutionary Computation, Berlin, Germany (v10n45)**

Basic concepts and foundations of evolutionary computation: evolution strategies, evolutionary programming, genetic algorithms, and genetic programming.

Applications of evolutionary computation in machine learning, neural networks, and fuzzy systems; electrical, electronics, and communications engineering; computer science and operations research; mechanical, chemical, and optical engineering.

Important Dates:

Dec 6, 1996     Deadline for receiving papers.  
Feb 28, 1997     Notification of acceptance.  
April 30, 1997    Camera-ready papers.

Session Chair:

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<http://www.first.gmd.de/imacs97/>

**1 – 2 September, 1997**

**BCEC97 Bio-Computing and Emergent Computation, Skovde, Sweden (v10n45)**

There is an urgent need for collaboration and cross-fertilization of ideas between researchers adopting biologically motivated and biologically inspired computing paradigms (e.g., artificial life, evolutionary computation, neural computation, computational molecular biology, autonomous adaptive agents).

BCEC97 is intended to be a general forum for presenting and disseminating current research in

biocomputing and emergent computation.

Important Dates:

March 1, 1997    Submission of full papers.  
May 3, 1997     Notification of acceptance.  
June 14, 1997    Camera-ready copy due.

For more information contact the conference organization via email: [bcec@ida.his.se](mailto:bcec@ida.his.se).

<http://www.his.se/ida/bcec/>

**2 – 4 September, 1997**

**Second IEE/IEEE International Conference on Genetic Algorithms in Engineering Systems: Innovations and Applications Glasgow, United Kingdom (v10n36)**

A One-Day International Workshop on Evolutionary Computation: Theory and Applications

Monday, 1 September 1997

This event, the second in the GALEZIA series of conferences, aims to provide an international forum for the presentation of technical results and advances in genetic algorithms (GAs): theory and applications in engineering systems.

GALESIA '97 will consider contributions from both academia and industry that emphasize the role of evolutionary computing and GAs in particular in engineering systems, although the general focus on theory and applications will be retained.

Deadlines:

Today: Fill in the information request form

31 Jan 1997: Submission of 5 copies of paper

May 1997: Notification of acceptance to authors

1 Sept 1997: Workshop

2–4 Sept 1997: Conference and exhibition

Contact:

Mr. Jarlath O'Connell (GALESIA '97 Secretariat)

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Email: [conference@iee.org.uk](mailto:conference@iee.org.uk)  
(Updates on  
<http://www.iee.org.uk/L.Sboard/Conf/Galesia/>)

### 3 – 4 September, 1997

#### **EUROMICRO97 Euromicro Workshop on Computational Intelligence, Hungary (v10n47)**

Artificial neural networks (NN), fuzzy-logic systems (FL), and evolutionary algorithms (EAs) have been investigated for three decades. Their broad application, however, had to wait until powerful computers became available within the past decade. Their potential is by no means exhausted today. On the contrary, more and more they are jointly applied to solve real-world hard problems. The term *computational intelligence* (CI) has been coined for such combinations, and the first CI World Congress in 1994 bore witness to the boom in this challenging field, with the next one scheduled for 1998.

This Workshop aims to bring together developers and users of CI methods in order to enhance the synergetic potential. Besides pure subsymbolic knowledge processing, combinations of symbolic and subsymbolic approaches will also be addressed.

#### Important Dates:

Submission of papers: Feb 1, 1997  
Notification of acceptance: April 1, 1997  
Camera-ready papers due: June 1, 1997  
<http://LS11-www.informatik.uni-dortmund.de/EUROMICRO>

### 8 – 12 September, 1997

#### **EUFIT 97, Fifth Congress on Intelligent Techniques and Soft Computing, Aachen, Germany (v10n41)**

The conference will be composed of plenary presentations, semiplenary sessions, panel sessions, invited and contributed sessions, and other events. There will be parallel and interactive sessions. They include scientific and applied presentations in fuzzy technology, neural networks, and genetic algorithms. In interactive sessions, speakers can also communicate freely with the interested audience up to 60 minutes.

#### Structure of the Congress

Tutorials: September 8, 1997  
Conference: September 9–11, 1997  
Symposium: September 9–10, 1997  
Exhibition: September 8–11, 1997  
Working Groups: September 8–12, 1997

#### Contact:

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<http://www.mitgmbh.de/elite/eufit.html>

### 17 – 19 September, 1997

#### **SOCO97 Second International ICSC Symposium on Soft Computing (Fuzzy Logic, Artificial Neural Networks, Genetic Algorithms), France (v10n40)**

Contributions are sought in areas based on the following list, which is indicative only.

Contributions from new application areas will be particularly welcome: applications of soft computing in control, fuzzy logic, AI and expert systems, machine learning, learning algorithms and intelligent control, educational aspects of soft computing, neural networks, fuzzy control, probabilistic reasoning, self-organizing systems, distributed intelligence, and genetic algorithms.

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