

1997 IEEE International Conference on Evolutionary Computation (ICEC '97)

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USA

Co-sponsored by
IEEE
IEEE Neural Network Council (NNC)
Evolutionary Programming Society (EPS)

Message from the Program Chairs

After Orlando (1994), Perth (1995), and Nagoya (1996), the IEEE International Conference on Evolutionary Computation (ICEC) starts to have a historical tradition now, where we see the fourth of these events happening in Indianapolis, Indiana, in April 1997 (the fifth one will take place in Anchorage, Alaska, in May 1998; the conference will be part of the Second World Congress on Computational Intelligence).

Along the lines of its predecessors, we are proud to present a conference program which covers a wide range of aspects of evolutionary computation. This includes principles of evolutionary computation such as adaptation and self-adaptation, variation operators, representational issues, and theoretical investigations. Further topics of the conference concern the relation of evolutionary computation to other optimization strategies (including the continuation of the special session contest of optimization algorithms that was initiated in Nagoya), artificial life related approaches, and special sessions on evolvable hard- and wetware, the latter keyword referring to the fascinating new idea of DNA-based computation.

About half of the conference presentations report about issues related to the application of evolutionary computation to challenging real-world optimization problems as occurring in engineering design (special session), image processing, robotics, and other fields such as e.g. fuzzy systems and neural networks (also represented by special sessions), to mention only a few. These relationships between fuzzy systems, neural networks and evolutionary computation are commonly summarized under the term computational intelligence.

Based on the feedback of the program committee members, who all did a great job in providing their reviews timely with an enormously high level of expertise and detail, we are sure that these proceedings present high-quality research results and serve as an excellent reflection of the current state of research in evolutionary computation. We would like to thank all the reviewers and, of course, the authors of the papers for making this success possible. In particular, we extend our thanks to the organizers of several special sessions for their successful efforts: these are: H. Bersini, R. Deaton, M. Dorigo, L. Gambardella, M. Garzon, M. Gen, S. Langerman, I. Parmee, E. Taillard, G. Seront, M. Sipper, A. Smith, A. Stauffer, and Q. Zhao.

Special thanks are also due to the whole organizing committee, the general chairs Russ Eberhart and Peter Angeline, the finance chair Rich Pfile, the publication chair Bill Porto (who made it possible that you have a copy of this printed proceedings volume), and Jörg Ziegenhirt at the Informatik Centrum Dortmund, who was a real help in handling many of the hard work necessary to organize a complete conference paper submission and review process. We thank also the Evolutionary Programming Society for all their work in making the joint conference a success. There has been a great cooperation; it has been a joy working with them. Also, the Purdue School of Engineering and Technology has provided clerical support, and has provided free Internet access and support. Patrick Baxter of the School deserves special thanks.

Thomas Bäck, Informatik Centrum Dortmund
Zbigniew Michalewicz, University of North Carolina at Charlotte
Xin Yao, Australian Defence Force Academy

ICEC'97 Conference Organization

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Peter Angeline (Lockheed Martin Federal Systems)

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Zbigniew Michalewicz (University of North Carolina)
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