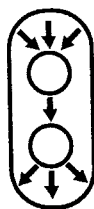


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D. Waagen A.E. Eiben (Eds.)

Evolutionary Programming VII

7th International Conference, EP98
San Diego, California, USA, March 25-27, 1998
Proceedings

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Preface

These proceedings contain the record of papers presented at the Seventh Annual Conference on Evolutionary Programming. Held March 25-27, 1998, EP98 was sponsored by the Evolutionary Programming Society in cooperation with the IEEE Neural Networks Council and the PPSN V Steering Committee. Since its inception, the purpose of this conference has been to foster communication and stimulate interactions between researchers investigating all aspects of evolutionary computation. The conference has steadily evolved into an open forum for discussing the current state of the art and future directions of evolutionary computation.

In addition to returning to San Diego, CA, for 1998, this year's conference enjoyed the largest number of papers presented and highest attendance since its inception in 1992. As part of the egalitarian nature of this conference, the papers presented span the full spectrum of evolutionary computation, including evolutionary programming, evolution strategies, genetic algorithms, genetic programming, cultural algorithms, and other variants. Special sessions on biological modeling and particle swarm augmented more traditional sessions on theory, operators, and representation. The number and wide range of applications papers presented is particularly notable. It is an important indicator that these techniques are being used successfully in real-world problem domains.

Creating a successful conference always takes a considerable effort and involves many people. The Evolutionary Programming Society would like to express its appreciation to the program committee for their diligent efforts to maintain the high quality of the papers, the conference volunteers Jacquelyn, Verna, and Eva for their cheerful, ever helpful presence, and to the team of Natural Selection, Inc., for their gracious support. Finally, special thanks go to David Fogel and Peter Angeline, whose hard work behind the scenes ensured the success of the conference.

May 1998

V. William Porto
General Chairman

N. Saravanan
Don Waagen
A.E. Eiben
Technical Co-Chairs

Invited Lectures and Panel Session

Keynote Lecture:

The Symbolic Species: The Co-Evolution of Language and the Brain
Terrence W. Deacon, Boston University

Special Invited Lecture:

The Cumulative Consensus of Cognitive Agents in Scenarios:
A Framework for Evolutionary Processes in Semantic Memory
Don Dearholt, Mississippi State University

Banquet Lecture:

Virtual Expectations
Darrell Morgeson, Los Alamos National Labs

Special Invited Lecture:

Visualization of Evolutionary Algorithms in R^n
Roman Galar, Technical University of Wroclaw

Panel Discussion:

Evolution and Economics

Panelists:

Steve Banks, Evolving Logic Associates

Paul Harrald, G.E. Capital, U.K.

William Morrison, University of South Carolina

Leigh Tesfatsion, Iowa State University

Moderator: V. William Porto, Natural Selection, Inc.

Best Student Paper Awards

An Empirical Investigation of an Evolutionary Algorithm's Ability
to Maintain a Known Good Solution
Thomas Kammeyer, University of California, San Diego

On the Application of Cohort-Driven Operators to
Continuous Optimization Problems using Evolutionary Computation
Arnold Patton, Michigan State University

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Xin Yao, Australian Defence Force Academy

Proceedings compiled by Bill Porto and David B. Fogel

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