Editorial Introduction

Welcome to another issue of Volume 6 of *Evolutionary Computation*.

The first paper in the issue is by Joseph Culberson. It deals with the No-Free-Lunch (NFL) theorem in a somewhat informal, tutorial style. Yet the approach taken by Culberson allows him to deal with some very important issues related to how NFL fits into the more general notion of computational complexity. Culberson also presents an alternative view of NFL, a view that is not only simple, but also makes clear the simplicity of the No-Free-Lunch theorem itself. The overall result is that Culberson sheds light on a topic that has often been misunderstood.

The paper by Sanza Kazadi develops the notion of conjugate schema. The idea is that conjugate schema can be used to attempt to decompose a problem into lower-dimensional components. Approximate methods for computing conjugate schema are introduced and tested empirically. Of the many papers that have explored representation issues, this one is particularly rigorous and novel.

Andrew Tuson and Peter Ross deliver a paper that tests various hypotheses and conjectures related to the use of adaptive and self-adaptive operators in evolutionary algorithms. They are particularly interested in adapting operators based on their ability to produce better offspring. They examine both self-adaptive operators that "co-evolve" with the problem solution, as well as approaches in which the operator probabilities are adapted by some meta-level system.

The last paper by Stefan Droste, Thomas Jansen, and Ingo Wegener looks at simple linear functions of Boolean inputs. They use new methods to derive the now familiar result that the expected run time of a $(1 + 1)$ evolutionary algorithm is $O(n \ln n)$.

The last two issues of 1998 are currently being processed. Volume 6(3) will contain a two-part study by Michael Vose and Alden Wright on the use of the Walsh transform for studying simple genetic algorithms. Some of the results should be of interest not only to the evolutionary computation community, but also to mainstream theoretical biology. Volume 6(4) will be a special issue on variable-length encodings, guest-edited by Wolfgang Banzhaf and Annie Wu.

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