CALL FOR BOOK CHAPTERS

Title: Exploitation of Linkage Learning in Evolutionary Algorithms

(to be published by Springer)

Overview

Genetic and evolutionary algorithms (GEAs) are powerful search methods based on the paradigm of evolution and widely applied to solve problems in many disciplines. In order to improve the performance and applicability, numerous sophisticated mechanisms have been introduced and integrated into GEAs in the past decades. One major category of these enhancing mechanisms is the concept of linkage, which models the relation between the decision variables with the genetic linkage observed in biological systems, and linkage learning techniques. Linkage learning connects the computational optimization methodologies and the natural evolution mechanisms. Not only can learning and adapting natural mechanisms enable us to design better computational methodologies, but also the insight gained by observing and analyzing the algorithmic behavior permits us to further understand biological systems, based on which GEAs are developed.

Scope

This edited volume aims at reviewing of current state-of-art linkage learning techniques, exchanging of ideas and viewpoints on linkage, as well as discussing the future directions. We invite researchers to submit their original work related to, but not limited to, the following topics:

- Linkage in biological systems and computational algorithms
- Linkage for discrete/continuous variables
- Linkage processing, handling, and learning techniques
- Identification and utilization of linkage
- Adaptation of representation and/or operators for linkage
- Theoretical aspects of linkage
- Applications of the linkage concept
- Position papers
- Real-world applications

Submission Guidelines

Manuscripts should be prepared according to the series book format provided by Springer, and the page limit for each chapter is 30 pages. Prospective authors are invited to indicate the intention to contribute by describing the topic, organization, expected number of pages, and contact author of the chapter. Please direct all correspondences to the editor.

Important Dates

Indication of Intention to Contribute: July 31, 2009
Submission of Manuscript: October 16, 2009
Submission of Revised Manuscript: November 13, 2009
Final Camera-ready Manuscript Submission: December 18, 2009

Editor

Ying-ping Chen
Department of Computer Science
National Chiao Tung University, Taiwan
Email: ypchen@cs.nctu.edu.tw