Special session
on

Metaheuristics for Optimization Problems

Abstract

Discrete and continuous optimization problems are usually very hard to solve (often NP hard) and require the utilization of computationally demanding techniques. Since most complex and real world problems are not amenable for exact algorithms, approximation algorithms can be used instead.

An approximation algorithm aims at finding an acceptable (not necessarily optimal) solution to the problem in hands, utilizing realistic computational time and memory resources. Metaheuristic algorithms are of this kind of optimization techniques in which a general search sheet is customized with problem knowledge to solve a wide variety of problems in combinatorial optimization, business, telecommunications, bioinformatics, and so on.

Examples of metaheuristic methods are simulated annealing, evolutionary algorithms, tabu search, ant colony systems, etc. Of great interest are their extensions to make hybrid, more efficient and well theoretically grounded proposals to the research community.

The "Metaheuristics for Optimization Problems" special session in NM&A'10 focuses on new theoretical and applied advances in the field of search and optimization. It aims to provide a forum for researchers and developers to exchange the latest experiences and ideas on metaheuristic methods to cross-fertilize domains like numerical methods, algorithms, software implementations, computational science, and complex applications.

Works matching this general statement are welcomed, not only in the mentioned topics but also in other related fields.