evo***** > evo**applications**

evo**stoc** 2011

**8th european event
on evolutionary algorithms
in stochastic and dynamic
environments**

27-29 april 2011
torino – italy
www.evostar.org

submission deadline
* 22 november 2010
notification to authors
* 7 january 2011
camera-ready deadline
* 1 february 2011

In many real-world optimisation problems, a wide range of uncertainties has to be taken into account. Generally, uncertainties in evolutionary optimisation can be categorized into four classes:
* Noisy fitness function. Noise in fitness evaluations may come from many different sources such as sensory measurement errors or randomised simulations.
* Approximated fitness function. When the fitness function is very expensive to evaluate, or an analytical fitness function is not available, approximated fitness functions are often used instead.
* Robustness. Often, when a solution is implemented, the design variables or the environmental parameters are subject to perturbations or changes. Therefore, a common requirement is that a solution should still work satisfyingly either when the design variables change slightly, e.g., due to manufacturing tolerances, or when the environmental parameters vary slightly. This issue is generally known as the search for robust solutions.
* Dynamic fitness function. In a changing environment, it should be possible to continuously track the moving optimum rather than repeatedly re-start the optimisation process. For evolutionary computation in dynamic environments, learning and adaptation usually play an important role. Multi-objective problems may also involve dynamic environments.

Handling uncertainties in evolutionary computation has received an increasing interest over the past years. A variety of methods for addressing uncertainties have been reported from different application backgrounds.

The **evostoc** event's objective is to foster interest in the issue of handling uncertainties, to provide a forum for researchers to meet, and a platform to present and discuss latest research in the field. Papers are solicited addressing any of the aforementioned four areas and/or their combination with optimisation methods inspired by nature. Algorithmic solutions for multi-objective/multi-criteria problems and novel implementation of hybrid (memetic) algorithms are warmly encouraged. Theoretical and empirical results as well as real-world applications are welcome.

areas of interest and contributions
Topics of interest include but are not limited to the following:
* handling noisy fitness functions;
* using fitness approximations;
* searching for robust solutions;
* tracking moving optima;
* multi-objective problems in uncertain environments;
* co-evolution in uncertain environments real-world applications.

publication details
Accepted papers will appear in the proceedings of **evo***, published in a volume of the *Springer Lecture Notes in Computer Science*, which will be available at the Conference.

submission details
Submissions must be original and not published elsewhere. The submissions will be peer reviewed by at least three members of the program committee. The authors of accepted papers will have to improve their paper on the basis of the reviewers' comments and will be asked to send a camera ready version of their manuscripts. At least one author of each accepted work has to register for the conference and attend the conference and present the work.

The reviewing process will be double-blind, please omit information about the authors in the submitted paper. Submit your manuscript in Springer LNCS format.
* Submission link:
http://myreview.csregistry.org/evoapps11
* Page limit: 10 pages.

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