



EvoStar 2009



The main European events in Evolutionary Computation

Sixth European Workshop on Evolutionary Algorithms in Stochastic and Dynamic Environments

(EvoSTOC '09)

April 15-17, 2009

Eberhard Karls Universität, Tübingen, Germany

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:

1. **Noisy fitness function.** Noise in fitness evaluations may come from many different sources such as sensory measurement errors or randomised simulations.
2. **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.
3. **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.
4. **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 workshop'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.

Submission Details

1. Submissions should be no more than 10 pages.
2. Please use [LNCS format](#)
3. As we are adopting a double-blind peer review process, please ensure to anonymise your submission by removing all references to the authors.
4. Submissions should be performed through the [conference website](#)
5. The deadline for the initial submission is November the 5th 2008, the notification to authors will be scheduled in December 2008



A limited amount of Travel Bursaries will be granted to students and researchers from developing countries. All accepted papers are published as papers in a volume of the [Springer Lecture Notes in Computer Science](#).

The authors of papers which receive the best reviews will be nominated for the 'Best paper Award'. Nominated papers will be invited to submit an extended version to [Memetic Computing Journal, Springer](#), thematic issue on "Memetic Computing in the Presence of Uncertainties"!

For informal inquiries please do not hesitate to contact the EvoSTOC chairs

EvoSTOC2009 Chairs

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