

- Call for papers -

Dear Colleagues,

we have the pleasure to invite you to participate in the symposium

”Optimization of Expensive Black-box Cost Functions”

to be held within the framework of the 3rd MIT Conference on Computational Fluid and Solid Mechanics, MIT, Cambridge, USA, June 14-17, 2005.

Motivation:

Computer based simulation and analysis is used nowadays extensively in various fields of engineering and applied sciences. Despite the steady and continuing growth of computing power, the computational cost of complex high-fidelity engineering analyses and simulations remains a serious concern. Designing optimization algorithms and optimization environments that can deal with such expensive simulations is a great challenge for the optimization community.

The aim of this minisymposium is to bring together developers of optimization algorithms and optimization environments with practitioners from industry to foster a fruitful discussion and the exchange of ideas and needs.

Topics of interest encompass the following but are not limited to

- simulation-based optimization without the availability of Jacobian or Hessian information
- applications in industry requiring easy-to-use robust and fault-tolerant optimization environments
- algorithms designed to minimize the number of objective function calls
- ability to cope with discontinuous (noisy) objective functions
- statistical approaches, design of experiments
- algorithms employing a surrogate model of the objective function
- parallelization of optimization algorithms
- ideas concerning robustness and fault tolerance of optimization algorithms

We are looking forward to meeting you at the 3rd MIT Conference on Computational Fluid and Solid Mechanics!

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