

VORträge zum Operations Research

Kolloquium des Instituts für Operations Research

Zeit: Dienstag, 11. Juni 2019, 17:30 Uhr

Ort: Raum 320, Gebäude 09.21

Es spricht: Prof. Dr. Gabriele Eichfelder, TU Ilmenau

Zum Thema: A Trust-Region Method for Multiobjective Optimization with Heterogeneous Functions

Abstract: In multiobjective heterogeneous optimization one considers optimization problems with multiple objective functions, where it is assumed that one of the functions is an expensive black-box function while the other objective functions are analytically given. Such problems occur in applications for instance in the context of Lorentz force velocimetry, when the task is to find an optimal design of a magnet which minimizes the weight of the magnet and maximizes the induced Lorentz force. The latter might be computable only by a time-consuming simulation. The proposed method uses the basic trust region approach by restricting the computations in every iteration to a local area and replacing the objective functions by suitable models. The next iteration point is computed by using the ideal point. Convergence results as well as numerical experiments are presented and the proposed procedure is compared to other algorithms. Also issues arising in true applications are discussed.

Die Vorträge zum Operations Research wenden sich an alle Interessierten!

Ab 17:00 Uhr ist am Institut für Operations Research (Gebäude 09.21, Raum 119) Gelegenheit zu einem Gespräch mit der Referentin bei einer Tasse Kaffee gegeben.

Bei Rückfragen wenden Sie sich bitte an:
Prof. Dr. Oliver Stein, Institut für Operations Research.