Seminar

Wintersemester 2012/13

Bergische Universität Wuppertal
Fachbereich C, Arbeitsgruppe Optimierung und Approximation
Dr. Michael Stiglmayr

Nichtlineare multikriterielle Optimierung

Themenliste

Carolin Hülsegge	Skalarisierung	Ehrgott [2005]
Artur Strebel	Direct Multisearch	Custódio et al. [2011]
Edwin Arnold	Normal boundary intersection	Das and Dennis [1998]
Nick Martens	Projected Gradient	Yang [1999]
Lisa Hölter	Newton-Verfahren	Fliege et al. [2009]
Benjamin Saure	Steepest Descent	Fliege and Svaiter [2000], Drummond and Svaiter [2005]
David Sochacki	Golden Section	Vieira et al. [2012]
Tatjana Joecks	Interior Point Method	Fliege [2006]
Marco Milano	Pascoletti-Serafini	Pascoletti and Serafini [1984]
Markus Werth	Unbiased Approximation	Klamroth et al. [2003]
Patricia Lehmann	Directed Multi-Objective Optimization	Brown and Smith [2005]
Christian Reinecke	An Approximation Algrorithm for Convex	Ehrgott et al. [2011]

Weitere Informationen finden Sie online unter:
`http://www2.math.uni-wuppertal.de/opt/seminar_multikrit/`

Literatur

Martin Brown and Robert E. Smith. Directed multi-objective optimization. *Int. J. Comput. Syst. Signal*, 6(1):3–17, 2005.

A. L. Custódio, J. F. A. Madeira, A. Ismael F. Vaz, and Luís N. Vicente. Direct multisearch for multiobjective optimization. *SIAM Journal on Optimization*, 21(3):1109–1140, 2011.

I. Das and J. Dennis. Normal-boundary intersection: A new method for generating the pareto surface in nonlinear multicriteria optimization problems. *SIAM Journal on Optimization*, 8(3):631–657, 1998. doi: 10.1137/S1052623496307510. URL http://epubs.siam.org/doi/abs/10.1137/S1052623496307510.

L.M. Graña Drummond and B.F. Svaiter. A steepest descent method for vector optimization. *Journal of Computational and Applied Mathematics*, 175(2): 395 – 414, 2005. ISSN 0377-0427. doi: 10.1016/j.cam.2004.06.018. URL http://www.sciencedirect.com/science/article/pii/S0377042704003127.

M. Ehrgott. *Multicriteria Optimization*. Springer, 2005.

Matthias Ehrgott, Lizhen Shao, and Anita Schöbel. An approximation algorithm for convex multi-objective programming problems. *J. Global Optimization*, 50(3):397–416, 2011.

Jörg Fliege. An efficient interior-point method for convex multicriteria optimization problems. *Math. Oper. Res.*, 31(4):825–845, 2006.

Jörg Fliege and Benar Fux Svaiter. Steepest descent methods for multicriteria optimization. *Math. Meth. of OR*, 51(3):479–494, 2000.

Jörg Fliege, L. Mauricio Graña Drummond, and Benar Fux Svaiter. Newton's method for multiobjective optimization. *SIAM Journal on Optimization*, 20(2):602–626, 2009.

Kathrin Klamroth, Jørgen Tind, and Margaret M. Wiecek. Unbiased approximation in multicriteria optimization. *Math. Meth. of OR*, 56(3):413–437, 2003.

A. Pascoletti and P. Serafini. Scalarizing vector optimization problems. *Journal of Optimization Theory and Applications*, 42(4):499–524, 1984.

Douglas A. G. Vieira, Ricardo H. C. Takahashi, and Rodney R. Saldanha. Multicriteria optimization with a multiobjective golden section line search. *Math. Program.*, 131(1-2):131–161, 2012.

Jian-Bo Yang. Gradient projection and local region search for multiobjective optimisation. *European Journal of Operational Research*, 112(2):432 – 459, 1999. ISSN 0377-2217. doi: 10.1016/S0377-2217(97)00451-7. URL http://www.sciencedirect.com/science/article/pii/S0377221797004517.