

Michael Kupferschmid

Research Publications

These papers appeared in refereed scientific and engineering journals. A list of 86 lectures, conference proceedings, and other informal publications is available on request.

Solving nonlinear principal-agent problems using bilevel programming, European Journal of Operational Research 230:2 2013 364-373 (with Mark Cecchini, J. G. Ecker, and Robert Leitch).

A Mathematical Model of Cell Cycle Effects in Gastric Cancer Chemotherapy, Bulletin of Mathematical Biology 74: 2012 159-174 (with Rachel Roe-Dale and David Isaacson).

A Mathematical Model of Breast Cancer Treatment with CMF and Doxorubicin, Bulletin of Mathematical Biology 73:3 2011 585-608 (with Rachel Roe-Dale and David Isaacson).

Solving bilevel linear programs using multiple objective linear programming, Journal of Optimization Theory and Applications 140:2 2009 197-212 (with J. Glackin and J. G. Ecker).

Active set strategies in an ellipsoid algorithm for nonlinear programming, Computers and Operations Research 31 2004 941-962 (with E. K. Rugenstein).

An application of nonlinear optimization in molecular biology, European Journal of Operational Research 138:2 16 Apr 2002 452-458 (with J. G. Ecker, C. E. Lawrence, A. A. Riley, and A. C. H. Scott).

An ellipsoid algorithm for equality-constrained nonlinear programs, Computers and Operations Research 28:1 January 2001 85-92 (with Sharmila Shah and John Mitchell).

Numerical verification of second order sufficiency conditions for nonlinear programming, SIAM Review 40:2 June 1998 (with Terrence K. Kelly).

Computing the internal transient voltage response of a transformer with a nonlinear core using Gear's method – part 2: verification, IEEE Transactions on Power Delivery 10:2 May 1995 702-708 (with M. Vakilian and R. C. Degeneff).

Computing the internal transient voltage response of a transformer with a nonlinear core using Gear's method – part 1: theory, IEEE Transactions on Power Delivery 10:4 October 1995 1836-1841 (with M. Vakilian and R. C. Degeneff).

Performance of several optimization methods in robot trajectory planning problems, SIAM Journal on Scientific Computing 15 1994 1401-1412 (with J. G. Ecker and S. P. Marin).

Theory of chaperonin action: inertial model for enhanced prokaryotic rubisco assembly, Protein Science I 1993 925-934 (with H. Roy and J. Bell).

A numerical investigation of rank-two ellipsoid algorithms for nonlinear programming, Mathematical Programming 43 1989 87-95 (with A. Ech-cherif and J. G. Ecker).

A note on solution of nonlinear programming problems with imprecise function and gradient values, Mathematical Programming Study 31 1987 129-138 (with J. G. Ecker).

Using deep cuts in an ellipsoid algorithm for nonlinear programming, Mathematical Programming Study 25 1985 93-107 (with S. T. Dziuban and J. G. Ecker).

A computational comparison of the ellipsoid algorithm with several nonlinear programming algorithms, SIAM Journal on Control and Optimization 23 1985 657-674 (with J. G. Ecker).

An automated data collection system for membrane transport experiments part I: test of Onsager reciprocity, Journal of Membrane Science 22 1985 77-109 (with R. Chu, D. Gisser, and A. Zelman).

Comparison of a special purpose algorithm with general purpose algorithms for solving geometric programming problems, Journal of Optimization Theory and Applications 43 1984 237-263 (with J. G. Ecker and R. S. Sacher).

Maximizing restitution for erroneous medical payments, Interfaces 13 1983 12-17 (with K. Heiner and J. G. Ecker).

An ellipsoid algorithm for nonlinear programming, Mathematical Programming 27 1983 83-106 (with J. G. Ecker).

An Ellipsoid Algorithm for Convex Programming, doctoral dissertation, Rensselaer Polytechnic Institute, 1981.

A survey of theatre engineering, Theatre Design and Technology 40 1975 21-26.