Kaj Madsen - DTU Orbit (31/12/2017)

Madsen, Kaj
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Department of Applied Mathematics and Computer Science

Publications:

**Space Mapping and Beyond: Knowledge-Driven Microwave Design Optimization**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

**Space Mapping With Adaptive Response Correction for Microwave Design Optimization**
Publication: Research - peer-review › Journal article – Annual report year: 2009

**Editorial - surrogate modeling and space mapping for engineering optimization**
Publication: Research - peer-review › Journal article – Annual report year: 2008

**Introduction to Optimization and Data Fitting**
Madsen, K. & Nielsen, H. B. 2008
Publication: Education › Compendium/lecture notes – Annual report year: 2008

**Quality assessment of coarse models and surrogates for space mapping optimization**
Publication: Research - peer-review › Journal article – Annual report year: 2008

**Special section: Applications of distributed and grid computing**
Publication: Research - peer-review › Journal article – Annual report year: 2008

**Editorial introduction to the special issue on computational linear algebra and sparse matrix computations**
Publication: Research - peer-review › Editorial – Annual report year: 2007

**On the vehicle routing problem with time windows**
Publication: Research › Ph.D. thesis – Annual report year: 2006

**A Space-Mapping Framework for Engineering Optimization: Theory and Implementation**
Publication: Research - peer-review › Journal article – Annual report year: 2006

**Interval methods: An introduction**
Publication: Research - peer-review › Book chapter – Annual report year: 2006
Recent trends in space mapping technology
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

Robust C subroutines for non-linear optimization
Brock, P., Madsen, K. & Nielsen, H. B. 2004
Publication: Research › Report – Annual report year: 2004

Robust non-gradient C subroutines for non-linear optimization
Brock, P., Madsen, K. & Nielsen, H. B. 2004
Publication: Research › Report – Annual report year: 2004

Selected numerical algorithms
Publication: Research - peer-review › Journal article – Annual report year: 2004

Space mapping interpolating surrogates for highly optimized EM-based design of microwave devices
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

Space Mapping: The State of the Art
Publication: Research - peer-review › Journal article – Annual report year: 2004

Optimization using surrogate models - by the space mapping technique
Søndergaard, J., Madsen, K. & Nielsen, H. B. May 2003
Publication: Research › Ph.D. thesis – Annual report year: 2003

EM-based surrogate modeling and design exploiting implicit, frequency and output space mappings
Publication: Research - peer-review › Article in proceedings – Annual report year: 2003

EM-based optimization exploiting partial space mapping and exact sensitivities
Publication: Research - peer-review › Conference article – Annual report year: 2002

EM-Based Optimization Exploiting Partial Space Mapping and Exact Sensitivities
Publication: Research - peer-review › Article in proceedings – Annual report year: 2002

Introduction to Interval Analysis
Caprani, O., Madsen, K. & Nielsen, H. B. 2002
Publication: Education › Compendium/lecture notes – Annual report year: 2002
Second Scandinavian Workshop on Linear Programming
Extended abstracts of invited papers
Publication: Research - peer-review › Book – Annual report year: 1996

Selvevaluering af datalogiuuddannelser på DTU
Publication: Research - peer-review › Report – Annual report year: 1996

Aggressive Space Mapping for Electromagnetic Design
Publication: Research - peer-review › Article in proceedings – Annual report year: 1995

Applied Parallel Computing: Computations in Physics, Chemistry and Engineering Science
Publication: Research - peer-review › Book – Annual report year: 1995

Electromagnetic Optimization Exploiting Aggressive Space Mapping
Publication: Research - peer-review › Journal article – Annual report year: 1995

Enclosing Solutions of Integral Equations
Publication: Research - peer-review › Journal article – Annual report year: 1995

Implementation of QR up- and downdating on a massively parallel computer
Publication: Research - peer-review › Journal article – Annual report year: 1995

A Parallel Method for Linear Interval Equations
Madsen, K. & Toft, O. 1994 In : Interval Computations. 3, p. 81-105
Publication: Research - peer-review › Journal article – Annual report year: 1994

New Characterizations of Solutions to Overdetermined Systems of Linear Equations
Publication: Research - peer-review › Journal article – Annual report year: 1994

Parallel Interval Methods for Perturbed Linear Systems
Publication: Research - peer-review › Book chapter – Annual report year: 1994

Programming for Sparse Minimax Optimization
Publication: Research - peer-review › Journal article – Annual report year: 1994

The Huber concept in device modeling, circuit diagnosis and design centering
Publication: Research - peer-review › Article in proceedings – Annual report year: 1994

A Finite Smoothing Algorithm for Linear L1 Estimation
Publication: Research - peer-review › Journal article – Annual report year: 1993
A Projected Conjugate Gradient Method for Sparse Minimax Problems.
Publication: Research - peer-review › Article in proceedings – Annual report year: 1993

Huber Optimization of Circuits: A Robust Approach
Publication: Research - peer-review › Journal article – Annual report year: 1993

Robustizing Circuit Optimization using Huber Functions.
Publication: Research - peer-review › Article in proceedings – Annual report year: 1993

Use of a Real-Valued Local Minimum in Parallel Global Optimization
Caprani, O., Godthåb, B. & Madsen, K. 1993 In : Interval Computations. 2, p. 71-82
Publication: Research - peer-review › Journal article – Annual report year: 1993

A Continuation Method for Linear Estimation.
Publication: Research - peer-review › Article in proceedings – Annual report year: 1992

Parallel Algorithms for Global Optimization.
Henriksen, T. & Madsen, K. 1992 In : Interval Computations. 3, 5, p. 88-95
Publication: Research - peer-review › Journal article – Annual report year: 1992

Robust Algorithms for Non-Linear Estimation.
Publication: Research - peer-review › Article in proceedings – Annual report year: 1992

Optimization of Pipe Networks
Hansen, C. T., Madsen, K. & Nielsen, H. B. 1991 In : Mathematical Programming. 52, 1, p. 45-58
Publication: Research - peer-review › Journal article – Annual report year: 1991

Finite Algorithms for Robust Linear Regression
Publication: Research - peer-review › Journal article – Annual report year: 1990

Algorithms for worst-case tolerance optimization
Publication: Research - peer-review › Journal article – Annual report year: 1979

Algorithms for worst case tolerance optimization
Publication: Research - peer-review › Report – Annual report year: 1978

FORTRAN program package for worst case tolerance optimization
Publication: Research - peer-review › Report – Annual report year: 1978

Linearly constrained minimax optimization
Publication: Research - peer-review › Journal article – Annual report year: 1978
Minimax optimization subject to linear constraints
Publication: Research - peer-review › Journal article – Annual report year: 1978

New algorithms for worst case tolerance optimization
Publication: Research - peer-review › Article in proceedings – Annual report year: 1978

Constrained minimax optimization
Madsen, K. & Schjær-Jacobsen, H. 1977
Publication: Research - peer-review › Report – Annual report year: 1977

FORTRAN subroutines for nonlinear optimization subject to linear constraints
Madsen, K. & Schjær-Jacobsen, H. 1977
Publication: Research - peer-review › Report – Annual report year: 1977

Linearly constrained minimax optimization of circuits and systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 1977

FORTRAN subroutines for minimax solution of non-linear bounds on the variables
Madsen, K. & Schjær-Jacobsen, H. 1976
Publication: Research - peer-review › Report – Annual report year: 1976

Gradient and non-gradient algorithms for minimax optimization with parameter bounds
Madsen, K. & Schjær-Jacobsen, H. 1976
Publication: Research - peer-review › Report – Annual report year: 1976

Linearly constrained minimax optimization of circuits and systems
Schjær-Jacobsen, H. & Madsen, K. 1976
Publication: Research - peer-review › Report – Annual report year: 1976

Singularities in minimax optimization of networks
Publication: Research - peer-review › Journal article – Annual report year: 1976

Singularities in minimax optimization of networks
Publication: Research - peer-review › Article in proceedings – Annual report year: 1976

Synthesis of nonuniformly spaced arrays using a general nonlinear minimax optimisation method
Publication: Research - peer-review › Journal article – Annual report year: 1976

Automated minimax design of networks
Publication: Research - peer-review › Journal article – Annual report year: 1975

Efficient Minimax Design of Networks without Using Derivatives
FORTRAN subroutines for non-linear minimax optimization
Madsen, K. & Schjær-Jacobsen, H. 1975

Projects:

Ikke-differentiabel optimering i heltalsprogrammering
Kallehauge, B., Madsen, O. B., Larsen, J., Madsen, K., Nielsen, O. A., Lübbecke, M. & Pisinger, D.
01/08/2000 → 22/05/2006
Project: PhD

Ikke-lineær optimering ved anvendelse af surrogatmodeller
Søndergaard, J., Madsen, K., Frandsen, P. E., Nielsen, H. B., Hansen, P. C., Ravn, H. V. & Vicente, L. N.
01/02/2000 → 20/05/2003
Project: PhD

Signal and Image Processing for Telemedicine (SITE).
Conradsen, K., Madsen, K., Hansen, P. C., Hansen, L. K., Erbsøll, B. K., Carstensen, J. M., Larsen, J., Sørensen, J. A. & Sigurdsson, S.
01/07/1999 → 30/06/2003
Project

Storskala inversionsalgoritmer
Berglund, E. A., Hansen, P. C., Bendtsen, C., Jacobsen, B. H., Madsen, K., Nielsen, H. B., Mosegaard, K. & Rojas Larrazabal, M. D. L. C.
01/12/1998 → 20/01/2003
Project: PhD

Guest List at IMM - 1997.
Madsen, K.
01/01/1997 → 31/12/1997
Project

Guest list of IMM - 1996.
Madsen, K.
01/01/1996 → 31/12/1996
Project

Linear and Quadratic Programming
Nielsen, H. B., Madsen, K., Pinar, M., Chen, B. & Edlund, O.
01/01/1996 → …
Project

EPOS: Efficient Parallel algorithms for Optimization and Simulation
03/02/1995 → …
Project

Surrogate Modelling for Engineering Optimization
Madsen, K., Bandler, J. W. & Zhang, Q.
01/01/1995 → …
Project
Selv-validerende computerbaserede beregningsmetoder for funktionalanalysen (med særlig henblik på anvendelsesmulighederne)
Stauning, O., Madsen, K., Knudsen, C., Skelboe, S. & Skelboe, S.
01/09/1994 → 26/11/1997
Project: PhD

Error Bounds for Differential Equations
Madsen, K. & Stauning, O.
01/08/1994 → 31/12/1997
Project

Space mapping for engineering optimization
Madsen, K., Nielsen, H. B., Søndergaard, J., Pedersen, F. Ø., Bakr, M., Bandler, J., Cheng, Q., Gebre-Mariam, D. & Mohamed, A.
01/01/1993 → …
Project

Global optimization
Madsen, K., Stauning, O., Zerchaninov, S., Zilinskas, A. & Zilinskas, J.
01/08/1990 → …
Project

Applications of parameter estimation
Madsen, K., Frandsen, P. E., Biernacki, R. & Bandler, J. W.
01/08/1979 → …
Project