

A Bibliography of Publications of Anders Forsgren

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Abstract

This bibliography records publications of Anders Forsgren.

Title word cross-reference

16 [For08].

algorithm [BF13]. **algorithms** [For02].
analysis [FR92, FR93, OHCF16].
approaches [CF14]. **approximate** [CF14].
approximating [BF13]. **Arising**
[FGG07, FGS94, FGS96]. **Augmented**
[FGG07].

based [BF13]. **between** [FO15].

Cholesky [FGM93, FGM95]. **column**
[CF14, OHCF16]. **Comments** [For08].
communications [PF02]. **Computing**
[FGM93, FGM95]. **conditioned**

[FGS94, FGS96]. **conditions** [For00].
conjugate [FO15]. **connection** [FO15].
Constrained
[FM93, FM97, FM90, FGS94, FGS96].
Controlling [FGM91, FGM89b, For02].
Convex [FS01, BF13].

Dempsey [For08]. **Diagonally** [For96].
Dimensioning [PF02]. **Directions**
[FGM95, FGM93]. **Dominant** [For96]. **Dual**
[FG98, BF13]. **dynamically** [OHCF15].

element [FR92, FR93]. **elementary**
[OHCF15, OHCF16]. **enabled** [PF02].
Equality [FM93, FM90].
Equality-Constrained [FM93, FM90].

F [For08]. **Factorization** [FGM95, FGM93].
factorizations [For02]. **finite** [FR92, FR93].
flux [OHCF15, OHCF16].

generated [OHCF16]. **generating**
[OHCF15]. **generation** [CF14, OHCF16].

gradient [FO15].

H [For08].

Identification [FGM91, FGM89b]. **ill** [FGS94, FGS96]. **ill-conditioned** [FGS94, FGS96]. **Inequality** [FM97]. **Inequality-Constrained** [FM97]. **Inertia** [FGM91, For02, FGM89b]. **Inertia-Controlling** [FGM91, For02, FGM89b]. **Intensity** [For08, CF14]. **intensity-modulated** [CF14]. **Interior** [FG98, FS01, FGW02, FGG07, FGS94, FGS96, For06]. **Iterative** [FGG07].

J [For08].

Large [FM93, FM97, FM90]. **Large-Scale** [FM93, FM97, FM90]. **Least** [For96, FS01]. **Least-Squares** [For96, FS01]. **Linear** [FM93, For96, FM97, FS01, FM90]. **Local** [FGM91, FGM89b].

Matrices [For96]. **metabolic** [OHCF15]. **method** [FGM89a, FR92, FR93, FO15]. **Methods** [FGM91, FM93, FM97, FG98, FS01, FGW02, FGG07, FGM89b, FM90, For90, FGS94, FGS96, For06, FO15].

Minimization

[FM93, FM97, FGM89a, FM90].

Minimizers [FGM91, FGM89b]. **modes** [OHCF15, OHCF16]. **Modified**

[FGM95, FGM89a, FR92, FGM93, FR93].

modulated [CF14, For08]. **multicast**

[PF02]. **multicast-enabled** [PF02].

network [OHCF15]. **networks** [PF02].

Newton

[FGM89a, FM90, For90, FR92, FGM93, FM93, FGM95, FM97, FO15, FR93]. **no** [For08]. **Nonconvex** [FG98, For90, For00]. **Nonlinear** [FG98, FGW02, FR92, FR93].

Optimality [For00]. **Optimization** [FGW02, For90, FGS94, FGS96, For02, For08, OHCF15].

Pareto [BF13]. **Partial** [FGM95, FGM93]. **plan** [For08]. **Primal** [FG98]. **Primal-Dual** [FG98]. **Problems** [For96, FS01, FO15]. **Programming** [FGM91, FG98, FS01, FGM89b, For00]. **programs** [CF14].

Quadratic

[FGM91, FS01, CF14, FGM89b, FO15].

quasi [FO15]. **quasi-Newton** [FO15].

radiation [CF14, For08]. **Related** [FS01]. **relevant** [OHCF15]. **Robustness** [OHCF16]. **Romeijn** [For08].

Scale [FM93, FM97, FM90]. **semidefinite** [For00]. **Solution** [FGG07]. **solutions** [CF14]. **Squares** [For96, FS01]. **Stability** [FGS94, FGS96]. **starts** [For06]. **surfaces** [BF13]. **symmetric** [FGS94, FGS96]. **Systems** [FGG07, FGS94, FGS96].

techniques [BF13]. **therapy** [CF14, For08]. **TOP** [For08]. **treatment** [For08].

unconstrained [FGM89a]. **use** [FR92, FR93]. **Using** [FGM95, FGM93, OHCF15].

warm [For06]. **Weight** [For96]. **Weighted** [FS01].

References

Bokrantz:2013:AAc

[BF13] Rasmus Bokrantz and Anders Forsgren. An algorithm for approximating convex Pareto surfaces based on dual techniques. *IN-*

FORMS Journal on Computing, 25 (2):377–393, 2013. ISSN 1091-9856 (print), 1526-5528 (electronic).

Carlsson:2014:CGA

- [CF14] Fredrik Carlsson and Anders Forsgren. On column generation approaches for approximate solutions of quadratic programs in intensity-modulated radiation therapy. *Annals of Operations Research*, 223:471–481, 2014. CODEN AOREEV. ISSN 0254-5330 (print), 1572-9338 (electronic).

Forsgren:1998:PDI

- [FG98] Anders Forsgren and Philip E. Gill. Primal-dual interior methods for nonconvex nonlinear programming. *SIAM Journal on Optimization*, 8(4):1132–1152, November 1998. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/30556>.

Forsgren:2007:ISA

- [FGG07] Anders Forsgren, Philip E. Gill, and Joshua D. Griffin. Iterative solution of augmented systems arising in interior methods. *SIAM Journal on Optimization*, 18(2):666–690, 2007. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic).

Forsgren:1989:MNM

- [FGM89a] A. Forsgren, P. E. Gill, and W. Murray. A modified Newton method for unconstrained minimization. Report SOL 89-12, De-

partment of Operations Research, Stanford University, 1989.

Forsgren:1989:ILM

- [FGM89b] A. Forsgren, P. E. Gill, and W. Murray. On the identification of local minimizers in inertia-controlling methods for quadratic programming. Report SOL 89-11, Department of Operations Research, Stanford University, 1989.

Forsgren:1991:ILM

- [FGM91] A. L. Forsgren, P. E. Gill, and W. Murray. On the identification of local minimizers in inertia-controlling methods for quadratic programming. *SIAM Journal on Matrix Analysis and Applications*, 12(4):730–746, October 1991. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Forsgren:1993:CMN

- [FGM93] A. Forsgren, P. E. Gill, and W. Murray. Computing modified Newton directions using a partial Cholesky factorization. Report TRITA-MAT-1993-9, Division of Optimization and Systems Theory, Department of Mathematics, Royal Institute of Technology, 1993.

Forsgren:1995:CMN

- [FGM95] Anders Forsgren, Philip E. Gill, and Walter Murray. Computing modified Newton directions using a partial Cholesky factorization. *SIAM Journal on Scientific Computing*, 16(1):139–150, January 1995. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic).

Forsgren:1994:SSI

- [FGS94] A. Forsgren, P. E. Gill, and J. R. Shinnerl. Stability of symmetric ill-conditioned systems arising in interior methods for constrained optimization. Report TRITA-MAT-1994-24, Division of Optimization and Systems Theory, Department of Mathematics, Royal Institute of Technology, 1994. Published in [FGS96].

Forsgren:1996:SSI

- [FGS96] Anders Forsgren, Philip E. Gill, and Joseph R. Shinnerl. Stability of symmetric ill-conditioned systems arising in interior methods for constrained optimization. *SIAM Journal on Matrix Analysis and Applications*, 17(1):187–211, January 1996. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/27065>.

Forsgren:2002:IMN

- [FGW02] Anders Forsgren, Philip E. Gill, and Margaret H. Wright. Interior methods for nonlinear optimization. *SIAM Review*, 44(4):525–597, December 2002. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/41494>.

Forsgren:1990:NML

- [FM90] A. Forsgren and W. Murray. Newton methods for large-scale linear equality-constrained minimization. Report SOL 90-6, De-

partment of Operations Research, Stanford University, 1990.

Forsgren:1993:NML

- [FM93] A. Forsgren and W. Murray. Newton methods for large-scale linear equality-constrained minimization. *SIAM Journal on Matrix Analysis and Applications*, 14(2):560–587, April 1993. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Forsgren:1997:NML

- [FM97] Anders Forsgren and Walter Murray. Newton methods for large-scale linear inequality-constrained minimization. *SIAM Journal on Optimization*, 7(1):162–176, February 1997. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/27912>.

Forsgren:2015:CBC

- [FO15] Anders Forsgren and Tove Odland. On the connection between the conjugate gradient method and quasi-Newton methods on quadratic problems. *Computational Optimization and Applications*, 60(2):377–392, 2015. CODEN CPPPEF. ISSN 0926-6003 (print), 1573-2894 (electronic).

Forsgren:1990:NMN

- [For90] A. Forsgren. *Newton methods for nonconvex optimization*. PhD thesis, Report TRITA-MAT-1990-10, Division of Optimization and Systems Theory, Department of Math-

ematics, Royal Institute of Technology, Stockholm, Sweden, 1990.

Forsgren:1996:LLS

- [For96] Anders Forsgren. On linear least-squares problems with diagonally dominant weight matrices. *SIAM Journal on Matrix Analysis and Applications*, 17(4):763–788, October 1996. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/28401>.

Forsgren:2000:OCN

- [For00] Anders Forsgren. Optimality conditions for nonconvex semidefinite programming. *Mathematical Programming*, 88(1, Ser. A):105–128, 2000. CODEN MHPGA4. ISSN 0025-5610.

Forsgren:2002:ICF

- [For02] Anders Forsgren. Inertia-controlling factorizations for optimization algorithms. *Applied Numerical Mathematics: Transactions of IMACS*, 43(1–2):91–107, October 2002. CODEN ANMAEL. ISSN 0168-9274 (print), 1873-5460 (electronic). 19th Dundee Biennial Conference on Numerical Analysis (2001).

Forsgren:2006:WSI

- [For06] A. Forsgren. On warm starts for interior methods. In *System modeling and optimization*, volume 199 of *IFIP Int. Fed. Inf. Process.*, pages 51–66. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2006.

Forsgren:2008:CIM

- [For08] A. Forsgren. Comments on: “Intensity modulated radiation therapy treatment plan optimization” [TOP 16 (2008), no. 2, 215–243; Cno. 2453404] by H. E. Romeijn and J. F. Dempsey. *TOP*, 16(2): 246–247, 2008. ISSN 1134-5764.

Forsgren:1992:UMN

- [FR92] A. Forsgren and U. Ringertz. On the use of a modified Newton method for nonlinear finite element analysis. Report TRITA-MAT-1992-22, Division of Optimization and Systems Theory, Department of Mathematics, Royal Institute of Technology, 1992.

Forsgren:1993:UMN

- [FR93] Anders Forsgren and Ulf Ringertz. On the use of a modified Newton method for nonlinear finite element analysis. *Computer Methods in Applied Mechanics and Engineering*, 110(3-4):275–283, 1993. CODEN CMMECC. ISSN 0045-7825, 0374-2830.

Forsgren:2001:WLL

- [FS01] Anders Forsgren and Göran Sporre. On weighted linear least-squares problems related to interior methods for convex quadratic programming. *SIAM Journal on Matrix Analysis and Applications*, 23(1):42–56, 2001. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/37229>.

Oddsottir:2015:DGR

- [OHCF15] Hildur Æsa Oddsóttir, Erika Hagrot, Véronique Chotteau, and Anders Forsgren. On dynamically generating relevant elementary flux modes in a metabolic network using optimization. *Journal of Mathematical Biology*, 71(4): 903–920, October 2015. CODEN JMBLAJ. ISSN 0303-6812 (print), 1432-1416 (electronic). URL <http://link.springer.com/content/pdf/10.1007/s00285-014-0844-1.pdf>.

Oddsottir:2016:RAE

- [OHCF16] Hildur Æsa Oddsóttir, Erika Hagrot, Véronique Chotteau, and Anders Forsgren. Robustness analysis of elementary flux modes generated by column generation. *Mathematical Biosciences*, 273:45–56, 2016. CODEN MABIAR. ISSN 0025-5564 (print), 1879-3134 (electronic).

Prytz:2002:DME

- [PF02] Mikael Prytz and Anders Forsgren. Dimensioning multicast-enabled communications networks. *Networks*, 39(4):216–231, 2002. CODEN NTWKAA. ISSN 0028-3045 (print), 1097-0037 (electronic).