A Bibliography of Publications of Henry Wolkowicz

Henry Wolkowicz
Dept of Comb and Opt
University of Waterloo
Waterloo, Ont.
Canada N2L 3G1

Tel: (519) 888-4567 ext. 15589
FAX: +1 519 725 5441

E-mail: hwolkowi@orion.uwaterloo.ca (Internet)

17 November 2023
Version 1.44

Abstract

This bibliography records publications of Henry Wolkowicz.

Title word cross-reference

$(0, 1)$ [PW95a, PW95b, PRW95]. ^{2} [KW97, KW98].

-quadratic [PW95b, PRW95].

1 [ADH$^+$06]. **12th** [BGKW07]. **19-5.5** [Wol98]. **19.** [PS00].

4th [BC95].

60th [BBB$^+$13].

93-17 [Wol94d].

Abraham [PRBI$^+$92]. **abstract** [BW79a, BW79b, BW81c, BW81b, BW82a, BW82b]. **Accuracy** [Kru01]. **ADMM** [OWX18]. **Advances** [xY98]. **advantage** [WBi86a]. **affine** [BW81a, Wol80c]. **age** [PRBI$^+$92]. **Algorithm** [TWZ94, BIW92, DKW12, KW03a, KW03b, WBi86b]. **Algorithms** [Kru01, PP00, WSV00, BBC$^+$11, RVW95, RVWxxb]. **all-inclusive** [WZ95]. **alternating** [DLW17]. **analysis** [MWWW20]. **analytical** [BBB$^+$13, BTW13]. **Applications** [PP00, RW92, TWZ94, WSV00, KW12a, KW12b, PS00, RW94a, RW97, Wol81c]. **Applied** [Kru96, PR02]. **approach** [AHTW01, GLWW09]. **Approaches** [Had89, PW98a, PW02, PW03, Wol00b, Wol78b]. **Approximate** [AHW05, AKW97, JKW98, Wol78b, WZ78]. **approximation** [MW81, Wol75]. **arising** [BJW85]. **Assignment** [Had89, HRW92b, Kar92, PRW94, PP00, Sch85, Wol00b, Zha96, ACWY99, DW09, HRW88, HRW90, HRW92a, KRW94, KRWZxx, PW94, RW92,

[GWW01]. **Issue**
[PW98b, PSWZ94, AdKT⁺07, BTW13].
iteration [WRW17]. **Iterative** [GLWW01].

J [Wol94a]. **Jonathan** [BBB⁺13]. **July**
[PS00].

Kantorovich [Wol75, Wol81a]. **knapsack**
[FLWW20]. **Kronecker** [SW91d].

L. [BSW82]. **Lack** [Wol02c]. **Lagrangian**
[AW00c, KRWZxx, Wol00a]. **Large** [AW00b,
PTW08, AdKT⁺07, RW94a, RW97, STW17].
large-scale [AdKT⁺07, STW17]. **Layout**
[Anj01]. **Least** [DW93, Zha93, WZ95].
Least-Change [DW93]. **Letters** [KKN⁺80].
Lifting [AW99, AW02e]. **Linear**
[GLWW01, Kru01, Wol96, BIW92,
GLWW09, KMR⁺97, KMR⁺01, PTW08,
SW86, SWZ88, WBi86a, WBi86b]. **Local**
[STW17]. **Localization**
[KW10, AAPW11, DKQW10]. **Lovász**
[SW02]. **Low** [HW18, DW09].
low-dimensional [DW09]. **Low-rank**
[HW18]. **Lower** [JKW85, HRW92a].

majorization [LW12]. **Management**
[PRBI⁺92]. **Mathematical** [Fia83, PK90].
mathematics [BBB⁺13, BTW13].
Matrices
[AW01a, AW02a, DPW15, AHW05, AW02b,
AW07, AAPW11, GJMW84b, GJMW87,
KW12a, LW12, KW12b, WRW17]. **Matrix**
[AW00a, AW00b, AW02c, AW00c, Wol81b,
Wol82, AKW97, AKW99, AHTW01, AW02d,
BJW85, DKQW10, DGW11, GJMW86,
HW18, JKW85, LW15, SWWP19, Wol81c,
WA02, Wol94a]. **Max**
[AW99, AW01b, AW01c, RVW95, RVWxxb,
AW01d, AW02d, RVWxxa, AW02e].
Max-Cut [AW99, AW01b, AW01c, AW01d,
AW02d, AW02e]. **Max-min**
[RVW95, RVWxxb, RVWxxa].
maximization [RW92]. **maximizing**

[GJMW86]. **Maximum**
[Anj01, SWW18, WRW17]. **May**
[BC95, PW94, PW98c, PK90]. **Measures**
[Wol94b, Zha93]. **measuring** [WW10].
Method
[GLWW01, GHI⁺22, SW01, AKW97,
HRVW96, JKW98, LPSW21, SW02, Wol83a].
Methods [DW93, PW98c, PRBI⁺92, Zha93,
DLP⁺15, PS00, RVWxxa, Wol75, WZ95].
min [RVW95, RVWxxa, RVWxxb]. **minima**
[STW17]. **minimal** [TW12]. **minimization**
[HW18, PSWW16, RW94a, RW97].
minimum [LPSW21]. **missing** [SWWP19].
Model [AW00b]. **Modelling**
[GWW01, PS00]. **Molecular** [AW02a].
moment [WRW17]. **Monotonicity** [BW89].
Multi [ADH⁺06]. **Multi-Stage** [ADH⁺06].
Multiple [Wol94c].

necessary [AW07]. **Network**
[KW10, AAPW11, DKQW10]. **Networking**
[ADH⁺06]. **Newton** [KMR⁺97, KMR⁺01,
KW03a, KW03b, RWxx, SW02]. **NGL02**
[ADH⁺06]. **NGL02-1** [ADH⁺06]. **node**
[SWWP19]. **nodes** [RW94b, RW95].
NOESY [AKG⁺13]. **Noisy**
[DKVW17, SWWP19]. **Nonconvex**
[NWY00]. **nondegeneracy** [GLWW09].
nondifferentiable [Wol83b]. **nonglobal**
[STW17]. **Nonlinear**
[BISW94, Kru96, KW00a, PP00, AdKT⁺07,
KW00b, SW86, xY98]. **Nonnegative**
[BJW85, LPSW21]. **nonnegativity**
[SW91a]. **Nonsymmetric**
[HRW92b, SW94, SW95]. **norm**
[HW18, LW15]. **Normal** [GJMW87]. **Note**
[RSW02, Wol02c, AKW96, DLW17,
GJMW86, SW91d]. **Novel** [PW03]. **nuclear**
[HW18]. **Numerical** [LW85].

Olkin [PSWZ94]. **one** [Wol94b]. **operator**
[Wol78b, WZ78]. **Optimal** [Lun88, Thoxx].
Optimality
[Wol80c, Wol83c, BW79a, BW79b, BW81c,

References

Alfakih:2011:EDM

[AAPW11] Abdo Y. Alfakih, Miguel F. Anjos, Veronica Piccialli, and Henry Wolkowicz. Euclidean distance matrices, semidefinite programming and sensor network localization. *Portugaliae Mathematica*, 68(1): 53–102, 2011. ISSN 0032-5155 (print), 1662-2758 (electronic). URL http://www. ems-ph.org/journals/show_ abstract.php?issn=0032-5155& vol=68&iss=1&rank=4.

Anstreicher:1999:SDT

[ACWY99] K. M. Anstreicher, X. Chen, H. Wolkowicz, and Y. Yuan. Strong duality for a trust-region type relaxation of the quadratic assignment problem. *Linear Algebra and Its Applications*, 301 (1-3):121–136, 1999. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Anjos:2006:NMS

[ADH+06] Miguel F. Anjos, Michael Desroches, Anwar Haque, Oleg Grodzevich, Hua Wei, and Henry Wolkowicz. NGL02-1: Multi-stage investment decision under contingent de-

mand for networking planning. In *IEEE Global Telecommunications Conference, 2006. GLOBECOM '06*, pages 1–5. IEEE Computer Society Press, 1109 Spring Street, Suite 300, Silver Spring, MD 20910, USA, 2006. URL `http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4150879`.

Andersen:2007:FSI

[AdKT+07] Erling Andersen, Etienne de Klerk, Levent Tunçel, Henry Wolkowicz, and Shuzhong Zhang. Foreword: special issue on large-scale nonlinear and semidefinite programming. *Mathematical Programming*, 109(2-3, Ser. B):207–209, 2007. CODEN MHPGA4. ISSN 0025-5610.

Anjos:2001:SPA

[AHTW01] M. F. Anjos, N. Higham, M. Takouda, and H. Wolkowicz. A semidefinite programming approach for the closest correlation matrix problem. Technical Report CORR 2001-in progress, University of Waterloo, Waterloo, ON, Canada, 2001.

Al-Homidan:2005:AEC

[AHW05] Suliman Al-Homidan and Henry Wolkowicz. Approximate and exact completion problems for Euclidean distance matrices using semidefinite programming. *Linear Algebra and Its Applications*, 406(??):109–141, September 1, 2005. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Alipanahi:2013:DPS

[AKG+13] Babak Alipanahi, Nathan Krislock, Ali Ghodsi, Henry Wolkowicz, Logan Donaldson, and Ming Li. Determining protein structures from NOESY distance constraints by semidefinite programming. *Journal of Computational Biology*, 20(4):296–310, 2013. CODEN JCOBEM. ISSN 1066-5277 (print), 1557-8666 (electronic).

Alfakih:1996:NGS

[AKW96] A. Alfakih, S. Kruk, and H. Wolkowicz. A note on geometry of semidefinite relaxations. Technical Report CORR Report 97, University of Waterloo, Waterloo, ON, Canada, 1996.

Alfakih:1997:IPM

[AKW97] A. Alfakih, A. Khandani, and H. Wolkowicz. An interior-point method for approximate distance matrix completions. Technical Report CORR Report 9, University of Waterloo, Waterloo, ON, Canada, 1997. URL `ftp://orion.uwaterloo.ca/pub/henry/reports/distmat.ps.gz`. SIMAX, submitted.

Alfakih:1999:SED

[AKW99] A. Alfakih, A. Khandani, and H. Wolkowicz. Solving Euclidean distance matrix completion problems via semidefinite programming. *Computational optimization and applications*, 12(1-3):13–30, 1999. CODEN CPPPEF. ISSN 0926-6003

(print), 1573-2894 (electronic). Computational optimization—a tribute to Olvi Mangasarian, Part I.

Anjos:2001:NCR

[Anj01]   M. F. Anjos. *New Convex Relaxations for the Maximum Cut and VLSI Layout Problems.* PhD thesis, University of Waterloo, 2001. Advisor: H. Wolkowicz.

Alfakih:1998:EWG

[AW98]   A. Alfakih and H. Wolkowicz. On the embedability of weighted graphs in Euclidean spaces. Technical Report CORR 98-12, University of Waterloo, Waterloo, ON, Canada, 1998.

Anjos:1999:SSR

[AW99]   M. F. Anjos and H. Wolkowicz. A strengthened SDP relaxation via a second lifting for the max-cut problem. Technical Report CORR 99-55, University of Waterloo, Waterloo, ON, Canada, 1999. 28 pp.

Alfakih:2000:MCP

[AW00a]   A. Alfakih and H. Wolkowicz. Matrix completion problems. In Wolkowicz et al. [WSV00], pages 533–545. ISBN 0-7923-7771-0. LCCN T57.74 .H355 2000.

Alfakih:2000:NSP

[AW00b]   A. Alfakih and H. Wolkowicz. A new semidefinite programming model for large sparse Euclidean distance matrix completion problems. Technical Re-

port CORR 2000-37, University of Waterloo, Waterloo, ON, Canada, 2000. In progress.

Anstreicher:2000:LRQ

[AW00c]   Kurt M. Anstreicher and Henry Wolkowicz. On Lagrangian relaxation of quadratic matrix constraints. *SIAM Journal on Matrix Analysis and Applications*, 22(1):41–55, 2000. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL http://epubs.siam.org/sam-bin/dbq/article/34029.

Alfakih:2001:TTE

[AW01a]   A. Alfakih and H. Wolkowicz. Two theorems on Euclidean distance matrices and Gale transform. *Linear Algebra and Its Applications*, 340(1-3): 149–154, 2001. CODEN LAA-PAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Anjos:2001:NRPa

[AW01b]   M. F. Anjos and H. Wolkowicz. A new rounding procedure for the max-cut problem I: Empirical results. Technical Report CORR 2000-in progress, University of Waterloo, Waterloo, ON, Canada, 2001.

Anjos:2001:NRPb

[AW01c]   M. F. Anjos and H. Wolkowicz. A new rounding procedure for the max-cut problem II: Theoretical results. Technical Report CORR 2000-in progress, University of Waterloo, Waterloo, ON, Canada, 2001.

Anjos:2001:SSP

[AW01d] Miguel F. Anjos and Henry Wolkowicz. Strengthened semidefinite programming relaxations for the max-cut problem. In *Advances in convex analysis and global optimization (Pythagorion, 2000)*, volume 54 of *Nonconvex Optim. Appl.*, pages 409–420. Kluwer Academic Publishers, Dordrecht, The Netherlands / Boston, MA, 2001.

Alfakih:2002:EDM

[AW02a] A. Alfakih and H. Wolkowicz. Euclidean distance matrices and the molecular conformation problem. Technical Report 17, University of Waterloo, Waterloo, ON, Canada, 2002.

Alfakih:2002:TTE

[AW02b] Abdo Y. Alfakih and Henry Wolkowicz. Two theorems on Euclidean distance matrices and Gale transform. *Linear Algebra and Its Applications*, 340: 149–154, 2002. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Anjos:2002:SPD

[AW02c] M. F. Anjos and H. Wolkowicz. Semidefinite programming for discrete optimization and matrix completion problems. *Discrete Applied Mathematics*, 123/124(CORR 2000-38):507–571, 2002. CODEN DAMADU. ISSN 0166-218X (print), 1872-6771 (electronic).

Anjos:2002:GSM

[AW02d] Miguel F. Anjos and Henry Wolkowicz. Geometry of semidefinite max-cut relaxations via matrix ranks. *Journal of Combinatorial Optimization*, 6(3):237–270, 2002. CODEN JCOPFV. ISSN 1382-6905 (print), 1573-2886 (electronic). New approaches for hard discrete optimization (Waterloo, ON, 2001). CORR 2001-39.

Anjos:2002:SSR

[AW02e] Miguel F. Anjos and Henry Wolkowicz. Strengthened semidefinite relaxations via a second lifting for the Max-Cut problem. *Discrete Applied Mathematics*, 119(1-2):79–106, 2002. CODEN DAMADU. ISSN 0166-218X (print), 1872-6771 (electronic). Foundations of heuristics in combinatorial optimization.

Alfakih:2007:SNS

[AW07] A. Y. Alfakih and Henry Wolkowicz. Some necessary and some sufficient trace inequalities for Euclidean distance matrices. *Linear Multilinear Algebra*, 55(5):499–506, 2007. CODEN LNMLAZ. ISSN 0308-1087 (print), 1563-5139 (electronic). URL http://www.tandfonline.com/doi/abs/10.1080/03081080701241570.

Bailey:2013:CAM

[BBB+13] David H. Bailey, Heinz H. Bauschke, Peter Borwein, Frank Garvan, Michel Théra, Jon D.

Vanderwerff, and Henry Wolkowicz, editors. *Computational and analytical mathematics: in honor of Jonathan Borwein's 60th Birthday*, volume 50 of *Springer proceedings in mathematics and statistics*. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2013. ISBN 1-4614-7620-8, 1-4614-7621-6 (e-book). ISSN 2194-1009. xv + 701 pp. LCCN QA241. URL `http://public.eblib.com/choice/publicfullrecord.aspx?p=1466708; http://swb.eblib.com/patron/FullRecord.aspx?p=1466708; http://www.myilibrary.com?id=547562.`

Bauschke:2011:FPA

[BBC⁺11] Heinz H. Bauschke, Regina S. Burachik, Patrick Louis Combettes, Veit Elser, D. Russell Luke, and Henry Wolkowicz, editors. *Fixed-point algorithms for inverse problems in science and engineering*, volume 49 of *Springer optimization and its applications*. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2011. ISBN 1-4419-9568-4, 1-4419-9569-2 (e-book). ISSN 1931-6828 (print), 1931-6836 (electronic). xi + 402 pp. LCCN QA378.5 .F59 2011. URL `http://0-dx.doi.org.fama.us.es/10.1007/978-1-4419-9569-8.`

Balas:1995:IPC

[BC95] Egon Balas and Jens Clausen, editors. *Integer programming and combinatorial optimization:*

4th International ICPO Conference, Copenhagen, Denmark, May 29–31, 1995: proceedings, volume 920 of *Lecture Notes in Computer Science*. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 1995. CODEN LNCSD9. ISBN 3-540-59408-6 (Berlin), 0-387-59408-6 (New York). ISSN 0302-9743 (print), 1611-3349 (electronic). LCCN T57.74 .C6 1995.

Burkowski:2014:EUS

[BCW14] Forbes Burkowski, Yuen-Lam Cheung, and Henry Wolkowicz. Efficient use of semidefinite programming for selection of rotamers in protein conformations. *INFORMS Journal on Computing*, 26(4):748–766, 2014. ISSN 1091-9856 (print), 1526-5528 (electronic).

Bhatia:2007:PIC

[BGKW07] Rajendra Bhatia, Robert Guralnick, Steve Kirkland, and Henry Wolkowicz. Preface to the 12th ILAS Conference Proceedings, Regina 2005. *Linear Algebra and Its Applications*, 421 (1):1–2, 2007. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). Held in Regina, SK, June 26–29, 2005.

Ben-Israel:1994:NP

[BISW94] A. Ben-Israel, Michael Schneider, and H. Wolkowicz. *Nonlinear Programming*. ????, ????, 1994. ISBN ???? ?? pp. LCCN ???? In progress.

Ben-Israel:1992:RVR

[BIW92]   A. Ben-Israel and H. Wolkowicz. A recursive volume reducing algorithm for semi-infinite linear programming. In Phillips et al. [PRBI+92], page ?? ISBN 0-7923-9139-X. LCCN T57.6.S977 1992. Invited paper.

Butler:1985:NSQ

[BJW85]   G. Butler, C. R. Johnson, and H. Wolkowicz. Nonnegative solutions of a quadratic matrix equation arising from comparison theorems in ordinary differential equations. *SIAM Journal on Algebraic and Discrete Methods*, 6(1):47–53, 1985. CODEN SJAMDU. ISSN 0196-5212 (print), 2168-345X (electronic).

Borwein:1982:SII

[BSFW82]   J. M. Borwein, G. P. H. Styan, L. V. Foster, and H. Wolkowicz. Some inequalities involving statistical expressions. *SIAM Review*, 24(3):340–342, July 1982. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic).

Borwein:1982:SSI

[BSW82]   J. M. Borwein, G. P. H. Styan, and H. Wolkowicz. Solutions: Some inequalities involving statistical expressions (L. V. Foster). *SIAM Review*, 24(3): 340–342, ???? 1982. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic).

Bauschke:2013:PSI

[BTW13]   Heinz H. Bauschke, Michel Théra, and Henry Wolkowicz. Preface [special issue: Computational and analytical mathematics]. *Mathematical Programming*, 139(1-2, Ser. B):1–3, 2013. CODEN MHPGA4. ISSN 0025-5610.

Borwein:1979:COA

[BW79a]   J. M. Borwein and H. Wolkowicz. Characterizations of optimality for the abstract convex program. Research Report 19, Dalhousie University, Halifax, NS, Canada, 1979.

Borwein:1979:COC

[BW79b]   J. M. Borwein and H. Wolkowicz. Characterizations of optimality without constraint qualification for the abstract convex program. Research Report 14, Department of Mathematics, Dalhousie University, Halifax, NS, Canada, June 1979. 59 pp.

Borwein:1981:CCP

[BW81a]   J. M. Borwein and H. Wolkowicz. Cone-convex programming, stability and affine constraints. In Schaible and Ziemba [SZ81], pages 379–397. ISBN 0-12-621120-5. LCCN QA402.5 .G45. Invited paper.

Borwein:1981:RAC

[BW81b]   J. M. Borwein and H. Wolkowicz. Regularizing the abstract convex program. *Journal of*

Mathematical Analysis and Applications, 83(2):495–530, 1981. CODEN JMANAK. ISSN 0022-247x (print), 1096-0813 (electronic).

Borwein:1981:COA

[BW81c] Jon M. Borwein and Henry Wolkowicz. Characterization of optimality for the abstract convex program with finite dimensional range. *Journal of the Australian Mathematical Society. Series A: Pure Mathematics and Statistics*, 30(4):390–411, April 1981. CODEN JAMADS. ISSN 0263-6115 (print), 2396-8192 (electronic). URL http://docserver.carma.newcastle.edu.au/1649/; http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=4896312.

Borwein:1981:FRC

[BW81d] Jon M. Borwein and Henry Wolkowicz. Facial reduction for a cone-convex programming problem. *Journal of the Australian Mathematical Society. Series A: Pure Mathematics and Statistics*, 30(3):369–380, February 1981. CODEN JAMADS. ISSN 0263-6115 (print), 2396-8192 (electronic). URL http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=5441184.

Borwein:1982:COCa

[BW82a] J. M. Borwein and H. Wolkowicz. Characterizations of optimality without constraint qualification for the abstract convex program. *Mathematical Programming Study*, 19:77–100, 1982. CODEN MPSTDF. ISSN 0303-3929. Optimality and stability in mathematical programming.

Borwein:1982:COCb

[BW82b] J. M. Borwein and H. Wolkowicz. Characterizations of optimality without constraint qualification for the abstract convex program. In *Optimality and Stability in Mathematical Programming*, page ?? Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 1982. URL http://link.springer.com/chapter/10.1007/BFb0120983.

Borwein:1986:SCQ

[BW86] J. M. Borwein and H. Wolkowicz. A simple constraint qualification in infinite dimensional programming. *Mathematical Programming*, 35(1):83–96, 1986. CODEN MHPGA4. ISSN 0025-5610.

Beatson:1989:PPP

[BW89] R. K. Beatson and H. Wolkowicz. Post-processing piecewise cubics for monotonicity. *SIAM Journal on Numerical Analysis*, 26(2):480–502, April 1989. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Cheung:2013:PRD

[CSW13a] Yuen-Lam Cheung, Simon Schurr, and Henry Wolkowicz. Preprocessing and regularization for degenerate semidefinite

programs. In *Computational and analytical mathematics*, volume 50 of *Springer Proc. Math. Stat.*, pages 251–303. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2013.

MR3108430

[CSW13b] Yuen-Lam Cheung, Simon Schurr, and Henry Wolkowicz. Preprocessing and regularization for degenerate semidefinite programs. In *Computational and analytical mathematics*, volume 50 of *Springer Proc. Math. Stat.*, pages 251–303. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2013.

Deutsch:1982:PSSa

[DAK$^+$82] Emeric Deutsch, Ron Adin, H. Kestelman, M. F. Kruelle, Daniel B. Shapiro, and Henry Wolkowicz. Problems and solutions: Solutions of elementary problems: E2849. *American Mathematical Monthly*, 89 (1):64, January 1982. CODEN AMMYAE. ISSN 0002-9890 (print), 1930-0972 (electronic). See also [DFK$^+$80].

Deutsch:1980:PSE

[DFK$^+$80] Emeric Deutsch, J. Fickett, Clark Kimberling, Peter Ungar, and Jan Mycielski. Problems and solutions: Elementary problems: E2847–E2852. *American Mathematical Monthly*, 87 (8):671–672, October 1980. CODEN AMMYAE. ISSN 0002-

9890 (print), 1930-0972 (electronic). See also [DAK$^+$82, **?**, **?**, **?**, **?**, **?**, **?**].

Ding:2011:ESR

[DGW11] Yichuan Ding, Dongdong Ge, and Henry Wolkowicz. On equivalence of semidefinite relaxations for quadratic matrix programming. *Mathematics of Operations Research*, 36(1):88–104, 2011. CODEN MOREDQ. ISSN 0364-765x (print), 1526-5471 (electronic).

Ding:2010:SNL

[DKQW10] Yichuan Ding, Nathan Krislock, Jianwei Qian, and Henry Wolkowicz. Sensor network localization, Euclidean distance matrix completions, and graph realization. *Optimization and Engineering*, 11(1):45–66, 2010. ISSN 1389-4420 (print), 1573-2924 (electronic). URL `http://link.springer.com/article/10.1007/s11081-008-9072-0`.

Drusvyatskiy:2017:NED

[DKVW17] D. Drusvyatskiy, N. Krislock, Y.-L. Voronin, and H. Wolkowicz. Noisy Euclidean distance realization: Robust facial reduction and the Pareto frontier. *SIAM Journal on Optimization*, 27(4):2301–2331, ???? 2017. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic).

Doan:2012:RAS

[DKW12] Xuan Vinh Doan, Serge Kruk, and Henry Wolkowicz. A robust

algorithm for semidefinite programming. *Optimization Methods & Software*, 27(4-5):667–693, 2012. ISSN 1055-6788.

Drusvyatskiy:2015:PMQ

[DLP⁺15] Dmitriy Drusvyatskiy, Chi-Kwong Li, Diane Christine Pelejo, Yuen-Lam Voronin, and Henry Wolkowicz. Projection methods for quantum channel construction. *Quantum Information Processing*, 14(8):3075–3096, 2015. CODEN QIPUAT. ISSN 1570-0755 (print), 1573-1332 (electronic).

Drusvyatskiy:2017:NAP

[DLW17] Dmitriy Drusvyatskiy, Guoyin Li, and Henry Wolkowicz. A note on alternating projections for ill-posed semidefinite feasibility problems. *Mathematical Programming*, 162(1-2, Ser. A): 537–548, 2017. CODEN MH-PGA4. ISSN 0025-5610.

Drusvyatskiy:2015:CSS

[DPW15] Dmitriy Drusvyatskiy, Gábor Pataki, and Henry Wolkowicz. Coordinate shadows of semidefinite and Euclidean distance matrices. *SIAM Journal on Optimization*, 25(2):1160–1178, ???? 2015. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic).

Drusvyatskiy:2015:EPI

[DVW15] D. Drusvyatskiy, S. A. Vavasis, and H. Wolkowicz. Extreme point inequalities and geometry of the rank sparsity ball. *Mathematical Programming*, 152(1–2):

521–544, 2015. CODEN MH-PGA4. ISSN 0025-5610.

Dennis:1993:SLC

[DW93] John E. Dennis, Jr. and H. Wolkowicz. Sizing and least-change secant methods. *SIAM Journal on Numerical Analysis*, 30(5):1291–1314, October 1993. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Ding:2009:LDS

[DW09] Yichuan Ding and Henry Wolkowicz. A low-dimensional semidefinite relaxation for the quadratic assignment problem. *Mathematics of Operations Research*, 34(4):1008–1022, 2009. CODEN MOREDQ. ISSN 0364-765x (print), 1526-5471 (electronic).

Fiacco:1983:MPD

[Fia83] Anthony V. Fiacco, editor. *Mathematical Programming with Data Perturbations II*. Marcel Dekker, Inc., New York, NY, USA, 1983. ISBN 0-8247-1789-9. LCCN QA402.5 .M356 1983. Papers presented to the Second Symposium for Mathematical Programming with Data Perturbations, held at the George Washington University in May 1980.

Fampa:2020:PCQ

[FLWW20] M. Fampa, D. Lubke, F. Wang, and H. Wolkowicz. Parametric convex quadratic relaxation of the quadratic knapsack prob-

lem. *European Journal of Operational Research*, 281(1):36–49, 2020. CODEN EJORDT. ISSN 0377-2217 (print), 1872-6860 (electronic).

Fortin:2000:STR

[For00]   C. Fortin. A survey of the trust region subproblem within a semidefinite framework. Master's thesis, University of Waterloo, 2000. Advisor: H. Wolkowicz.

Floudas:2001:EO

[FP01]   C. A. Floudas and P. M. Pardalos, editors. *Encyclopedia of Optimization*. Kluwer Academic Publishers, Dordrecht, The Netherlands / Boston, MA, 2001. ISBN 0-7923-6932-7. Vol. I: xxviii + 539; Vol. II: viii + 549; Vol. III: viii + 580; Vol. IV: viii + 503; Vol. V: viii + 557; Vol. VI: xxxii + 258 pp. US$1300.

Falkner:1994:CSG

[FRW94]   J. Falkner, F. Rendl, and H. Wolkowicz. A computational study of graph partitioning. *Mathematical Programming*, 66(2 (Ser. A)):211–239, 1994. CODEN MHPGA4. ISSN 0025-5610. URL `ftp://orion.uwaterloo.ca/pub/henry/reports/gpcomput.ps.gz`.

Falkner:19xx:SRG

[FRWZxx]   J. Falkner, F. Rendl, H. Wolkowicz, and Q. Zhao. Semidefinite relaxations for the graph partitioning problem. Research report, University of Waterloo, Waterloo, ON, Canada, 19xx.

Fortin:2002:STR

[FW02]   C. Fortin and H. Wolkowicz. A survey of the trust region subproblem within a semidefinite programming framework. Technical Report CORR 2002-22, University of Waterloo, Waterloo, ON, Canada, 2002. URL `http://orion.math.uwaterloo.ca:80/~hwolkowi/henry/reports/ABSTRACTS.html\#surveytrs`.

Fortin:2003:TRS

[FW03]   C. Fortin and H. Wolkowicz. The trust region subproblem and semidefinite programming. *Optimization Methods & Software*, 2003. CODEN OMSOE2. ISSN 1055-6788. To appear in the special issue dedicated to Jochem Zowes 60th birthday, Taylor and Francis Publisher.

Fortin:2004:TRS

[FW04]   Charles Fortin and Henry Wolkowicz. The trust region subproblem and semidefinite programming. *Optimization Methods & Software*, 19(1):41–67, 2004. ISSN 1055-6788.

Guelicher:1987:PSE

[GDC+87]   Herbert Guelicher, Jordi Dou, Mihai Cipu, Marian Deaconescu, Charles R. Johnson, Gail Wolkowicz, Henry Wolkowicz, Rick Luttmann, and Noam D. Elkies. Problems

and solutions: Elementary problems: E3231–E3236. *American Mathematical Monthly*, 94(9): 876–878, November 1987. CODEN AMMYAE. ISSN 0002-9890 (print), 1930-0972 (electronic). See also [**?**, **?**, **?**, **?**, JWWS89, **?**].

Graham:2022:RDP

[GHI+22]   Naomi Graham, Hao Hu, Jiyoung Im, Xinxin Li, and Henry Wolkowicz. A restricted dual Peaceman–Rachford splitting method for a strengthened DNN relaxation for QAP. *INFORMS Journal on Computing*, 34(4):2125–2143, July/August 2022. CODEN ???? ISSN 1091-9856 (print), 1526-5528 (electronic). URL `https://pubsonline.informs.org/doi/fpi/10.1287/ijoc.2022.1161`.

Grone:1983:CRS

[GJMW83]   Robert Grone, Charles R. Johnson, E. Marques de Sa, and Henry Wolkowicz. Constrained ranges of sesquilinear forms. Research report, University of Waterloo, Waterloo, ON, Canada, 1983.

Grone:1984:IHI

[GJMW84a]   Bob Grone, Charles Johnson, E. Marques De Sá, and Henry Wolkowicz. Improving Hadamard's inequality. *Linear and Multilinear Algebra*, 16(1–4):305–322, 1984. CODEN LNMLAZ. ISSN 0308-1087 (print), 1563-5139 (electronic). URL `http:`

`//www.tandfonline.com/doi/abs/10.1080/03081088408817634.`

Grone:1984:PDC

[GJMW84b]   Robert Grone, Charles R. Johnson, E. Marques de Sä, and Henry Wolkowicz. Positive definite completions of partial Hermitian matrices. *Linear Algebra and Its Applications*, 58: 109–124, 1984. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Grone:1986:NMP

[GJMW86]   Robert Grone, Charles R. Johnson, E. Marques de Sá, and Henry Wolkowicz. A note on maximizing the permanent of a positive definite Hermitian matrix, given the eigenvalues. *Linear and Multilinear Algebra*, 19(4):389–393, 1986. CODEN LNMLAZ. ISSN 0308-1087 (print), 1563-5139 (electronic). URL `http://www.tandfonline.com/doi/abs/10.1080/03081088608817733.`

Grone:1987:NM

[GJMW87]   Robert Grone, Charles R. Johnson, E. Marques de Sa, and Henry Wolkowicz. Normal matrices. *Linear Algebra and Its Applications*, 87:213–225, 1987. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Gruber:1998:PSP

[GKRW98]   G. Gruber, S. Kruk, F. Rendl, and H. Wolkowicz. Presolving for semidefinite programs without constraint qualifications.

Technical Report CORR 98-32, University of Waterloo, Waterloo, ON, Canada, 1998.

Gonzalez-Lima:2001:SIM

[GLWW01]   M. Gonzalez-Lima, H. Wei, and H. Wolkowicz. A simple iterative method for linear programming. Technical Report CORR 2001-in progress, University of Waterloo, Waterloo, ON, Canada, 2001.

Gonzalez-Lima:2009:SPD

[GLWW09]   Maria Gonzalez-Lima, Hua Wei, and Henry Wolkowicz. A stable primal-dual approach for linear programming under nondegeneracy assumptions. *Computational optimization and applications*, 44(2):213–247, 2009. CODEN CPPPEF. ISSN 0926-6003 (print), 1573-2894 (electronic).

Grodzevich:2009:RUP

[GW09]   Oleg Grodzevich and Henry Wolkowicz. Regularization using a parameterized trust region subproblem. *Mathematical Programming*, 116(1-2, Ser. B):193–220, 2009. CODEN MHPGA4. ISSN 0025-5610.

Grodzevich:2001:BIM

[GWW01]   O. Grodzevich, H. Wei, and H. Wolkowicz. Broadband and IP: Modelling, scheduling, and optimization. Technical Report CORR 2001-in progress, University of Waterloo, Waterloo, ON, Canada, 2001.

Hadley:1989:COA

[Had89]   Scott W. Hadley. *Continuous Optimization Approaches to the Quadratic Assignment Problem.* PhD thesis, University of Waterloo, Waterloo, ON, Canada, 1989. Advisor: H. Wolkowicz.

Helmberg:1995:CSP

[HPRW95]   C. Helmberg, S. Poljak, F. Rendl, and H. Wolkowicz. Combining semidefinite and polyhedral relaxations to integer programs. In Balas and Clausen [BC95], pages 124–134. CODEN LNCSD9. ISBN 3-540-59408-6 (Berlin), 0-387-59408-6 (New York). ISSN 0302-9743 (print), 1611-3349 (electronic). LCCN T57.74 .C6 1995.

Helmberg:1996:IPM

[HRVW96]   Christoph Helmberg, Franz Rendl, Robert J. Vanderbei, and Henry Wolkowicz. An interior-point method for semidefinite programming. *SIAM Journal on Optimization*, 6(2):342–361, May 1996. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic). URL `ftp://orion.uwaterloo.ca/pub/henry/reports/sdp.ps.gz`.

Hadley:1988:IBQ

[HRW88]   S. W. Hadley, F. Rendl, and H. Wolkowicz. Improving bounds for the quadratic assignment problem. Research report, University of Waterloo, Waterloo, ON, Canada, 1988.

Hadley:1990:BQA

[HRW90] S. W. Hadley, F. Rendl, and H. Wolkowicz. Bounds for the quadratic assignment problems using continuous optimization. In Pulleyblank and Kannan [PK90], pages 237–248. ISBN 0-88898-099-X.

Hadley:1992:NLB

[HRW92a] S. W. Hadley, F. Rendl, and H. Wolkowicz. A new lower bound via projection for the quadratic assignment problem. *Mathematics of Operations Research*, 17(3):727–739, 1992. CODEN MOREDQ. ISSN 0364-765x (print), 1526-5471 (electronic).

Hadley:1992:SNQ

[HRW92b] S. W. Hadley, F. Rendl, and H. Wolkowicz. Symmetrization of nonsymmetric quadratic assignment problems and the Hoffman-Wielandt inequality. *Linear Algebra and Its Applications*, 167:53–64, April 01, 1992. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). Sixth Haifa Conference on Matrix Theory (Haifa, 1990).

Hadley:1988:HFE

[HW88] S. W. Hadley and H. Wolkowicz. The Hessian of a function of the eigenvalues. Research report, University of Waterloo, Waterloo, ON, Canada, 1988.

Huang:2018:LRM

[HW18] Shimeng Huang and Henry Wolkowicz. Low-rank matrix completion using nuclear norm minimization and facial reduction. *Journal of Global Optimization*, 72(1):5–26, 2018. CODEN JGOPEO. ISSN 0925-5001 (print), 1573-2916 (electronic).

Im:2021:SBP

[IW21] Jiyoung Im and Henry Wolkowicz. A strengthened Barvinok–Pataki bound on SDP rank. *Oper. Res. Lett.*, 49(6):837–841, 2021. ISSN 0167-6377 (print), 1872-7468 (electronic).

Johnson:1985:LBS

[JKW85] C. R. Johnson, Ravindar Kumar, and H. Wolkowicz. Lower bounds for the spread of a matrix. *Linear Algebra and Its Applications*, 71:161–173, 1985. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Johnson:1998:IPM

[JKW98] Charles R. Johnson, Brenda Kroschel, and Henry Wolkowicz. An interior-point method for approximate positive semidefinite completions. *Computational optimization and applications*, 9(2):175–190, 1998. CODEN CPPPEF. ISSN 0926-6003 (print), 1573-2894 (electronic). CORR Report 95-11.

Jeyakumar:1990:ZDG

[JW90] V. Jeyakumar and H. Wolkowicz. Zero duality gaps in infinite-dimensional programming. *Journal of Optimiza-*

tion Theory and Applications, 67(1):87–108, 1990. CODEN JOTABN. ISSN 0022-3239 (print), 1573-2878 (electronic).

Jeyakumar:1992:GSC

[JW92]   V. Jeyakumar and H. Wolkowicz. Generalizations of Slater's constraint qualification for infinite convex programs. *Mathematical Programming*, 57(1, Ser. B):85–101, 1992. CODEN MHPGA4. ISSN 0025-5610.

Johnson:1987:PSE

[JWW87]   Charles R. Johnson, Gail Wolkowicz, and Henry Wolkowicz. Problems and solutions: Elementary problems: E3234. *American Mathematical Monthly*, 94(9):877, November 1987. CODEN AMMYAE. ISSN 0002-9890 (print), 1930-0972 (electronic).

Johnson:1989:PSS

[JWWS89] Charles R. Johnson, Gail Wolkowicz, Henry Wolkowicz, and Patrick A. Staley. Problems and solutions: Solutions of elementary problems: E3234. *American Mathematical Monthly*, 96(4):362–363, April 1989. CODEN AMMYAE. ISSN 0002-9890 (print), 1930-0972 (electronic). See also [GDC⁺87].

Karisch:1992:TRQ

[Kar92]   Stefan E. Karisch. Trust regions and the quadratic assignment problem. Master's thesis, University of Waterloo, Waterloo, ON, Canada, 1992. URL

`http://orion.uwaterloo.ca/ ~hwolkowi/henry/reports/karischmsthesis. ps.gz`. Advisor: H. Wolkowicz.

Kotz:1987:ESS

[KJR87]   Samuel Kotz, Norman L. Johnson, and Campbell B. Read, editors. *Encyclopedia of Statistical Sciences*, volume 8. Wiley-Interscience, New York, NY, USA, 1987. ISBN 0-471-05546-8 (vol. 1). LCCN QA276.14 .E5 1982. Invited paper.

Kempthorne:1980:LE

[KKN⁺80] Oscar Kempthorne, D. G. Kabe, K. R. Nair, Henry Wolkowicz, George P. H. Styan, James R. Lackritz, Samuel Leinhardt, Stanley Wasserman, Libert Ehrman, Robert J. K. Jacob, William C. Shelton, Stephen E. Fienberg, Ruma Falk, Gary G. Koch, and John Neter. Letters to the Editor. *The American Statistician*, 34(4):249–254, November 1980. CODEN ASTAAJ. ISSN 0003-1305 (print), 1537-2731 (electronic). URL `http://www.jstor.org/ stable/2684078`.

Kruk:1997:GND

[KMR⁺97] S. Kruk, M. Muramatsu, F. Rendl, R. J. Vanderbei, and H. Wolkowicz. The Gauss–Newton direction in linear and semidefinite programming. Technical Report in progress, University of Waterloo, Waterloo, ON, Canada, 1997.

Kruk:2001:GND

[KMR+01] S. Kruk, M. Muramatsu, F. Rendl, R. J. Vanderbei, and H. Wolkowicz. The Gauss–Newton direction in linear and semidefinite programming. *Optimization Methods & Software*, 15(1):1–27, 2001. CODEN OMSOE2. ISSN 1055-6788.

Kruk:1996:SPA

[Kru96] S. Kruk. Semidefinite programming applied to nonlinear programming. Master's thesis, University of Waterloo, Waterloo, ON, Canada, 1996. URL http://orion.uwaterloo.ca/ ~hwolkowi/henry/software/ sqqp.d/krukmsthesis.ps.gz. Advisor: H. Wolkowicz.

Kruk:2001:HAA

[Kru01] S. Kruk. *High Accuracy Algorithms for the Solutions of Semidefinite Linear Programs.* PhD thesis, University of Waterloo, 2001. Advisor: H. Wolkowicz.

Karisch:1994:TRQ

[KRW94] S. E. Karisch, F. Rendl, and H. Wolkowicz. Trust regions and the quadratic assignment problem. In Pardalos and Wolkowicz [PW94], pages 199–219. ISBN 0-8218-6607-9. LCCN QA402.5 .Q33 1994.

Karisch:19xx:QLR

[KRWZxx] S. Karisch, F. Rendl, H. Wolkowicz, and Q. Zhao. Quadratic Lagrangian relaxation for the quadratic assignment problem.

Research report, University of Waterloo, Waterloo, ON, Canada, 19xx.

Kumar:1984:BE

[Kum84] Ravinder Kumar. Bounds for eigenvalues. Master's thesis, University of Alberta, Edmonton, AB, Canada, 1984. Advisor: H. Wolkowicz.

Kruk:1997:SPS

[KW97] S. Kruk and H. Wolkowicz. SQ^{2}P, sequential quadratic constrained quadratic programming. Research report, corr 97-01, University of Waterloo, Waterloo, ON, Canada, 1997. Accepted (subject to revision) for the Proceedings of Nonlinear Programming Conference in Beijing in honour of Professor M. J. D. Powell.

Kruk:1998:SPS

[KW98] S. Kruk and H. Wolkowicz. SQ^{2}P, sequential quadratic constrained quadratic programming. In xiang Yuan. [xY98], pages 177–204. ISBN 0-7923-5053-7. LCCN T57.8 .I58 1996. Conference was held September 2–5 at the Institute of Computational Mathematics and Scientific/Engineering Computing, Chinese Academy of Sciences, Beijing, China.

Kruk:1999:PP

[KW99] Serge Kruk and Henry Wolkowicz. Pseudolinear programming. *SIAM Review*, 41(4): 795–805, December 1999. CODEN SIREAD. ISSN 0036-1445

(print), 1095-7200 (electronic). URL http://epubs.siam.org/ sam-bin/dbq/article/33525.

Kruk:2000:GNP

[KW00a] S. Kruk and H. Wolkowicz. General nonlinear programming. In Wolkowicz et al. [WSV00], pages 563–575. ISBN 0-7923-7771-0. LCCN T57.74 .H355 2000.

Kruk:2000:SQC

[KW00b] Serge Kruk and Henry Wolkowicz. Sequential, quadratic constrained, quadratic programming for general nonlinear programming. In *Handbook of semidefinite programming*, volume 27 of *Internat. Ser. Oper. Res. Management Sci.*, pages 563–575. Kluwer Academic Publishers, Dordrecht, The Netherlands / Boston, MA, 2000.

Kruk:2003:CIS

[KW03a] S. Kruk and H. Wolkowicz. Convergence of an infeasible short-step path-following algorithm based on the Gauss–Newton direction. *Journal of Applied Mathematics*, ??(CORR 2000-23):??, 2003. ISSN 1110-757x (print), 1687-0042 (electronic). To appear.

Kruk:2003:CSS

[KW03b] Serge Kruk and Henry Wolkowicz. Convergence of a short-step primal-dual algorithm based on the Gauss–Newton direction. *Journal of Applied Mathematics*, 2003(10):517–534, 2003.

ISSN 1110-757x (print), 1687-0042 (electronic). URL https://www.hindawi.com/journals/jam/2003/836784/abs/.

Krislock:2010:ESN

[KW10] Nathan Krislock and Henry Wolkowicz. Explicit sensor network localization using semidefinite representations and facial reductions. *SIAM Journal on Optimization*, 20(5):2679–2708, ???? 2010. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic).

Krislock:2012:EDM

[KW12a] Nathan Krislock and Henry Wolkowicz. Euclidean distance matrices and applications. In *Handbook on semidefinite, conic and polynomial optimization*, volume 166 of *Internat. Ser. Oper. Res. Management Sci.*, pages 879–914. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2012.

MR2894673

[KW12b] Nathan Krislock and Henry Wolkowicz. Euclidean distance matrices and applications. In *Handbook on semidefinite, conic and polynomial optimization*, volume 166 of *Internat. Ser. Oper. Res. Management Sci.*, pages 879–914. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2012.

Li:2021:SCP

[LPSW21] Xinxin Li, Ting Kei Pong, Hao Sun, and Henry Wolkowicz. A strictly contractive Peaceman–Rachford splitting method for the doubly nonnegative relaxation of the minimum cut problem. *Computational optimization and applications*, 78 (3):853–891, 2021. CODEN CPPPEF. ISSN 0926-6003 (print), 1573-2894 (electronic).

Lund:1988:OVR

[Lun88] Joe Lund. Optimal vehicle replacement policy. Master's thesis, University of Waterloo, Waterloo, ON, Canada, 1988. Advisor: H. Wolkowicz.

Lamoreaux:1985:NDC

[LW85] M. Lamoreaux and H. Wolkowicz. Numerical decomposition of a convex function. *Journal of Optimization Theory and Applications*, 47(1):51–64, 1985. CODEN JOTABN. ISSN 0022-3239 (print), 1573-2878 (electronic).

Lin:2012:EMI

[LW12] Minghua Lin and Henry Wolkowicz. An eigenvalue majorization inequality for positive semidefinite block matrices. *Linear Multilinear Algebra*, 60(11–12):1365–1368, 2012. CODEN LNMLAZ. ISSN 0308-1087 (print), 1563-5139 (electronic). URL `http://www.tandfonline.com/doi/abs/10.1080/03081087.2011.651723`.

Lin:2015:HTM

[LW15] Minghua Lin and Henry Wolkowicz. Hiroshima's theorem and matrix norm inequalities. *Acta Scientiarum Mathematicarum (Szeged)*, 81(1-2):45–53, 2015. ISSN 0001-6969 (print), 2064-8316 (electronic).

Merikoski:1983:BRE

[MSW83] J. Merikoski, G. P. H. Styan, and H. Wolkowicz. Bounds for ratios of eigenvalues using traces. *Linear Algebra and Its Applications*, 55:105–124, 1983. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Massam:1981:RCA

[MW81] Helene Massam and H. Wolkowicz. Regularization and convex approximation. Research report, The University of Alberta, Edmonton, AB, Canada, 1981.

Merikoski:1985:IEB

[MW85] J. Merikoski and H. Wolkowicz. Improving eigenvalue bounds using extra bounds. *Linear Algebra and Its Applications*, 68: 93–113, 1985. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Ma:2020:RPC

[MWWW20] Shiqian Ma, Fei Wang, Linchuan Wei, and Henry Wolkowicz. Robust principal component analysis using facial reduction. *Optimization and Engineering*, 21

(3):1195–1219, 2020. ISSN 1389-4420 (print), 1573-2924 (electronic).

Nesterov:2000:SPR

[NWY00] Y. E. Nesterov, H. Wolkowicz, and Y. Ye. Semidefinite programming relaxations of nonconvex quadratic optimization. In Wolkowicz et al. [WSV00], pages 361–419. ISBN 0-7923-7771-0. LCCN T57.74 .H355 2000.

Nazareth:1997:QCR

[NWZ97] J. L. Nazareth, H. Wolkowicz, and M. Zhu. The quasi-Cauchy relation and diagonal updating. Technical Report CORR Report ??, University of Waterloo, Waterloo, ON, Canada, 1997. In progress.

Nazareth:1999:QCR

[NWZ99] J. L. Nazareth, H. Wolkowicz, and M. Zhu. The quasi-Cauchy relation and diagonal updating. *SIAM Journal on Optimization*, 9(4):1192–1204 (electronic), 1999. CODEN SJOPE8. ISSN 1095-7189. Dedicated to John E. Dennis, Jr., on his 60th birthday.

Overton:1997:SP

[OW97] M. L. Overton and H. Wolkowicz, editors. *Semidefinite Programming*. North-Holland, Amsterdam, The Netherlands, 1997. CODEN MHPGA4. ISBN ???? ISSN 0025-5610. i–ii, 97–320 pp. LCCN ???? Dedicated to the memory of Svato-

pluk Poljak, Math. Programming **77** (1997), no. 2, Ser. B.

Oliveira:2018:ASR

[OWX18] Danilo Elias Oliveira, Henry Wolkowicz, and Yangyang Xu. ADMM for the SDP relaxation of the QAP. *Mathematical Programming Computation*, 10(4):631–658, 2018. ISSN 1867-2949 (print), 1867-2957 (electronic).

Pulleyblank:1990:IPC

[PK90] W. R. Pulleyblank and Ravi Kannan, editors. *Integer Programming and Combinatorial Optimization: proceedings of a conference held at the University of Waterloo, May 28–30 1990, by the Mathematical Programming Society*. University of Waterloo Press, Waterloo, ON, Canada, 1990. ISBN 0-88898-099-X.

Pardalos:2000:NAP

[PP00] Panos M. Pardalos and Leonidas Pitsoulis, editors. *Nonlinear Assignment Problems: Algorithms and Applications*, volume 7 of *Combinatorial optimization*. Kluwer Academic Publishers, Dordrecht, The Netherlands / Boston, MA, 2000. ISBN 0-7923-6646-8. LCCN QA402.6 .N66 2000.

Pardalos:2002:HAO

[PR02] Panos M. Pardalos and Mauricio G. C. Resende, editors. *Handbook of Applied Optimization*. Oxford University Press, Walton Street, Oxford OX2 6DP,

UK, 2002. ISBN 0-19-512594-0. xviii + 1095 pp.

Phillips:1992:SMS

[PRBI⁺92] Fred Young Phillips, John James Rousseau, Adi Ben-Israel, et al., editors. *Systems and Management Science by Extremal Methods: research honoring Abraham Charnes at age 70.* Kluwer Academic Publishers, Dordrecht, The Netherlands / Boston, MA, 1992. ISBN 0-7923-9139-X. LCCN T57.6.S977 1992. Papers presented at a conference held in Oct. 1987 at the ICp2s Institute of the University of Texas at Austin.

Pardalos:1994:QAP

[PRW94] P. Pardalos, F. Rendl, and H. Wolkowicz. The quadratic assignment problem: A survey and recent developments. In Pardalos and Wolkowicz [PW94], pages 1–41. ISBN 0-8218-6607-9. LCCN QA402.5 .Q33 1994.

Poljak:1995:RSR

[PRW95] S. Poljak, F. Rendl, and H. Wolkowicz. A recipe for semidefinite relaxation for $(0, 1)$-quadratic programming. *Journal of Global Optimization*, 7(1):51–73, 1995. CODEN JGOPEO. ISSN 0925-5001 (print), 1573-2916 (electronic).

Powell:2000:SMO

[PS00] M. J. D. Powell and S. Scholtes, editors. *System modelling and optimization: methods, theory and applications: 19. IFIP–TC7 conference on system modelling and optimization, July 12–16, 1999, Cambridge, UK.* Kluwer Academic Publishers, Dordrecht, The Netherlands / Boston, MA, 2000. ISBN 0-7923-7881-4. LCCN QA402.3 .I4536 1999.

Pong:2016:EQP

[PSWW16] Ting Kei Pong, Hao Sun, Ningchuan Wang, and Henry Wolkowicz. Eigenvalue, quadratic programming, and semidefinite programming relaxations for a cut minimization problem. *Computational optimization and applications*, 63 (2):333–364, 2016. CODEN CPPPEF. ISSN 0926-6003 (print), 1573-2894 (electronic).

Pukelsheim:1994:SIH

[PSWZ94] F. Pukelsheim, G. P. H. Styan, H. Wolkowicz, and I. Zaballa, editors. *Special Issue Honoring Ingram Olkin*, volume 199 of *Linear Algebra and Its Applications*. Elsevier Science, Inc., Amsterdam, The Netherlands, 1994. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). viii + 445 pp.

Potaptchik:2008:LSP

[PTW08] Marina Potaptchik, Levent Tunçel, and Henry Wolkowicz. Large scale portfolio optimization with piecewise linear transaction costs. *Optimization Methods & Software*, 23(6):929–952, 2008. ISSN 1055-6788.

Pardalos:1994:QAR

[PW94] Panos M. Pardalos and Henry Wolkowicz, editors. *Quadratic assignment and related problems: DIMACS Workshop, May 20–21, 1993*, volume 16 of *DIMACS Series in Discrete Mathematics and Theoretical Computer Science*. American Mathematical Society, Providence, RI, USA, 1994. ISBN 0-8218-6607-9. LCCN QA402.5 .Q33 1994.

Poljak:1993:CRQ

[PW95a] S. Poljak and H. Wolkowicz. Convex relaxations of $(0, 1)$ quadratic programming. *Mathematics of Operations Research*, 20(3):550–561, 1995. CODEN MOREDQ. ISSN 0364-765X (print), 1526-5471 (electronic). Originally appeared as DIMACS Technical Report CORR 93-18.

Poljak:1995:CRQ

[PW95b] S. Poljak and H. Wolkowicz. Convex relaxations of $(0, 1)$-quadratic programming. *Mathematics of Operations Research*, 20(3):550–561, 1995. CODEN MOREDQ. ISSN 0364-765x (print), 1526-5471 (electronic).

Pardalos:1998:SPI

[PW98a] P. Pardalos and H. Wolkowicz, editors. *Semidefinite Programming and Interior-Point Approaches for Combinatorial Optimization Problems*. Kluwer Academic Publishers, Dordrecht, The Netherlands / Boston, MA, 1998. ISSN 1382-6905 (print), 1573-2886 (electronic). 1–109 pp. Papers from the workshop held at the University of Toronto, Toronto, ON, May 15–17, 1996, J. Comb. Optim. **2** (1998), no. 1.

Pardalos:1998:SIS

[PW98b] P. Pardalos and H. Wolkowicz, editors. *Special Issue on Semidefinite Programming*, volume 2.1 of *J. Combinatorial Optimization*. Kluwer Academic Publishers, Dordrecht, The Netherlands / Boston, MA, 1998. ISBN ???? LCCN ????

Pardalos:1998:TSI

[PW98c] P. Pardalos and H. Wolkowicz, editors. *Topics in Semidefinite and Interior-Point Methods. Proceedings of the workshop held in Toronto, ON, May 1996*, The Fields Institute for Research in Mathematical Sciences, Communications Series. American Mathematical Society, Providence, RI, USA, 1998. ISBN 0-8218-0825-7.

Pardalos:2002:NAH

[PW02] P. Pardalos and H. Wolkowicz, editors. *New Approaches to Hard Discrete Optimization*, volume 6 #3. Kluwer Academic Publishers, Dordrecht, The Netherlands / Boston, MA, 2002. ISSN 1382-6905 (print), 1573-2886 (electronic). 235–352 pp. Papers from the workshop held at the University of Waterloo, ON, May, 2001, J. Comb. Opt.

Pardalos:2003:NAH

[PW03] Panos Pardalos and Henry Wolkowicz, editors. *Novel Approaches to Hard Discrete Optimization*, The Fields Institute for Research in Mathematical Sciences, Communications Series. American Mathematical Society, Providence, RI, USA, 2003. ISBN 0-8218-3248-4. LCCN QA402.5 .N689 2003.

Pong:2014:GTR

[PW14] Ting Kei Pong and Henry Wolkowicz. The generalized trust region subproblem. *Computational optimization and applications*, 58(2):273–322, 2014. CODEN CPPPEF. ISSN 0926-6003 (print), 1573-2894 (electronic).

Rendl:2002:NSH

[RSW02] F. Rendl, R. Sotirov, and H. Wolkowicz. A note on a simplified HKM direction for special classes of SDP. Technical Report CORR Report 2002-16, University of Waterloo, Waterloo, ON, Canada, 2002.

Ramana:1995:SDS

[RTW95] Motakuri Ramana, Levent Tunçel, and Henry Wolkowicz. Strong duality for semidefinite programming. Technical report CORR 95-12, University of Waterloo, Waterloo, ON, Canada, 1995. 31 pp.

Ramana:1997:SDS

[RTW97] M. V. Ramana, L. Tunçel, and H. Wolkowicz. Strong duality for semidefinite programming. *SIAM Journal on Optimization*, 7(3):641–662, 1997. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic). URL `ftp://orion.uwaterloo.ca/pub/henry/reports/strongdual.ps.gz`.

Rendl:1995:MME

[RVW95] F. Rendl, R. J. Vanderbei, and H. Wolkowicz. Max-min eigenvalue problems, primal-dual interior point algorithms, and trust region subproblems. *Optimization Methods & Software*, 5:1–16, 1995. CODEN OMSOE2. ISSN 1055-6788.

Rendl:19xx:IPM

[RVWxxa] F. Rendl, B. Vanderbei, and H. Wolkowicz. An interior-point methods for max-min eigenvalue problems. Submitted to SIOPT, CORR 93-20., 19xx.

Rendl:19xx:MME

[RVWxxb] F. Rendl, R. J. Vanderbei, and H. Wolkowicz. Max-min eigenvalue problems, primal-dual interior point algorithms, and trust region subproblems. *Optimization Methods & Software*, ??(??):????, 19xx. ISSN 1055-6788.

Rendl:1992:APP

[RW92] F. Rendl and H. Wolkowicz. Applications of parametric programming and eigenvalue maximization to the quadratic assignment problem. *Mathematical Programming*, 53(1, Ser. A):

63–78, 1992. CODEN MH-PGA4. ISSN 0025-5610.

Rendl:1994:SFT

[RW94a] F. Rendl and H. Wolkowicz. A semidefinite framework for trust region subproblems with applications to large scale minimization. Technical Report CORR Report 94-32, University of Waterloo, Waterloo, ON, Canada, 1994. Submitted.

Rendl:1994:PTP

[RW94b] Franz Rendl and Henry Wolkowicz. A projection technique for partitioning the nodes of a graph. *Annals of Operations Research*, 58(3):155–179, May 1994. CODEN AOREEV. ISSN 0254-5330 (print), 1572-9338 (electronic). URL `http://link.springer.com/article/10.1007/BF02032130`. Accepted Aug/94. To appear in the special issue of APMOD93.

Rendl:1995:PTP

[RW95] F. Rendl and H. Wolkowicz. A projection technique for partitioning the nodes of a graph. *Annals of Operations Research*, 58(3):155–179, May 1995. CODEN AOREEV. ISSN 0254-5330 (print), 1572-9338 (electronic). URL `ftp://orion.uwaterloo.ca/pub/henry/reports/gp.ps.gz; http://link.springer.com/article/10.1007/BF02032130`. Applied mathematical programming and modeling, II (APMOD 93) (Budapest, 1993).

Rendl:1997:SFT

[RW97] F. Rendl and H. Wolkowicz. A semidefinite framework for trust region subproblems with applications to large scale minimization. *Mathematical Programming*, 77(2 (Ser. B)):273–299, 1997. CODEN MHPGA4. ISSN 0025-5610.

Rendl:19xx:QNF

[RWxx] F. Rendl and H. Wolkowicz. A quasi-Newton framework for the graph partitioning problem. 24 pages in manuscript — in progress., 19xx.

Schoettle:1985:TAPb

[Sch85] Christopher Schoettle. The teaching assignment problem. Master's thesis, Emory University, Atlanta, GA, USA, 1985. Advisor: H. Wolkowicz.

Stephan:1985:ESQ

[Ste85] Peter Stephan. An explicit solution to the quadratic dynamic programming problem. Master's thesis, Emory University, Atlanta, GA, USA, 1985. Advisor: H. Wolkowicz.

Salahi:2017:LNM

[STW17] Maziar Salahi, Akram Taati, and Henry Wolkowicz. Local nonglobal minima for solving large-scale extended trust-region subproblems. *Computational optimization and applications*, 66(2):223–244, 2017. CODEN CPPPEF. ISSN 0926-6003 (print), 1573-2894 (electronic).

Smith:1984:DBS

[SW84] P. W. Smith and Henry Wolkowicz. Dimensionality of biinfinite systems. *Linear Algebra and Its Applications*, 57(??): 115–130, February 1984. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). URL `http://www.sciencedirect.com/science/article/pii/0024379584901812.`

Schoettle:1985:TAPa

[SW85] C. Schoettle and H. Wolkowicz. The teaching assignment problem. Research report, Emory University, Atlanta, GA, USA, 1985.

Smith:1986:NEL

[SW86] P. W. Smith and H. Wolkowicz. A nonlinear equation for linear programming. *Mathematical Programming*, 34(2):235–238, 1986. CODEN MHPGA4. ISSN 0025-5610.

Stern:1991:ENI

[SW91a] R. J. Stern and H. Wolkowicz. Exponential nonnegativity on the ice-cream cone. *SIAM Journal on Matrix Analysis and Applications*, 12(1):160–165, 1991. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Stern:1991:RIC

[SW91b] R. J. Stern and H. Wolkowicz. Results on invariant cones. *Linear Algebra and Its Applications*, 166:1–26, 1991. CODEN LAAPAW. ISSN 0024-

3795 (print), 1873-1856 (electronic). Proceedings from the Haifa Matrix Theory Conference, June 1990.

Stern:1991:IEC

[SW91c] Ronald J. Stern and Henry Wolkowicz. Invariant ellipsoidal cones. *Linear Algebra and Its Applications*, 150:81–106, 1991. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). Proceedings of the First Conference of the International Linear Algebra Society (Provo, UT, 1989).

Stern:1991:NGI

[SW91d] Ronald J. Stern and Henry Wolkowicz. A note on generalized invariant cones and the Kronecker canonical form. *Linear Algebra and Its Applications*, 147:97–100, 1991. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Stern:1994:TRP

[SW94] R. Stern and H. Wolkowicz. Trust region problems and nonsymmetric eigenvalue perturbations. *SIAM Journal on Matrix Analysis and Applications*, 15 (3):755–778, 1994. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Stern:1995:ITR

[SW95] R. Stern and H. Wolkowicz. Indefinite trust region subproblems and nonsymmetric eigenvalue perturbations. *SIAM*

Journal on Optimization, 5 (2):286–313, 1995. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic).

Sotirov:2001:SMS

[SW01] R. Sotirov and H. Wolkowicz. The simple method for the SDP relaxation of the QAP. Technical Report in progress, University of Waterloo, Waterloo, ON, Canada, 2001.

Sotirov:2002:SLT

[SW02] R. Sotirov and H. Wolkowicz. Solving Lovász theta function problems using an inexact Gauss–Newton method. Technical Report in progress, University of Waterloo, Waterloo, ON, Canada, 2002.

Sremac:2018:MDP

[SWW18] Stefan Sremac, Hugo J. Woerdeman, and Henry Wolkowicz. Maximum determinant positive definite Toeplitz completions. In *Operator theory, analysis and the state space approach*, volume 271 of *Oper. Theory Adv. Appl.*, pages 421–441. Birkhäuser/Springer, Cham, Switzerland, 2018.

Sremac:2021:EBS

[SWW21] Stefan Sremac, Hugo J. Woerdeman, and Henry Wolkowicz. Error bounds and singularity degree in semidefinite programming. *SIAM Journal on Optimization*, 31(1):812–836, ???? 2021. CODEN SJOPE8.

ISSN 1052-6234 (print), 1095-7189 (electronic).

Sremac:2019:NED

[SWWP19] Stefan Sremac, Fei Wang, Henry Wolkowicz, and Lucas Pettersson. Noisy Euclidean distance matrix completion with a single missing node. *Journal of Global Optimization*, 75(4):973–1002, 2019. CODEN JGOPEO. ISSN 0925-5001 (print), 1573-2916 (electronic).

Sutherland:1988:ELS

[SWZ88] W. R. S. Sutherland, H. Wolkowicz, and Vera Zeidan. An explicit linear solution for the quadratic dynamic programming problem. *Journal of Optimization Theory and Applications*, 58(2):319–330, 1988. CODEN JOTABN. ISSN 0022-3239 (print), 1573-2878 (electronic).

Schaible:1981:CCP

[SZ81] Siegfried Schaible and William T. Ziemba, editors. *Generalized Concavity in Optimization and Economics*. NATO conference, Academic Press, New York, NY, USA, 1981. ISBN 0-12-621120-5. LCCN QA402.5 .G45. Papers presented at the proceedings of the NATO Advance Study Institute held at the University of British Columbia, Vancouver, Canada, August 4–15, 1980.

Thomas:19xx:OPP

[Thoxx] Steven Thomas. Optimal project planning for a pharmaceutical company. Master's

thesis, University of Waterloo, 19xx. Advisor: H. Wolkowicz.

Tuncel:2003:SEU

[TW03] L. Tunçel and H. Wolkowicz. Strengthened existence and uniqueness conditions for search directions in semidefinite programming. Technical Report CORR 2003-20, University of Waterloo, Waterloo, ON, Canada, 2003.

Tuncel:2005:SEU

[TW05] Levent Tunçel and Henry Wolkowicz. Strengthened existence and uniqueness conditions for search directions in semidefinite programming. *Linear Algebra and Its Applications*, 400 (1):31–60, May 1, 2005. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Tuncel:2012:SDM

[TW12] Levent Tunçel and Henry Wolkowicz. Strong duality and minimal representations for cone optimization. *Computational optimization and applications*, 53(2):619–648, 2012. CODEN CPPPEF. ISSN 0926-6003 (print), 1573-2894 (electronic).

Tuncel:1994:SPT

[TWZ94] L. Tunçel, H. Wolkowicz, and Q. Zhao. *Semidefinite Programming: Theory, Applications, Algorithm*. Global Optimization. Kluwer Academic Publishers, Dordrecht, The Netherlands / Boston, MA, 1994. ISBN ???? LCCN ???? In progress.

Wolkowicz:2002:SPD

[WA02] Henry Wolkowicz and Miguel F. Anjos. Semidefinite programming for discrete optimization and matrix completion problems. *Discrete Applied Mathematics*, 123(1-3):513–577, 2002. CODEN DAMADU. ISSN 0166-218X (print), 1872-6771 (electronic). Workshop on Discrete Optimization, DO'99 (Piscataway, NJ).

Wolkowicz:1986:TAD

[WBi86a] H. Wolkowicz and A. Ben-israel. Taking advantage of degeneracy in linear programming. Research Report CORR 86-23, University of Waterloo, Waterloo, ON, Canada, 1986.

Wolkowicz:1986:VCR

[WBi86b] H. Wolkowicz and A. Ben-israel. A volume and constraint reducing algorithm for linear programming. Research Report CORR 86-29, University of Waterloo, Waterloo, ON, Canada, 1986.

Wolkowicz:1975:KGT

[Wol75] Henry Wolkowicz. Kantorovich's general theory of approximation methods. M.sc. thesis, McGill University, Montréal, PQ, Canada, 1975. M.Sc. Thesis.

Wolkowicz:1978:CCD

[Wol78a] H. Wolkowicz. Calculating the cone of directions of constancy. *Journal of Optimization Theory and Applications*,

25(3):451–457, 1978. CODEN JOTABN. ISSN 0022-3239 (print), 1573-2878 (electronic).

Wolkowicz:1978:CAA

[Wol78b] Henry Wolkowicz. *Constructive approaches to approximate solutions of operator equations and convex programming*. PhD thesis, McGill University, Montréal, PQ, Canada, 1978.

Wolkowicz:1980:CPE

[Wol80a] H. Wolkowicz. Convex programs with equivalent duals. *Applied Mathematics Notes*, 5(2):45–62, 1980. ISSN 0700-9224. Invited paper.

Wolkowicz:1980:GOC

[Wol80b] H. Wolkowicz. Geometry of optimality conditions and constraint qualifications: The convex case. *Mathematical Programming*, 19(1):32–60, 1980. CODEN MHPGA4. ISSN 0025-5610.

Wolkowicz:1980:OCA

[Wol80c] H. Wolkowicz. Optimality and the cone of affine directions. Research report, The University of Alberta, Edmonton, AB, Canada, 1980.

Wolkowicz:1980:SPU

[Wol80d] H. Wolkowicz. Shadow prices for an unstable convex program. *Utilitas Mathematica*, 18:119–139, 1980. CODEN UTMADA. ISSN 0315-3681. Report No. 15 Dalhousie University.

Wolkowicz:1981:BKR

[Wol81a] H. Wolkowicz. Bounds for the Kantorovich ratio. Research report, The University of Alberta, Edmonton, AB, Canada, 1981.

Wolkowicz:1981:CMO

[Wol81b] H. Wolkowicz. A constrained matrix optimization problem. *SIAM Review*, 23(1):101, ???? 1981. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic).

Wolkowicz:1981:SAO

[Wol81c] H. Wolkowicz. Some applications of optimization in matrix theory. *Linear Algebra and Its Applications*, 40:101–118, 1981. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Wolkowicz:1981:STO

[Wol81d] H. Wolkowicz. A strengthened test for optimality. *Journal of Optimization Theory and Applications*, 35(4):497–515, 1981. CODEN JOTABN. ISSN 0022-3239 (print), 1573-2878 (electronic).

Wolkowicz:1982:CMO

[Wol82] H. Wolkowicz. A constrained matrix optimization problem. *SIAM Review*, 24(1):83, ???? 1982. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic).

Wolkowicz:1983:MRC

[Wol83a] H. Wolkowicz. The method of reduction in convex pro-

gramming. *Journal of Optimization Theory and Applications*, 40(3):349–378, 1983. CODEN JOTABN. ISSN 0022-3239 (print), 1573-2878 (electronic).

Wolkowicz:1983:OCN

[Wol83b] H. Wolkowicz. An optimality condition for a nondifferentiable convex program. *Naval Research Logistics Quarterly*, 30(3):415–418, 1983. CODEN NRLQAR. ISSN 0028-1441 (print), 1931-9193 (electronic).

Wolkowicz:1983:OCS

[Wol83c] H. Wolkowicz. Optimality conditions and shadow prices. In Fiacco [Fia83], pages 49–63. ISBN 0-8247-1789-9. LCCN QA402.5 .M356 1983. Invited paper.

Wolkowicz:1985:GEB

[Wol85] H. Wolkowicz. Generating eigenvalue bounds using optimization. Research report, University of Waterloo, Waterloo, ON, Canada, 1985.

Wolkowicz:1994:BRB

[Wol94a] H. Wolkowicz. Book review: *Matrix Differentiation Identities* (Peter J. Costa and Stanley Rabinowitz). *SIAM Review*, 36 (4):657–659, ???? 1994. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic).

Wolkowicz:1994:MSR

[Wol94b] H. Wolkowicz. Measures for symmetric rank-one updates. *Mathematics of Operations Research*, 19(4):815–830, 1994.

CODEN MOREDQ. ISSN 0364-765x (print), 1526-5471 (electronic).

Wolkowicz:1994:MIT

[Wol94c] H. Wolkowicz. Multiple indefinite trust region problems and semidefinite programming. Research report, University of Waterloo, Waterloo, ON, Canada, 1994. In progress.

Wolkowicz:1994:PS

[Wol94d] H. Wolkowicz. Problem solution 93-17. *SIAM Review*, 36(4):657–659, 1994. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic).

Wolkowicz:1996:ESI

[Wol96] Henry Wolkowicz. Explicit solutions for interval semidefinite linear programs. *Linear Algebra and Its Applications*, 236(1–3): 95–104, March 15, 1996. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). URL `http://www.elsevier.com/cgi-bin/cas/tree/store/laa/cas_sub/browse/browse.cgi?year=1996&volume=236&issue=1-3&aid=9400130`.

Wolkowicz:1998:SSP

[Wol98] H. Wolkowicz. Semidefiniteness of a sum: Problem solution 19-5.5. *IMAGE, The Bulletin of ILAS*, 20:30–31, April 1998.

Wolkowicz:2000:SLR

[Wol00a] H. Wolkowicz. Semidefinite and Lagrangian relaxations for hard combinatorial problems.

In Powell and Scholtes [PS00], pages 269–309. ISBN 0-7923-7881-4. LCCN QA402.3 .I4536 1999.

Wolkowicz:2000:SPA

[Wol00b] H. Wolkowicz. Semidefinite programming approaches to the quadratic assignment problem. In Pardalos and Pitsoulis [PP00], pages 143–174. ISBN 0-7923-6646-8. LCCN QA402.6 .N66 2000.

Wolkowicz:2001:DSP

[Wol01a] H. Wolkowicz. Duality for semidefinite programming. In Floudas and Pardalos [FP01], page ?? ISBN 0-7923-6932-7. US$1300.

Wolkowicz:2001:SSP

[Wol01b] H. Wolkowicz. Solving semidefinite programs using preconditioned conjugate graditents. Technical Report CORR 2001-49, University of Waterloo, Waterloo, ON, Canada, 2001.

Wolkowicz:2002:SPa

[Wol02a] H. Wolkowicz. Semidefinite programming. Technical Report 4, University of Waterloo, Waterloo, ON, Canada, 2002.

Wolkowicz:2002:SPb

[Wol02b] H. Wolkowicz. Semidefinite programming. In Pardalos and Resende [PR02], pages 40–50. ISBN 0-19-512594-0.

Wolkowicz:2002:NLS

[Wol02c] Henry Wolkowicz. A note on lack of strong duality for

quadratic problems with orthogonal constraints. *European Journal of Operational Research*, 143(2):356–364, 2002. CODEN EJORDT. ISSN 0377-2217 (print), 1872-6860 (electronic). Interior point methods (Budapest, 2000).

Wolkowicz:2004:SSP

[Wol04] Henry Wolkowicz. Solving semidefinite programs using preconditioned conjugate gradients. *Optimization Methods & Software*, 19(6):653–672, 2004. ISSN 1055-6788.

Wolkowicz:2010:GEB

[Wol10] Henry Wolkowicz. Generating eigenvalue bounds using optimization. In *Nonlinear analysis and variational problems*, volume 35 of *Springer Optim. Appl.*, pages 465–490. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2010.

Wang:2017:FMR

[WRW17] Fei Wang, Greg Reid, and Henry Wolkowicz. Finding maximum rank moment matrices by facial reduction on primal form and Douglas–Rachford iteration. *ACM Communications in Computer Algebra*, 51(1):35–37, March 2017. CODEN ???? ISSN 1932-2232 (print), 1932-2240 (electronic).

Wolkowicz:1979:ESI

[WS79] H. Wolkowicz and G. P. H. Styan. Extensions of Samuel-

son's inequality. *The American Statistician*, 33(3):143–144, 1979. CODEN ASTAAJ. ISSN 0003-1305 (print), 1537-2731 (electronic).

Wolkowicz:1980:BEU

[WS80a]   H. Wolkowicz and G. P. H. Styan. Bounds for eigenvalues using traces. *Linear Algebra and Its Applications*, 29: 471–506, 1980. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Wolkowicz:1980:HSI

[WS80b]   H. Wolkowicz and G. P. H. Styan. A history of Samuelson's inequality. *The American Statistician*, 34:250, 1980. CODEN ASTAAJ. ISSN 0003-1305 (print), 1537-2731 (electronic).

Wolkowicz:1980:MBE

[WS80c]   H. Wolkowicz and G. P. H. Styan. More bounds for eigenvalues using traces. *Linear Algebra and Its Applications*, 31: 1–17, 1980. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Wolkowicz:1987:SI

[WS87]   H. Wolkowicz and G. P. H. Styan. Samuelson's inequality. In Kotz et al. [KJR87], page ?? ISBN 0-471-05546-8 (vol. 1). LCCN QA276.14 .E5 1982. Invited paper.

Wolkowicz:2000:HSP

[WSV00]   Henry Wolkowicz, Romesh Saigal, and Lieven Vandenberghe,

editors. *Handbook of Semidefinite Programming: Theory, Algorithms, and Applications*, volume 27 of *International series in operations research & management science*. Kluwer Academic Publishers, Dordrecht, The Netherlands / Boston, MA, 2000. ISBN 0-7923-7771-0. xxvi + 654 pp. LCCN T57.74 .H355 2000.

Wei:2010:GMI

[WW10]   Hua Wei and Henry Wolkowicz. Generating and measuring instances of hard semidefinite programs. *Mathematical Programming*, 125(1, Ser. A):31–45, 2010. CODEN MHPGA4. ISSN 0025-5610.

Wolkowicz:1978:CBA

[WZ78]   H. Wolkowicz and S. Zlobec. Calculating the best approximate solution of an operator equation. *Mathematics of Computation*, 32(144):1183–1213, October 1978. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic).

Wolkowicz:1995:AIE

[WZ95]   Henry Wolkowicz and Qing Zhao. An all-inclusive efficient region of updates for least change secant methods. *SIAM Journal on Optimization*, 5(1): 172–191, February 1995. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic).

Wolkowicz:1996:SPR

[WZ96]   Henry Wolkowicz and Qing Zhao. Semidefinite program-

ming relaxations for the graph partitioning problem. Research report corr 96-16, University of Waterloo, Waterloo, ON, Canada, 1996. 17 pp. URL `ftp: //orion.uwaterloo.ca/pub/ henry/reports/graphpart.ps. gz`.

Wolkowicz:1999:SPR

[WZ99] H. Wolkowicz and Q. Zhao. Semidefinite programming relaxations for the graph partitioning problem. *Discrete Applied Mathematics*, 96/97:461–479, 1999. CODEN DAMADU. ISSN 0166-218X (print), 1872-6771 (electronic). Selected for the special Editors' Choice, Edition 1999.

Yuan:1998:ANP

[xY98] Ya xiang Yuan., editor. *Advances in nonlinear programming: proceedings of the 96 International Conference on Nonlinear Programming*, volume 14 of *Applied optimization*. Kluwer Academic Publishers, Dordrecht, The Netherlands / Boston, MA, 1998. ISBN 0-7923-5053-7. LCCN T57.8 .I58 1996. Conference was held September 2–5 at the Institute of Computational Mathematics and Scientific/Engineering Computing, Chinese Academy of Sciences, Beijing, China.

Zhao:1993:MLC

[Zha93] Qing Zhao. Measures for least change secant methods. Master's thesis, Uni-

versity of Waterloo, Waterloo, ON, Canada, 1993. URL `http://orion.uwaterloo.ca/ ~hwolkowi/henry/reports/zhaomscthesis. ps.gz`. Advisor: H. Wolkowicz.

Zhao:1996:SPA

[Zha96] Q. Zhao. *Semidefinite Programming for Assignment and Partitioning Problems*. PhD thesis, University of Waterloo, Waterloo, ON, Canada, 1996. URL `ftp://orion.uwaterloo. ca/pub/henry/software/qap. d/zhaophdthesis.ps.gz`. Advisor: H. Wolkowicz.

Zhao:1997:SPR

[ZKRW97] Q. Zhao, S. Karisch, F. Rendl, and H. Wolkowicz. Semidefinite programming relaxations for the quadratic assignment problem. Research Report CORR 95-27, University of Waterloo, Waterloo, ON, Canada, 1997. URL `ftp://orion.uwaterloo.ca/ pub/henry/reports/qapsdp. ps.gz`. To appear in J. Comb. Opt.

Zhao:1998:SPR

[ZKRW98] Q. Zhao, S. E. Karisch, F. Rendl, and H. Wolkowicz. Semidefinite programming relaxations for the quadratic assignment problem. *Journal of Combinatorial Optimization*, 2(1):71–109, 1998. CODEN JCOPFV. ISSN 1382-6905 (print), 1573-2886 (electronic). Semidefinite programming and interior-point approaches for combinatorial op-

timization problems (Toronto, ON, 1996).

Zhu:1999:QCR

[ZNW99]   M. Zhu, J. L. Nazareth, and H. Wolkowicz. The quasi-Cauchy relation and diagonal updating. *SIAM Journal on Optimization*, 9(4):1192–1204, September 1999. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/33179`. Dedicated to John E. Dennis, Jr., on his 60th birthday.