Henry Wolkowicz

List of Publications by Year
in descending order

85 papers	3,975 citations	159358 30 h-index	123241 61 g-index
87 all docs	87 docs citations	87 times ranked	1601 citing authors

#	Article	IF	Citations
1	An Interior-Point Method for Semidefinite Programming. SIAM Journal on Optimization, 1996, 6, 342-361.	1.2	552
2	Positive definite completions of partial Hermitian matrices. Linear Algebra and Its Applications, 1984, 58, 109-124.	0.4	448
3	Bounds for eigenvalues using traces. Linear Algebra and Its Applications, 1980, 29, 471-506.	0.4	205
4	Semidefinite Programming Relaxations for the Quadratic Assignment Problem. Journal of Combinatorial Optimization, 1998, 2, 71-109.	0.8	172
5	Solving Euclidean Distance Matrix Completion Problems Via Semidefinite Programming. Computational Optimization and Applications, 1999, 12, 13-30.	0.9	167
6	Strong Duality for Semidefinite Programming. SIAM Journal on Optimization, 1997, 7, 641-662.	1.2	152
7	Indefinite Trust Region Subproblems and Nonsymmetric Eigenvalue Perturbations. SIAM Journal on Optimization, 1995, 5, 286-313.	1.2	150
8	Regularizing the abstract convex program. Journal of Mathematical Analysis and Applications, 1981, 83, 495-530.	0.5	112
9	The trust region subproblem and semidefinite programming*. Optimization Methods and Software, 2004, 19, 41-67.	1.6	112
10	A semidefinite framework for trust region subproblems with applications to large scale minimization. Mathematical Programming, 1997, 77, 273-299.	1.6	103
11	Normal matrices. Linear Algebra and Its Applications, 1987, 87, 213-225.	0.4	92
12	On Lagrangian Relaxation of Quadratic Matrix Constraints. SIAM Journal on Matrix Analysis and Applications, 2000, 22, 41-55.	0.7	92
13	Explicit Sensor Network Localization using Semidefinite Representations and Facial Reductions. SIAM Journal on Optimization, 2010, 20, 2679-2708.	1.2	81
14	Facial reduction for a cone-convex programming problem. Journal of the Australian Mathematical Society Series A Pure Mathematics and Statistics, 1981, 30, 369-380.	0.3	79
15	Generalizations of Slater's constraint qualification for infinite convex programs. Mathematical Programming, 1992, 57, 85-101.	1.6	74
16	Applications of parametric programming and eigenvalue maximization to the quadratic assignment problem. Mathematical Programming, 1992, 53, 63-78.	1.6	66
17	Sensor Network Localization, Euclidean Distance Matrix completions, and graph realization. Optimization and Engineering, 2010, 11, 45-66.	1.3	64
18	Semidefinite programming relaxations for the graph partitioning problem. Discrete Applied Mathematics, 1999, 96-97, 461-479.	0.5	60

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19	Some applications of optimization in matrix theory. Linear Algebra and Its Applications, 1981, 40, 101-118.	0.4	59
20	A projection technique for partitioning the nodes of a graph. Annals of Operations Research, 1995, 58, 155-179.	2.6	54
21	Exponential Nonnegativity on the Ice Cream Cone. SIAM Journal on Matrix Analysis and Applications, 1991, 12, 160-165.	0.7	50
22	Lower bounds for the spread of a matrix. Linear Algebra and Its Applications, 1985, 71, 161-173.	0.4	47
23	Convex Relaxations of (0, 1)-Quadratic Programming. Mathematics of Operations Research, 1995, 20, 550-561.	0.8	47
24	The generalized trust region subproblem. Computational Optimization and Applications, 2014, 58, 273-322.	0.9	47
25	Euclidean Distance Matrices and Applications. Profiles in Operations Research, 2012, , 879-914.	0.3	47
26	Strengthened semidefinite relaxations via a second lifting for the Max-Cut problem. Discrete Applied Mathematics, 2002, 119, 79-106.	0.5	40
27	More bounds for elgenvalues using traces. Linear Algebra and Its Applications, 1980, 31, 1-17.	0.4	39
28	A computational study of graph partitioning. Mathematical Programming, 1994, 66, 211-239.	1.6	38
29	Strong duality and minimal representations for cone optimization. Computational Optimization and Applications, 2012, 53, 619-648.	0.9	36
30	Approximate and exact completion problems for Euclidean distance matrices using semidefinite programming. Linear Algebra and Its Applications, 2005, 406, 109-141.	0.4	35
31	The Many Faces of Degeneracy in Conic Optimization. Foundations and Trends® in Optimization, 2017, 3, 77-170.	7.2	30
32	An Interior-Point Method for Approximate Positive Semidefinite Completions. Computational Optimization and Applications, 1998, 9, 175-190.	0.9	27
33	Solving Euclidean Distance Matrix Completion Problems Via Semidefinite Programming. , 1999, , 13-30.		26
34	Invariant ellipsoidal cones. Linear Algebra and Its Applications, 1991, 150, 81-106.	0.4	25
35	Measures for Symmetric Rank-One Updates. Mathematics of Operations Research, 1994, 19, 815-830.	0.8	25
36	Semidefinite programming for discrete optimization and matrix completion problems. Discrete Applied Mathematics, 2002, 123, 513-577.	0.5	25

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37	A Low-Dimensional Semidefinite Relaxation for the Quadratic Assignment Problem. Mathematics of Operations Research, 2009, 34, 1008-1022.	0.8	25
38	Determining Protein Structures from NOESY Distance Constraints by Semidefinite Programming. Journal of Computational Biology, 2013, 20, 296-310.	0.8	25
39	Coordinate Shadows of Semidefinite and Euclidean Distance Matrices. SIAM Journal on Optimization, 2015, 25, 1160-1178.	1.2	25
40	Geometry of optimality conditions and constraint qualifications: The convex case. Mathematical Programming, 1980, 19, 32-60.	1.6	23
41	Strong duality for a trust-region type relaxation of the quadratic assignment problem. Linear Algebra and Its Applications, 1999, 301, 121-136.	0.4	23
42	Max-min eigenvalue problems, primal-dual Interior point algorithms, and Trust region subproblemst. Optimization Methods and Software, 1995, 5, 1-16.	1.6	21
43	Local nonglobal minima for solving large-scale extended trust-region subproblems. Computational Optimization and Applications, 2017, 66, 223-244.	0.9	19
44	Two theorems on Euclidean distance matrices and Gale transform. Linear Algebra and Its Applications, 2002, 340, 149-154.	0.4	16
45	Euclidean distance matrices, semidefinite programming and sensor network localization. Portugaliae Mathematica, 2011, 68, 53-102.	0.4	16
46	An eigenvalue majorization inequality for positive semidefinite block matrices. Linear and Multilinear Algebra, 2012, 60, 1365-1368.	0.5	16
47	The Gauss-Newton direction in semidefinite programming. Optimization Methods and Software, 2001, 15, 1-28.	1.6	15
48	On Equivalence of Semidefinite Relaxations for Quadratic Matrix Programming. Mathematics of Operations Research, 2011, 36, 88-104.	0.8	15
49	A note on alternating projections for ill-posed semidefinite feasibility problems. Mathematical Programming, 2017, 162, 537-548.	1.6	15
50	ADMM for the SDP relaxation of the QAP. Mathematical Programming Computation, 2018, 10, 631-658.	3.2	15
51	Trust Region Problems and Nonsymmetric Eigenvalue Perturbations. SIAM Journal on Matrix Analysis and Applications, 1994, 15, 755-778.	0.7	14
52	Sensor network localization, euclidean distance matrix completions, and graph realization. , 2008, , .		14
53	Large scale portfolio optimization with piecewise linear transaction costs. Optimization Methods and Software, 2008, 23, 929-952.	1.6	13
54	Preprocessing and Regularization for Degenerate Semidefinite Programs. Springer Proceedings in Mathematics and Statistics, 2013, , 251-303.	0.1	13

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55	Bounds for ratios of eigenvalues using traces. Linear Algebra and Its Applications, 1983, 55, 105-124.	0.4	10
56	Improving Hadamard's inequality*. Linear and Multilinear Algebra, 1984, 16, 305-322.	0.5	10
57	Explicit solutions for interval semidefinite linear programs. Linear Algebra and Its Applications, 1996, 236, 95-104.	0.4	10
58	Generating and measuring instances of hard semidefinite programs. Mathematical Programming, 2010, 125, 31-45.	1.6	10
59	Low-rank matrix completion using nuclear norm minimization and facial reduction. Journal of Global Optimization, 2018, 72, 5-26.	1.1	10
60	Semidefinite programming. Mathematical Programming, 1997, 77, 105-109.	1.6	9
61	Geometry of Semidefinite Max-Cut Relaxations via Matrix Ranks. Journal of Combinatorial Optimization, 2002, 6, 237-270.	0.8	9
62	Solving semidefinite programs using preconditioned conjugate gradients. Optimization Methods and Software, 2004, 19, 653-672.	1.6	9
63	Hiroshimaâ€™s theorem and matrix norm inequalities. Acta Scientiarum Mathematicarum, 2015, 81, 45-53.	0.2	9
64	A robust algorithm for semidefinite programming. Optimization Methods and Software, 2012, 27, 667-693.	1.6	8
65	Eigenvalue, quadratic programming, and semidefinite programming relaxations for a cut minimization problem. Computational Optimization and Applications, 2016, 63, 333-364.	0.9	7
66	A strictly contractive Peaceman-Rachford splitting method for the doubly nonnegative relaxation of the minimum cut problem. Computational Optimization and Applications, 2021, 78, 853-891.	0.9	7
67	Extensions of Samuelson's Inequality. American Statistician, 1979, 33, 143.	0.9	6
68	A note on maximizing the permanent of a positive definite hermitian matrix, given the eigenvalues$^{\hat{}}$—. Linear and Multilinear Algebra, 1986, 19, 389-393.	0.5	6
69	Pseudolinear Programming. SIAM Review, 1999, 41, 795-805.	4.2	6
70	Regularization using a parameterized trust region subproblem. Mathematical Programming, 2009, 116, 193-220.	1.6	6
71	A stable primalâ€"dual approach for linear programming under nondegeneracy assumptions. Computational Optimization and Applications, 2009, 44, 213-247.	0.9	6
72	Error Bounds and Singularity Degree in Semidefinite Programming. SIAM Journal on Optimization, 2021, 31, 812-836.	1.2	6

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73	Strengthened existence and uniqueness conditions for search directions in semidefinite programming. Linear Algebra and Its Applications, 2005, 400, 31-60.	0.4	5
74	Projection methods for quantum channel construction. Quantum Information Processing, 2015, 14, 3075-3096.	1.0	4
75	Convergence of a short-step primal-dual algorithm based on the Gauss-Newton direction. Journal of Applied Mathematics, 2003, 2003, 517-534.	0.4	3
76	Efficient Use of Semidefinite Programming for Selection of Rotamers in Protein Conformations. INFORMS Journal on Computing, 2014, 26, 748-766.	1.0	3
77	Noisy Euclidean distance matrix completion with a single missing node. Journal of Global Optimization, 2019, 75, 973-1002.	1.1	3
78	Robust principal component analysis using facial reduction. Optimization and Engineering, 2020, 21, 1195-1219.	1.3	3
79	A Restricted Dual Peaceman-Rachford Splitting Method for a Strengthened DNN Relaxation for QAP. INFORMS Journal on Computing, 2022, 34, 2125-2143.	1.0	3
80	Some necessary and some sufficient trace inequalities for Euclidean distance matrices. Linear and Multilinear Algebra, 2007, 55, 499-506.	0.5	2
81	A strengthened Barvinok-Pataki bound on SDP rank. Operations Research Letters, 2021, 49, 837-841.	0.5	2
82	Protein Structure by Semidefinite Facial Reduction. Lecture Notes in Computer Science, 2012, , 1-11.	1.0	2
83	NGL02-1: Multi-Stage Investment Decision under Contingent Demand for Networking Planning. IEEE Global Telecommunications Conference (GLOBECOM), 2006, , .	0.0	0
84	Foreword: Special issue on large-scale nonlinear and semidefinite programming. Mathematical Programming, 2007, 109, 207-209.	1.6	0
85	An SDP-based Method for the Real Radical Ideal Membership Test. , 2017, , .		0