C Roos

List of Publications by Year
in descending order

114 papers	3,715 citations	136885 32 h-index	143943 57 g-index
116 all docs	116 docs citations	116 times ranked	1325 citing authors

#	ARTICLE	IF	CITATIONS
1	On implementing a primal-dual interior-point method for conic quadratic optimization. Mathematical Programming, 2003, 95, 249-277.	1.6	483
2	A Comparative Study of Kernel Functions for Primal-Dual Interior-Point Algorithms in Linear Optimization. SIAM Journal on Optimization, 2004, 15, 101-128.	1.2	200
3	Self-regular functions and new search directions for linear and semidefinite optimization. Mathematical Programming, 2002, 93, 129-171.	1.6	158
4	On Copositive Programming and Standard Quadratic Optimization Problems. Journal of Global Optimization, 2000, 18, 301-320.	1.1	145
5	Robust Solutions of Uncertain Quadratic and Conic-Quadratic Problems. SIAM Journal on Optimization, 2002, 13, 535-560.	1.2	129
6	On maximization of quadratic form over intersection of ellipsoids with common center. Mathematical Programming, 1999, 86, 463-473.	1.6	123
7	A Full-Newton Step O(n) Infeasible Interior-Point Algorithm for Linear Optimization. SIAM Journal on Optimization, 2006, 16, 1110-1136.	1.2	102
8	Sensitivity analysis in linear programming: just be careful!. European Journal of Operational Research, 1997, 101, 15-28.	3.5	96
9	A New Efficient Large-Update Primal-Dual Interior-Point Method Based on a Finite Barrier. SIAM Journal on Optimization, 2002, 13, 766-782.	1.2	87
10	Cramer and Cayley-Hamilton in the max algebra. Linear Algebra and Its Applications, 1988, 101, 87-108.	0.4	82
11	A polynomial method of approximate centers for linear programming. Mathematical Programming, 1992, 54, 295-305.	1.6	81
12	Full Nesterovâ€"Todd step infeasible interior-point method for symmetric optimization. European Journal of Operational Research, 2011, 214, 473-484.	3.5	80
13	A new lower bound for the minimum distance of a cyclic code. IEEE Transactions on Information Theory, 1983, 29, 330-332.	1.5	67
14	Initialization in semidefinite programming via a self-dual skew-symmetric embedding. Operations Research Letters, 1997, 20, 213-221.	0.5	63
15	A survey of search directions in interior point methods for linear programming. Mathematical Programming, 1991, 52, 481-509.	1.6	60
16	On the Convergence of the Central Path in Semidefinite Optimization. SIAM Journal on Optimization, 2002, 12, 1090-1099.	1.2	57
17	The theory of linear programming:skew symmetric self-dual problems and the central path[*]. Optimization, 1994, 29, 225-233.	1.0	54
18	An exponential example for Terlaky's pivoting rule for the criss-cross simplex method. Mathematical Programming, 1990, 46, 79-84.	1.6	48

#	Article	IF	Citations
19	Copositive realxation for genera quadratic programming. Optimization Methods and Software, 1998, 9, 185-208.	1.6	48
20	Primal-Dual Interior-Point Methods for Second-Order Conic Optimization Based on Self-Regular Proximities. SIAM Journal on Optimization, 2002, 13, 179-203.	1.2	48
21	Economically Efficient Standards to Protect the Netherlands Against Flooding. Interfaces, 2014, 44, 7-21.	1.6	44
22	Primal-Dual Interior-Point Algorithms for Semidefinite Optimization Based on a Simple Kernel Function. Mathematical Modelling and Algorithms, 2005, 4, 409-433.	0.5	43
23	On the classical logarithmic barrier function method for a class of smooth convex programming problems. Journal of Optimization Theory and Applications, 1992, 73, 1-25.	0.8	42
24	Safe Dike Heights at Minimal Costs: The Nonhomogeneous Case. Operations Research, 2012, 60, 1342-1355.	1.2	42
25	An inequality for generalized hexagons. Geometriae Dedicata, 1981, 10, 219-222.	0.1	41
26	On the structure of convolutional and cyclic convolutional codes. IEEE Transactions on Information Theory, 1979, 25, 676-683.	1.5	40
27	A Class of Large-Update and Small-Update Primal-Dual Interior-Point Algorithms for Linear Optimization. Journal of Optimization Theory and Applications, 2008, 138, 341-359.	0.8	38
28	Primal–dual interior-point algorithms for second-order cone optimization based on kernel functions. Nonlinear Analysis: Theory, Methods & Applications, 2009, 70, 3584-3602.	0.6	37
29	The linear complimentarity problem, sufficient matrices, and the criss-cross method. Linear Algebra and Its Applications, 1993, 187, 1-14.	0.4	36
30	Unified Analysis of Kernel-Based Interior-Point Methods for $P_*(kappa)$-Linear Complementarity Problems. SIAM Journal on Optimization, 2010, 20, 3014-3039.	1.2	36
31	Degeneracy in interior point methods for linear programming: a survey. Annals of Operations Research, 1993, 46-47, 107-138.	2.6	35
32	A new full-Newton step O(n) infeasible interior-point algorithm for semidefinite optimization. Numerical Algorithms, 2009, 52, 225-255.	1.1	35
33	A generalization of the BCH bound for cyclic codes, including the Hartmann-Tzeng bound. Journal of Combinatorial Theory - Series A, 1982, 33, 229-232.	0.5	33
34	A new class of polynomial primal–dual methods for linear and semidefinite optimization. European Journal of Operational Research, 2002, 143, 234-256.	3.5	33
35	Optimal Strategies for Flood Prevention. Management Science, 2017, 63, 1644-1656.	2.4	33
36	Essential extensions in radical theory for rings. Journal of the Australian Mathematical Society, 1977, 23, 340-347.	0.3	32

#	Article	IF	Citations
37	SimplifiedO(nL) infeasible interior-point algorithm for linear optimization using full-Newton steps. Optimization Methods and Software, 2007, 22, 519-530.	1.6	32
38	Extended Matrix Cube Theorems with Applications to Î¼-Theory in Control. Mathematics of Operations Research, 2003, 28, 497-523.	0.8	31
39	Primal-dual algorithms for linear programming based on the logarithmic barrier method. Journal of Optimization Theory and Applications, 1994, 83, 1-26.	0.8	30
40	Primal-dual target-following algorithms for linear programming. Annals of Operations Research, 1996, 62, 197-231.	2.6	30
41	New Complexity Analysis of the Primalâ€"Dual Newton Method for Linear Optimization. Annals of Operations Research, 2000, 99, 23-39.	2.6	30
42	A Strongly Polynomial Rounding Procedure Yielding a Maximally Complementary Solution for $P_*(kappa)$ Linear Complementarity Problems. SIAM Journal on Optimization, 2000, 11, 320-340.	1.2	30
43	Notes on Duality in Second Order and p -Order Cone Optimization. Optimization, 2002, 51, 627-643.	1.0	30
44	A polynomial-time algorithm for linear optimization based on a new simple kernel function. Optimization Methods and Software, 2003, 18, 631-646.	1.6	25
45	A Long-step barrier method for convex quadratic programming. Algorithmica, 1993, 10, 365-382.	1.0	24
46	A Full Nesterovâ€"Todd Step Infeasible Interior-Point Method for Second-Order Cone Optimization. Journal of Optimization Theory and Applications, 2013, 158, 816-858.	0.8	24
47	A primalâ€dual interior-point method for linear optimization based on a new proximity function. Optimization Methods and Software, 2002, 17, 985-1008.	1.6	23
48	A polynomial-time algorithm for linear optimization based on a new class of kernel functions. Journal of Computational and Applied Mathematics, 2009, 224, 500-513.	1.1	23
49	A sufficient condition for self-concordance, with application to some classes of structured convex programming problems. Mathematical Programming, 1995, 69, 75-88.	1.6	22
50	A note on the existence of perfect constant weight codes. Discrete Mathematics, 1983, 47, 121-123.	0.4	21
51	A Large-Step Analytic Center Method for a Class of Smooth Convex Programming Problems. SIAM Journal on Optimization, 1992, 2, 55-70.	1.2	21
52	A logarithmic barrier cutting plane method for convex programming. Annals of Operations Research, 1995, 58, 67-98.	2.6	21
53	A Polynomial Primal-Dual Dikin-Type Algorithm for Linear Programming. Mathematics of Operations Research, 1996, 21, 341-353.	0.8	21
54	Kernel-Based Interior-Point Methods for Monotone Linear Complementarity Problems over Symmetric Cones. Journal of Optimization Theory and Applications, 2011, 150, 444-474.	0.8	21

#	Article	IF	Citations
55	An Improved and Simplified Full-Newton Step $O(n)$ Infeasible Interior-Point Method for Linear Optimization. SIAM Journal on Optimization, 2015, 25, 102-114.	1.2	21
56	A Complexity Reduction for the Long-Step Path-Following Algorithm for Linear Programming. SIAM Journal on Optimization, 1992, 2, 71-87.	1.2	20
57	Complexity analysis of logarithmic barrier decomposition methods for semi-infinite linear programming. Applied Numerical Mathematics, 1999, 29, 379-394.	1.2	20
58	Improved Full-Newton Step O(nL) Infeasible Interior-Point Method for Linear Optimization. Journal of Optimization Theory and Applications, 2010, 145, 271-288.	0.8	17
59	A new kernel function yielding the best known iteration bounds for primal-dual interior-point algorithms. Acta Mathematica Sinica, English Series, 2009, 25, 2169-2178.	0.2	16
60	A build-up variant of the logarithmic barrier method for LP. Operations Research Letters, 1992, 12, 181-186.	0.5	15
61	A Family of Polynomial Affine Scaling Algorithms for Positive SemiDefinite Linear Complementarity Problems. SIAM Journal on Optimization, 1997, 7, 126-140.	1.2	15
62	Logarithmic Barrier Decomposition Methods for Semi-infinite Programming. International Transactions in Operational Research, 1997, 4, 285-303.	1.8	15
63	On the Dimension of the Set of Rim Perturbations for Optimal Partition Invariance. SIAM Journal on Optimization, 1998, 9, 207-216.	1.2	15
64	Limiting behavior of the central path in semidefinite optimization. Optimization Methods and Software, 2005, 20, 99-113.	1.6	15
65	A potential reduction approach to the frequency assignment problem. Discrete Applied Mathematics, 1997, 78, 251-282.	0.5	14
66	Adding and Deleting Constraints in the Logarithmic Barrier Method for LP. Nonconvex Optimization and Its Applications, 1994, , 166-185.	0.1	14
67	On the existence of certain distance-regular graphs. Journal of Combinatorial Theory Series B, 1982, 33, 197-212.	0.6	13
68	Generic Primal-dual Interior Point Methods Based on a New Kernel Function. RAIRO - Operations Research, 2008, 42, 199-213.	1.0	13
69	A potential-reduction variant of Renegar's short-step path-following method for linear programming. Linear Algebra and Its Applications, 1991, 152, 43-68.	0.4	11
70	New trajectory-following polynomial-time algorithm for linear programming problems. Journal of Optimization Theory and Applications, 1989, 63, 433-458.	0.8	10
71	Application of Nonlinear Optimization to Reactor Core Fuel Reloading. Annals of Nuclear Energy, 1999, 26, 423-448.	0.9	10
72	Kernel-function Based Algorithms for Semidefinite Optimization. RAIRO - Operations Research, 2009, 43, 189-199.	1.0	10

#	Article	IF	Citations
73	A generic primal–dual interior-point method for semidefinite optimization based on a new class of kernel functions. Optimization Methods and Software, 2010, 25, 387-403.	1.6	10
74	An improved version of Chubanov's method for solving a homogeneous feasibility problem. Optimization Methods and Software, 2018, 33, 26-44.	1.6	10
75	Improved complexity using higher-order correctors for primal-dual Dikin affine scaling. Mathematical Programming, 1997, 76, 117-130.	1.6	9
76	An efficient algorithm for critical circuits and finite eigenvectors in the max-plus algebra. Linear Algebra and Its Applications, 1999, 295, 231-240.	0.4	9
77	On the existence of certain generalized Moore geometries, part I. Discrete Mathematics, 1984, 51, 179-190.	0.4	8
78	Potential reduction algorithms for structured combinatorial optimization problems. Operations Research Letters, 1997, 21, 55-64.	0.5	8
79	Optimization of nuclear reactor reloading patterns. Annals of Operations Research, 1997, 69, 65-84.	2.6	8
80	Note on a paper of Broyden. Operations Research Letters, 1999, 25, 183-186.	0.5	7
81	On the existence of certain generalized Moore geometries, part II. Discrete Mathematics, 1984, 51, 277-282.	0.4	6
82	Object delineation in noisy images by a modified policy-iteration method. IEEE Transactions on Pattern Analysis and Machine Intelligence, 1992, 14, 952-958.	9.7	6
83	Long-step primal-dual target-following algorithms for linear programming. Mathematical Methods of Operations Research, 1996, 44, 11-30.	0.4	6
84	Interior point methods, a decade after Karmarkar—a survey, with application to the smallest eigenvalue problem. Statistica Neerlandica, 1996, 50, 146-170.	0.9	6
85	Polynomial Primal-Dual Affine Scaling Algorithms in Semidefinite Programming. Journal of Combinatorial Optimization, 1998, 2, 51-69.	0.8	6
86	Basis- and partition identification for quadratic programming and linear complementarity problems. Mathematical Programming, 1999, 86, 261-282.	1.6	6
87	New Complexity Analysis of the Primal–Dual Method for Semidefinite Optimization Based on the Nesterov–Todd Direction. Journal of Optimization Theory and Applications, 2001, 109, 327-343.	0.8	6
88	Inverse barrier methods for linear programming. RAIRO - Operations Research, 1994, 28, 135-163.	1.0	6
89	On the existence of certain generalized moore geometries (Part IV). Discrete Mathematics, 1986, 62, 139-144.	0.4	5
90	On the existence of certain generalized Moore geometries, part III. Discrete Mathematics, 1986, 58, 275-283.	0.4	5

#	Article	IF	Citations
91	A Survey of the Implications of the Behavior of the Central Path for the Duality Theory of Linear Programming. Management Science, 1995, 41, 1922-1934.	2.4	5
92	FINDING OPTIMAL NUCLEAR REACTOR CORE RELOAD PATTERNS USING NONLINEAR OPTIMIZATION AND SEARCH HEURISTICS. Engineering Optimization, 1999, 32, 143-176.	1.5	5
93	Convergence of the Dual Variables for the Primal Affine Scaling Method with Unit Steps in the Homogeneous Case. Journal of Optimization Theory and Applications, 1997, 95, 305-321.	0.8	4
94	A Scaled Gauss--Newton Primal-Dual Search Direction for Semidefinite Optimization. SIAM Journal on Optimization, 2001, 11, 870-888.	1.2	4
95	Infeasible Interior-Point Methods for Linear Optimization Based on Large Neighborhood. Journal of Optimization Theory and Applications, 2016, 170, 562-590.	0.8	4
96	A Universal and Structured Way to Derive Dual Optimization Problem Formulations. INFORMS Journal on Optimization, 2020, 2, 229-255.	0.9	4
97	Upper bounds for A(n,4) and A(n,6) derived from Delsarte's linear programming bound. Discrete Mathematics, 1982, 40, 261-276.	0.4	3
98	Developments towards the slice-wise three-dimensional reconstruction of the distribution of the contrast perfusion in the myocardial muscle from biplane angiographic views. International Journal of Cardiovascular Imaging, 1990, 5, 213-224.	0.2	3
99	On Central-Path Proximity Measures in Interior-Point Methods. Journal of Optimization Theory and Applications, 2005, 127, 303-328.	0.8	3
100	The non-existence of some perfect codes over non-prime power alphabets. Discrete Mathematics, 2011, 311, 1344-1348.	0.4	3
101	On Primal–Dual Path–Following Algorithms for Semidefinite Programming. Applied Optimization, 1998, , 137-157.	0.4	3
102	Ideals of matrixrings over nonassociative rings. Acta Mathematica Hungarica, 1976, 27, 7-20.	0.3	2
103	Convergence of the homotopy path for a full-Newton step infeasible interior-point method. Operations Research Letters, 2010, 38, 147-151.	0.5	2
104	On the existence of certain generalized Moore geometries, V. Discrete Mathematics, 1989, 76, 183-189.	0.4	1
105	Method of approximate centers for semi-definite programming. Optimization Methods and Software, 1997, 7, 291-309.	1.6	1
106	A nonconvex weighted potential function forpolynomial target following methods. Annals of Operations Research, 1998, 81, 3-14.	2.6	1
107	Primal-dual potential reduction methods for semidefinite programming using affine-scaling directions. Applied Numerical Mathematics, 1999, 29, 335-360.	1.2	1
108	Linear Optimization. , 2003, , 597-616.		1

#	Article	IF	Citations
109	Counterexample to a Conjecture on an Infeasible Interior-Point Method. SIAM Journal on Optimization, 2010, 20, 1862-1867.	1.2	1
110	On the chaotic behavior of the primalâ€"dual affineâ€"scaling algorithm for linear optimization. Chaos, 2014, 24, 043132.	1.0	1
111	A Homogenized Cutting Plane Method to Solve the Convex Feasibility Problem. Applied Optimization, 2001, , 167-190.	0.4	1
112	Interior point approach to linear programming: theory, algorithms & parametric analysis. , 1992, , 181-216.		1
113	On t-constant codes and designs (Corresp.). IEEE Transactions on Information Theory, 1981, 27, 640-643.	1.5	0
114	Fair prices exist always in production networks. Economics Letters, 1986, 21, 209-213.	0.9	0