Guoyin Li

List of Publications by Year
in descending order

107 papers	3,062 citations	159585 30 h-index	189892 50 g-index
107 all docs	107 docs citations	107 times ranked	1303 citing authors

#	Article	IF	Citations
1	Global Convergence of Splitting Methods for Nonconvex Composite Optimization. SIAM Journal on Optimization, 2015, 25, 2434-2460.	2.0	236
2	New quasi-Newton methods for unconstrained optimization problems. Applied Mathematics and Computation, 2006, 175, 1156-1188.	2.2	151
3	Nonlinear behaviour and stability of functionally graded porous arches with graphene platelets reinforcements. International Journal of Engineering Science, 2019, 137, 37-56.	5.0	123
4	Calculus of the Exponent of Kurdykaâ€"Åojasiewicz Inequality and Its Applications to Linear Convergence of First-Order Methods. Foundations of Computational Mathematics, 2018, 18, 1199-1232.	2.5	112
5	New conjugacy condition and related new conjugate gradient methods for unconstrained optimization. Journal of Computational and Applied Mathematics, 2007, 202, 523-539.	2.0	110
6	Strong Duality in Robust Convex Programming: Complete Characterizations. SIAM Journal on Optimization, 2010, 20, 3384-3407.	2.0	107
7	Douglasâ€"Rachford splitting for nonconvex optimization with application to nonconvex feasibility problems. Mathematical Programming, 2016, 159, 371-401.	2.4	93
8	The Zâ€"eigenvalues of a symmetric tensor and its application to spectral hypergraph theory. Numerical Linear Algebra With Applications, 2013, 20, 1001-1029.	1.6	81
9	A modified Polakâ€"RibiÃ¨reâ€"Polyak conjugate gradient algorithm for nonsmooth convex programs. Journal of Computational and Applied Mathematics, 2014, 255, 86-96.	2.0	79
10	Robust solutions to multi-objective linear programs with uncertain data. European Journal of Operational Research, 2015, 242, 730-743.	5.7	70
11	New nonlinear conjugate gradient formulas for large-scale unconstrained optimization problems. Applied Mathematics and Computation, 2006, 179, 407-430.	2.2	69
12	Trust-region problems with linear inequality constraints: exact SDP relaxation, global optimality and robust optimization. Mathematical Programming, 2014, 147, 171-206.	2.4	67
13	HÃ¶lder Metric Subregularity with Applications to Proximal Point Method. SIAM Journal on Optimization, 2012, 22, 1655-1684.	2.0	63
14	Dynamic reliability analysis using the extended support vector regression (X-SVR). Mechanical Systems and Signal Processing, 2019, 126, 368-391.	8.0	61
15	Alternative Theorems for Quadratic Inequality Systems and Global Quadratic Optimization. SIAM Journal on Optimization, 2009, 20, 983-1001.	2.0	52
16	Robust duality for generalized convex programming problems under data uncertainty. Nonlinear Analysis: Theory, Methods & Applications, 2012, 75, 1362-1373.	1.1	51
17	Error Bounds of Generalized D-Gap Functions for Nonsmooth and Nonmonotone Variational Inequality Problems. SIAM Journal on Optimization, 2009, 20, 667-690.	2.0	49
18	Global error bounds for piecewise convex polynomials. Mathematical Programming, 2013, 137, 37-64.	2.4	47

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19	New fractional error bounds for polynomial systems with applications to HÃ¶lderian stability in optimization and spectral theory of tensors. Mathematical Programming, 2015, 153, 333-362.	2.4	46
20	Robust Solutions of MultiObjective Linear Semi-Infinite Programs under Constraint Data Uncertainty. SIAM Journal on Optimization, 2014, 24, 1402-1419.	2.0	45
21	Convergence Rate Analysis for Averaged Fixed Point Iterations in Common Fixed Point Problems. SIAM Journal on Optimization, 2017, 27, 1-33.	2.0	44
22	Robust linear semi-infinite programming duality under uncertainty. Mathematical Programming, 2013, 139, 185-203.	2.4	42
23	Global convergence of the Polak-RibiÃ¨re-Polyak conjugate gradient method with an Armijo-type inexact line search for nonconvex unconstrained optimization problems. Mathematics of Computation, 2008, 77, 2173-2193.	2.1	39
24	Characterizing robust set containments and solutions of uncertain linear programs without qualifications. Operations Research Letters, 2010, 38, 188-194.	0.7	39
25	Robust conjugate duality for convex optimization under uncertainty with application to data classification. Nonlinear Analysis: Theory, Methods & Applications, 2011, 74, 2327-2341.	1.1	39
26	Analysis of the Convergence Rate for the Cyclic Projection Algorithm Applied to Basic Semialgebraic Convex Sets. SIAM Journal on Optimization, 2014, 24, 498-527.	2.0	39
27	Characterizing Robust Solution Sets of Convex Programs under Data Uncertainty. Journal of Optimization Theory and Applications, 2015, 164, 407-435.	1.5	39
28	A semidefinite program approach for computing the maximum eigenvalue of a class of structured tensors and its applications in hypergraphs and copositivity test. Numerical Linear Algebra With Applications, 2018, 25, e2125.	1.6	37
29	Robust SOS-convex polynomial optimization problems: exact SDP relaxations. Optimization Letters, 2015, 9, 1-18.	1.6	35
30	On the Asymptotically Well Behaved Functions and Global Error Bound for Convex Polynomials. SIAM Journal on Optimization, 2010, 20, 1923-1943.	2.0	34
31	On Extension of Fenchel Duality and its Application. SIAM Journal on Optimization, 2008, 19, 1489-1509.	2.0	30
32	Stable zero duality gaps in convex programming: Complete dual characterisations with applications to semidefinite programs. Journal of Mathematical Analysis and Applications, 2009, 360, 156-167.	1.0	30
33	Robust Duality in Parametric Convex Optimization. Set-Valued and Variational Analysis, 2013, 21, 177-189.	1.1	30
34	Robust assessment of collapse resistance of structures under uncertain loads based on Info-Gap model. Computer Methods in Applied Mechanics and Engineering, 2015, 285, 208-227.	6.6	30
35	Hybrid uncertain natural frequency analysis for structures with random and interval fields. Computer Methods in Applied Mechanics and Engineering, 2018, 328, 365-389.	6.6	29
36	Global convergence of modified Polak-RibiÃ¨re-Polyak conjugate gradient methods with sufficient descent property. Journal of Industrial and Management Optimization, 2008, 4, 565-579.	1.3	29

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37	Necessary and sufficient conditions for S-lemma andÂnonconvex quadratic optimization. Optimization and Engineering, 2009, 10, 491-503.	2.4	28
38	Support vector machine classifiers with uncertain knowledge sets via robust optimization. Optimization, 2014, 63, 1099-1116.	1.7	28
39	A robust von Neumann minimax theorem for zero-sum games under bounded payoff uncertainty. Operations Research Letters, 2011, 39, 109-114.	0.7	27
40	Uncertainty analysis for structures with hybrid random and interval parameters using mathematical programming approach. Applied Mathematical Modelling, 2017, 48, 208-232.	4.2	27
41	On Polynomial Optimization Over Non-compact Semi-algebraic Sets. Journal of Optimization Theory and Applications, 2014, 163, 707-718.	1.5	24
42	Exact SDP relaxations for classes of nonlinear semidefinite programming problems. Operations Research Letters, 2012, 40, 529-536.	0.7	22
43	Lagrange multiplier characterizations of robust best approximations under constraint data uncertainty. Journal of Mathematical Analysis and Applications, 2012, 393, 285-297.	1.0	22
44	Semismoothness of the maximum eigenvalue function of a symmetric tensor and its application. Linear Algebra and Its Applications, 2013, 438, 813-833.	0.9	22
45	Finding the Maximum Eigenvalue of Essentially Nonnegative Symmetric Tensors via Sum of Squares Programming. Journal of Optimization Theory and Applications, 2013, 158, 717-738.	1.5	20
46	Convergence of the Lasserre hierarchy of SDP relaxations for convex polynomial programs without compactness. Operations Research Letters, 2014, 42, 34-40.	0.7	20
47	Peacemanâ€"Rachford splitting for a class of nonconvex optimization problems. Computational Optimization and Applications, 2017, 68, 407-436.	1.6	20
48	Robust Duality for Fractional Programming Problems with Constraint-Wise Data Uncertainty. Journal of Optimization Theory and Applications, 2011, 151, 292-303.	1.5	19
49	Strong duality for robust minimax fractional programming problems. European Journal of Operational Research, 2013, 228, 331-336.	5.7	19
50	Error bounds for parametric polynomial systems with applications to higher-order stability analysis and convergence rates. Mathematical Programming, 2018, 168, 313-346.	2.4	19
51	Necessary global optimality conditions for nonlinear programming problems with polynomial constraints. Mathematical Programming, 2011, 126, 393-399.	2.4	18
52	A new class of alternative theorems for SOS-convex inequalities and robust optimization. Applicable Analysis, 2015, 94, 56-74.	1.3	18
53	Kurdykaâ€"Åojasiewicz Exponent via Inf-projection. Foundations of Computational Mathematics, 2022, 22, 1171-1217.	2.5	17
54	New dual constraint qualifications characterizing zero duality gaps of convex programs and semidefinite programs. Nonlinear Analysis: Theory, Methods & Applications, 2009, 71, e2239-e2249.	1.1	16

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55	Robust Farkas' lemma for uncertain linear systems with applications. Positivity, 2011, 15, 331-342.	0.7	16
56	A Tensor Analogy of Yuan's Theorem of the Alternative and Polynomial Optimization with Sign structure. Journal of Optimization Theory and Applications, 2016, 168, 446-474.	1.5	16
57	Exact Second-Order Cone Programming Relaxations for Some Nonconvex Minimax Quadratic Optimization Problems. SIAM Journal on Optimization, 2018, 28, 760-787.	2.0	16
58	Error bound results for generalized D-gap functions of nonsmooth variational inequality problems. Journal of Computational and Applied Mathematics, 2010, 233, 2795-2806.	2.0	15
59	Radius of robust feasibility formulas for classes of convex programs with uncertain polynomial constraints. Operations Research Letters, 2016, 44, 67-73.	0.7	15
60	A note on alternating projections for ill-posed semidefinite feasibility problems. Mathematical Programming, 2017, 162, 537-548.	2.4	15
61	Convergence rate analysis for the higher order power method in best rank one approximations of tensors. Numerische Mathematik, 2018, 140, 993-1031.	1.9	15
62	SOS tensor decomposition: Theory and applications. Communications in Mathematical Sciences, 2016, 14, 2073-2100.	1.0	15
63	Guaranteeing highly robust weakly efficient solutions for uncertain multi-objective convex programs. European Journal of Operational Research, 2018, 270, 40-50.	5.7	14
64	Constraint qualifications for convex optimization without convexity of constraints : New connections and applications to best approximation. European Journal of Operational Research, 2018, 265, 19-25.	5.7	14
65	Convergent Semidefinite Programming Relaxations for Global Bilevel Polynomial Optimization Problems. SIAM Journal on Optimization, 2016, 26, 753-780.	2.0	13
66	Extended trust-region problems with one or two balls: exact copositive and Lagrangian relaxations. Journal of Global Optimization, 2018, 71, 551-569.	1.8	13
67	On the Linear Convergence of Forward–Backward Splitting Method: Part I—Convergence Analysis. Journal of Optimization Theory and Applications, 2021, 188, 378-401.	1.5	12
68	Strong duality in robust semi-definite linear programming under data uncertainty. Optimization, 2014, 63, 713-733.	1.7	11
69	A new bounded degree hierarchy with SOCP relaxations for global polynomial optimization and conic convex semi-algebraic programs. Journal of Global Optimization, 2019, 75, 885-919.	1.8	11
70	Polyphase uncertainty analysis through virtual modelling technique. Mechanical Systems and Signal Processing, 2022, 162, 108013.	8.0	11
71	Unified approach to some geometric results in variational analysis. Journal of Functional Analysis, 2007, 248, 317-343.	1.4	10
72	Farkas' lemma for separable sublinear inequalities without qualifications. Optimization Letters, 2009, 3, 537-545.	1.6	9

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73	Further results on Cauchy tensors and Hankel tensors. Applied Mathematics and Computation, 2016, 275, 50-62.	2.2	9
74	Semidefinite programming relaxation methods for global optimization problems with sparse polynomials and unbounded semialgebraic feasible sets. Journal of Global Optimization, 2016, 65, 175-190.	1.8	9
75	Extrapolated Proximal Subgradient Algorithms for Nonconvex and Nonsmooth Fractional Programs. Mathematics of Operations Research, 2022, 47, 2415-2443.	1.3	9
76	Polymorphic uncertainty quantification for engineering structures via a hyperplane modelling technique. Computer Methods in Applied Mechanics and Engineering, 2022, 398, 115250.	6.6	9
77	A virtual model architecture for engineering structures with Twin Extended Support Vector Regression (T-X-SVR) method. Computer Methods in Applied Mechanics and Engineering, 2021, 386, 114121.	6.6	8
78	A new version of the Liuâ€"Storey conjugate gradient method. Applied Mathematics and Computation, 2007, 189, 302-313.	2.2	7
79	Regularized Lagrangian duality for linearly constrained quadratic optimization and trust-region problems. Journal of Global Optimization, 2011, 49, 1-14.	1.8	7
80	A bilevel Farkas lemma to characterizing global solutions of a class of bilevel polynomial programs. Operations Research Letters, 2015, 43, 405-410.	0.7	7
81	Pseudo-spectra theory of tensors and tensor polynomial eigenvalue problems. Linear Algebra and Its Applications, 2017, 533, 536-572.	0.9	7
82	SOS-Convex Semialgebraic Programs and its Applications to Robust Optimization: A Tractable Class of Nonsmooth Convex Optimization. Set-Valued and Variational Analysis, 2018, 26, 305-326.	1.1	7
83	Global Quadratic Minimization over Bivalent Constraints: Necessary and Sufficient Global Optimality Condition. Journal of Optimization Theory and Applications, 2012, 152, 710-726.	1.5	6
84	Robust solutions of quadratic optimization over single quadratic constraint under interval uncertainty. Journal of Global Optimization, 2013, 55, 209-226.	1.8	6
85	Robust least square semidefinite programming with applications. Computational Optimization and Applications, 2014, 58, 347-379.	1.6	6
86	A Note on Nonconvex Minimax Theorem with Separable Homogeneous Polynomials. Journal of Optimization Theory and Applications, 2011, 150, 194-203.	1.5	5
87	Global optimality principles for polynomial optimization over box or bivalent constraints by separable polynomial approximations. Journal of Global Optimization, 2014, 58, 31-50.	1.8	5
88	The radius of robust feasibility of uncertain mathematical programs: A Survey and recent developments. European Journal of Operational Research, 2022, 296, 749-763.	5.7	5
89	Nonlinear Analysis: Algorithm, Convergence, and Applications 2014. Abstract and Applied Analysis, 2014, 2014, 1-2.	0.7	4
90	Calculating Radius of Robust Feasibility of Uncertain Linear Conic Programs via Semi-definite Programs. Journal of Optimization Theory and Applications, 2021, 189, 597-622.	1.5	4

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91	Robust Optimization and Data Classification for Characterization of Huntington Disease Onset via Duality Methods. Journal of Optimization Theory and Applications, 2022, 193, 649-675.	1.5	4
92	A proximal-projection partial bundle method for convex constrained minimax problems. Journal of Industrial and Management Optimization, 2019, 15, 757-774.	1.3	4
93	A working set SQCQP algorithm with simple nonmonotone penalty parameters. Journal of Computational and Applied Mathematics, 2011, 236, 1382-1398.	2.0	3
94	A convergent hierarchy of SDP relaxations for a class of hard robust global polynomial optimization problems. Operations Research Letters, 2017, 45, 325-333.	0.7	3
95	Exact Conic Programming Relaxations for a Class of Convex Polynomial Cone Programs. Journal of Optimization Theory and Applications, 2017, 172, 156-178.	1.5	3
96	A copositive Farkas lemma and minimally exact conic relaxations for robust quadratic optimization with binary and quadratic constraints. Operations Research Letters, 2019, 47, 530-536.	0.7	3
97	Convexifiability of continuous and discrete nonnegative quadratic programs for gap-free duality. European Journal of Operational Research, 2020, 280, 441-452.	5.7	3
98	$${ext {B}}$$-subdifferentials of the projection onto the matrix simplex. Computational Optimization and Applications, 2021, 80, 915-941.	1.6	3
99	Global Optimality Conditions for Classes of Non-convex Multi-objective Quadratic Optimization Problems. Springer Optimization and Its Applications, 2010, , 177-186.	0.9	3
100	Positive semi-definiteness of generalized anti-circulant tensors. Communications in Mathematical Sciences, 2016, 14, 941-952.	1.0	3
101	Uncertain Structural Free Vibration Analysis With Non-Probabilistic Spatially Varying Parameters. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2019, 5, .	1.1	2
102	On a Separation Principle for Nonconvex Sets. Set-Valued and Variational Analysis, 2008, 16, 851-860.	0.5	1
103	New strong duality results for convex programs with separable constraints. European Journal of Operational Research, 2010, 207, 1203-1209.	5.7	1
104	Robust best approximation with interpolation constraints under ellipsoidal uncertainty: Strong duality and nonsmooth Newton methods. Nonlinear Analysis: Theory, Methods & Applications, 2013, 81, 1-11.	1.1	1
105	Quadratic Growth Conditions and Uniqueness of Optimal Solution to Lasso. Journal of Optimization Theory and Applications, 0, , 1.	1.5	1
106	Advance in Nonlinear Analysis: Algorithm, Convergence, and Applications. Abstract and Applied Analysis, 2013, 2013, 1-2.	0.7	0
107	Non-Deterministic Free Vibration Analysis of Structures With Random and Fuzzy Parameters. , 2017, , .		0