

Monique Laurent

List of Publications by Year in descending order

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72
papers

2,607
citations

236925

25
h-index

206112

48
g-index

73
all docs

73
docs citations

73
times ranked

976
citing authors

#	ARTICLE	IF	CITATIONS
1	Geometry of Cuts and Metrics. Algorithms and Combinatorics, 1997, , .	0.6	533
2	Sums of Squares, Moment Matrices and Optimization Over Polynomials. The IMA Volumes in Mathematics and Its Applications, 2009, , 157-270.	0.5	342
3	A Comparison of the Sherali-Adams, LovÅ¡sz-Schrijver, and Lasserre Relaxations for Oâ€™1 Programming. Mathematics of Operations Research, 2003, 28, 470-496.	1.3	251
4	Semidefinite Programming and Integer Programming. Handbooks in Operations Research and Management Science, 2005, 12, 393-514.	0.6	80
5	Semidefinite Characterization and Computation of Zero-Dimensional Real Radical Ideals. Foundations of Computational Mathematics, 2008, 8, 607-647.	2.5	77
6	A PTAS for the minimization of polynomials of fixed degree over the simplex. Theoretical Computer Science, 2006, 361, 210-225.	0.9	67
7	Revisiting two theorems of Curto and Fialkow on moment matrices. Proceedings of the American Mathematical Society, 2005, 133, 2965-2976.	0.8	61
8	Semidefinite representations for finite varieties. Mathematical Programming, 2007, 109, 1-26.	2.4	52
9	On the Facial Structure of the Set of Correlation Matrices. SIAM Journal on Matrix Analysis and Applications, 1996, 17, 530-547.	1.4	49
10	Facets for the cut cone I. Mathematical Programming, 1992, 56, 121-160.	2.4	47
11	The Operator Ψ for the Chromatic Number of a Graph. SIAM Journal on Optimization, 2008, 19, 572-591.	2.0	46
12	Semidefinite Approximations for Global Unconstrained Polynomial Optimization. SIAM Journal on Optimization, 2005, 16, 490-514.	2.0	39
13	Lower Bound for the Number of Iterations in Semidefinite Hierarchies for the Cut Polytope. Mathematics of Operations Research, 2003, 28, 871-883.	1.3	38
14	A generalization of antiwebs to independence systems and their canonical facets. Mathematical Programming, 1989, 45, 97-108.	2.4	35
15	On the Lasserre Hierarchy of Semidefinite Programming Relaxations of Convex Polynomial Optimization Problems. SIAM Journal on Optimization, 2011, 21, 824-832.	2.0	35
16	Strengthened semidefinite programming bounds for codes. Mathematical Programming, 2007, 109, 239-261.	2.4	34
17	Applications of cut polyhedra â€™ II. Journal of Computational and Applied Mathematics, 1994, 55, 217-247.	2.0	33
18	A connection between positive semidefinite and euclidean distance matrix completion problems. Linear Algebra and Its Applications, 1998, 273, 9-22.	0.9	33

#	ARTICLE	IF	CITATIONS
19	Error Bounds for Some Semidefinite Programming Approaches to Polynomial Minimization on the Hypercube. <i>SIAM Journal on Optimization</i> , 2010, 20, 3104-3120.	2.0	33
20	Conic Approach to Quantum Graph Parameters Using Linear Optimization Over the Completely Positive Semidefinite Cone. <i>SIAM Journal on Optimization</i> , 2015, 25, 2461-2493.	2.0	33
21	The real positive semidefinite completion problem for series-parallel graphs. <i>Linear Algebra and Its Applications</i> , 1997, 252, 347-366.	0.9	32
22	Polynomial Instances of the Positive Semidefinite and Euclidean Distance Matrix Completion Problems. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2001, 22, 874-894.	1.4	30
23	A generalized flat extension theorem for moment matrices. <i>Archiv Der Mathematik</i> , 2009, 93, 87-98.	0.5	30
24	Facets for the cut cone II: Clique-web inequalities. <i>Mathematical Programming</i> , 1992, 56, 161-188.	2.4	29
25	A new graph parameter related to bounded rank positive semidefinite matrix completions. <i>Mathematical Programming</i> , 2014, 145, 291-325.	2.4	26
26	Moment matrices, border bases and real radical computation. <i>Journal of Symbolic Computation</i> , 2013, 51, 63-85.	0.8	24
27	Semidefinite bounds for the stability number of a graph via sums of squares of polynomials. <i>Mathematical Programming</i> , 2007, 110, 145-173.	2.4	21
28	Tighter Linear and Semidefinite Relaxations for Max-Cut Based on the Lovász-Schrijver Lift-and-Project Procedure. <i>SIAM Journal on Optimization</i> , 2002, 12, 345-375.	2.0	20
29	The quadratic assignment problem is easy for Robinsonian matrices with Toeplitz structure. <i>Operations Research Letters</i> , 2015, 43, 103-109.	0.7	19
30	Computing Semidefinite Programming Lower Bounds for the (Fractional) Chromatic Number Via Block-Diagonalization. <i>SIAM Journal on Optimization</i> , 2008, 19, 592-615.	2.0	18
31	Convergence analysis of a Lasserre hierarchy of upper bounds for polynomial minimization on the sphere. <i>Mathematical Programming</i> , 2022, 193, 665-685.	2.4	18
32	On Leonid Gurvits's Proof for Permanents. <i>American Mathematical Monthly</i> , 2010, 117, 903.	0.3	17
33	Convergence analysis for Lasserre's measure-based hierarchy of upper bounds for polynomial optimization. <i>Mathematical Programming</i> , 2017, 162, 363-392.	2.4	17
34	Improved convergence analysis of Lasserre's measure-based upper bounds for polynomial minimization on compact sets. <i>Mathematical Programming</i> , 2022, 193, 831-871.	2.4	17
35	Graphic vertices of the metric polytope. <i>Discrete Mathematics</i> , 1996, 151, 131-153.	0.7	16
36	Gap Inequalities for the Cut Polytope. <i>European Journal of Combinatorics</i> , 1996, 17, 233-254.	0.8	16

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37	Matrices with high completely positive semidefinite rank. <i>Linear Algebra and Its Applications</i> , 2017, 513, 122-148.	0.9	16
38	On the Equivalence of Algebraic Approaches to the Minimization of Forms on the Simplex. <i>Lecture Notes in Control and Information Sciences</i> , 0, , 121-132.	1.0	15
39	Improved Convergence Rates for Lasserre-Type Hierarchies of Upper Bounds for Box-Constrained Polynomial Optimization. <i>SIAM Journal on Optimization</i> , 2017, 27, 347-367.	2.0	15
40	Worst-Case Examples for Lasserre's Measure-Based Hierarchy for Polynomial Optimization on the Hypercube. <i>Mathematics of Operations Research</i> , 2020, 45, 86-98.	1.3	15
41	The cut cone III: On the role of triangle facets. <i>Graphs and Combinatorics</i> , 1992, 8, 125-142.	0.4	14
42	Collapsing and lifting for the cut cone. <i>Discrete Mathematics</i> , 1994, 127, 105-130.	0.7	14
43	Similarity-First Search: A New Algorithm with Application to Robinsonian Matrix Recognition. <i>SIAM Journal on Discrete Mathematics</i> , 2017, 31, 1765-1800.	0.8	14
44	Equilateral Dimension of the Rectilinear Space. <i>Designs, Codes, and Cryptography</i> , 2000, 21, 149-164.	1.6	13
45	A prolongation-projection algorithm for computing the finite real variety of an ideal. <i>Theoretical Computer Science</i> , 2009, 410, 2685-2700.	0.9	13
46	Lower Bounds on Matrix Factorization Ranks via Noncommutative Polynomial Optimization. <i>Foundations of Computational Mathematics</i> , 2019, 19, 1013-1070.	2.5	13
47	On the Facial Structure of Independence System Polyhedra. <i>Mathematics of Operations Research</i> , 1988, 13, 543-555.	1.3	12
48	On the Sparsity Order of a Graph and Its Deficiency in Chordality. <i>Combinatorica</i> , 2001, 21, 543-570.	1.2	12
49	An alternative proof of a PTAS for fixed-degree polynomial optimization over the simplex. <i>Mathematical Programming</i> , 2015, 151, 433-457.	2.4	12
50	Bound-Constrained Polynomial Optimization Using Only Elementary Calculations. <i>Mathematics of Operations Research</i> , 2017, 42, 834-853.	1.3	12
51	A Lex-BFS-based recognition algorithm for Robinsonian matrices. <i>Discrete Applied Mathematics</i> , 2017, 222, 151-165.	0.9	11
52	A Survey of Semidefinite Programming Approaches to the Generalized Problem of Moments and Their Error Analysis. <i>Association for Women in Mathematics Series</i> , 2019, , 17-56.	0.4	11
53	The inequicut cone. <i>Discrete Mathematics</i> , 1993, 119, 21-48.	0.7	10
54	An Error Analysis for Polynomial Optimization over the Simplex Based on the Multivariate Hypergeometric Distribution. <i>SIAM Journal on Optimization</i> , 2015, 25, 1498-1514.	2.0	10

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55	Bounds on entanglement dimensions and quantum graph parameters via noncommutative polynomial optimization. <i>Mathematical Programming</i> , 2018, 170, 5-42.	2.4	9
56	Comparison of Lasserre's Measure-Based Bounds for Polynomial Optimization to Bounds Obtained by Simulated Annealing. <i>Mathematics of Operations Research</i> , 2018, 43, 1317-1325.	1.3	9
57	Sum-of-squares hierarchies for binary polynomial optimization. <i>Mathematical Programming</i> , 2023, 197, 621-660.	2.4	9
58	The even and odd cut polytopes. <i>Discrete Mathematics</i> , 1993, 119, 49-66.	0.7	8
59	Block-diagonal semidefinite programming hierarchies for 0/1 programming. <i>Operations Research Letters</i> , 2009, 37, 27-31.	0.7	8
60	Near-optimal analysis of Lasserre's univariate measure-based bounds for multivariate polynomial optimization. <i>Mathematical Programming</i> , 2021, 188, 443-460.	2.4	7
61	The cut cone III: On the role of triangle facets. <i>Graphs and Combinatorics</i> , 1993, 9, 135-152.	0.4	6
62	A Structural Characterization for Certifying Robinsonian Matrices. <i>Electronic Journal of Combinatorics</i> , 2017, 24, .	0.4	6
63	Hilbert bases of cuts. <i>Discrete Mathematics</i> , 1996, 150, 257-279.	0.7	5
64	The Approach of Moments for Polynomial Equations. <i>Profiles in Operations Research</i> , 2012, , 25-60.	0.4	5
65	Forbidden minor characterizations for low-rank optimal solutions to semidefinite programs over the elliptope. <i>Journal of Combinatorial Theory Series B</i> , 2014, 108, 40-80.	1.0	5
66	Complexity of the Positive Semidefinite Matrix Completion Problem with a Rank Constraint. <i>Fields Institute Communications</i> , 2013, , 105-120.	1.3	5
67	On the closure of the completely positive semidefinite cone and linear approximations to quantum colorings. <i>Electronic Journal of Linear Algebra</i> , 0, 32, 15-40.	0.6	5
68	On the convergence rate of grid search for polynomial optimization over the simplex. <i>Optimization Letters</i> , 2017, 11, 597-608.	1.6	4
69	Sum-of-Squares Hierarchies for Binary Polynomial Optimization. <i>Lecture Notes in Computer Science</i> , 2021, , 43-57.	1.3	4
70	Handelman's hierarchy for the maximum stable set problem. <i>Journal of Global Optimization</i> , 2014, 60, 393-423.	1.8	3
71	Bounding the separable rank via polynomial optimization. <i>Linear Algebra and Its Applications</i> , 2022, 648, 1-55.	0.9	3
72	Perfect elimination orderings for symmetric matrices. <i>Optimization Letters</i> , 2020, 14, 339-353.	1.6	1