

Bernd Sturmfels

List of Publications by Year in descending order

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67
papers

2,433
citations

279798

23
h-index

233421

45
g-index

73
all docs

73
docs citations

73
times ranked

1084
citing authors

#	ARTICLE	IF	CITATIONS
1	Lectures on Algebraic Statistics. , 2009, , .		172
2	The Euclidean Distance Degree of an Algebraic Variety. Foundations of Computational Mathematics, 2016, 16, 99-149.	2.5	115
3	Toric Ideals of Phylogenetic Invariants. Journal of Computational Biology, 2005, 12, 204-228.	1.6	82
4	Tropical discriminants. Journal of the American Mathematical Society, 2007, 20, 1111-1133.	3.9	82
5	The algebraic degree of semidefinite programming. Mathematical Programming, 2010, 122, 379-405.	2.4	67
6	Syzygies of codimension 2 lattice ideals. Mathematische Zeitschrift, 1998, 229, 163-194.	0.9	58
7	Solving the Likelihood Equations. Foundations of Computational Mathematics, 2005, 5, 389-407.	2.5	57
8	ORBITOPES. Mathematika, 2011, 57, 275-314.	0.5	54
9	Hyperdeterminantal relations among symmetric principal minors. Journal of Algebra, 2007, 316, 634-648.	0.7	52
10	Rational Design of Antibiotic Treatment Plans: A Treatment Strategy for Managing Evolution and Reversing Resistance. PLoS ONE, 2015, 10, e0122283.	2.5	52
11	Algebraic factor analysis: tetrads, pentads and beyond. Probability Theory and Related Fields, 2007, 138, 463-493.	1.8	51
12	Computing the integer programming gap. Combinatorica, 2007, 27, 367-382.	1.2	43
13	Quartic curves and their bitangents. Journal of Symbolic Computation, 2011, 46, 712-733.	0.8	42
14	Variation of cost functions in integer programming. Mathematical Programming, 1997, 77, 357-387.	2.4	40
15	Convexity in Tree Spaces. SIAM Journal on Discrete Mathematics, 2017, 31, 2015-2038.	0.8	40
16	How to shell a monoid. Mathematische Annalen, 1998, 310, 379-393.	1.4	38
17	Multivariate Gaussians, semidefinite matrix completion, and convex algebraic geometry. Annals of the Institute of Statistical Mathematics, 2010, 62, 603-638.	0.8	38
18	Learning algebraic varieties from samples. Revista Matemática Complutense, 2018, 31, 545-593.	1.2	32

#	ARTICLE	IF	CITATIONS
19	Toric Ideals of Phylogenetic Invariants. <i>Journal of Computational Biology</i> , 2005, 12, 457-481.	1.6	29
20	Algebraic boundaries of Hilbert's SOS cones. <i>Compositio Mathematica</i> , 2012, 148, 1717-1735.	0.8	26
21	Mixed discriminants. <i>Mathematische Zeitschrift</i> , 2013, 274, 761-778.	0.9	25
22	Wasserstein distance to independence models. <i>Journal of Symbolic Computation</i> , 2021, 104, 855-873.	0.8	25
23	Moment Varieties of Gaussian Mixtures. <i>Journal of Algebraic Statistics</i> , 2016, 7, .	0.6	23
24	Computer Algebra in Systems Biology. <i>American Mathematical Monthly</i> , 2009, 116, 882-891.	0.3	20
25	Algebraic unimodular counting. <i>Mathematical Programming</i> , 2003, 96, 183-203.	2.4	19
26	On the convex hull of a space curve. <i>Advances in Geometry</i> , 2012, 12, 157-178.	0.4	19
27	The Hurwitz form of a projective variety. <i>Journal of Symbolic Computation</i> , 2017, 79, 186-196.	0.8	19
28	On the Existence of Epipolar Matrices. <i>International Journal of Computer Vision</i> , 2017, 121, 403-415.	15.6	19
29	Exponential varieties. <i>Proceedings of the London Mathematical Society</i> , 2016, 112, 27-56.	1.3	17
30	Commutative algebra of statistical ranking. <i>Journal of Algebra</i> , 2012, 361, 264-286.	0.7	15
31	Binary Cumulant Varieties. <i>Annals of Combinatorics</i> , 2013, 17, 229-250.	0.6	14
32	Monomials, binomials and Riemann-Roch. <i>Journal of Algebraic Combinatorics</i> , 2013, 37, 737-756.	0.8	14
33	Duality of multiple root loci. <i>Journal of Algebra</i> , 2016, 446, 499-526.	0.7	14
34	Hypergeometric Polynomials and Integer Programming. <i>Compositio Mathematica</i> , 1999, 115, 231-240.	0.8	13
35	Mustafin varieties. <i>Selecta Mathematica, New Series</i> , 2011, 17, 757-793.	1.0	13
36	The Universal Kummer Threefold. <i>Experimental Mathematics</i> , 2013, 22, 327-362.	0.7	13

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37	Tropicalization of Classical Moduli Spaces. <i>Mathematics in Computer Science</i> , 2014, 8, 119-145.	0.4	13
38	Three Counter-Examples on Semi-Graphoids. <i>Combinatorics Probability and Computing</i> , 2008, 17, 239-257.	1.3	12
39	Learning Paths from Signature Tensors. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2019, 40, 394-416.	1.4	10
40	Primary Ideals and Their Differential Equations. <i>Foundations of Computational Mathematics</i> , 2021, 21, 1363.	2.5	10
41	Generic Spectrahedral Shadows. <i>SIAM Journal on Optimization</i> , 2015, 25, 1209-1220.	2.0	9
42	Algebraic Identifiability of Gaussian Mixtures. <i>International Mathematics Research Notices</i> , 2018, 2018, 6556-6580.	1.0	9
43	VARIETIES OF SIGNATURE TENSORS. <i>Forum of Mathematics, Sigma</i> , 2019, 7, .	0.7	9
44	Does Antibiotic Resistance Evolve in Hospitals?. <i>Bulletin of Mathematical Biology</i> , 2017, 79, 191-208.	1.9	8
45	The Geometry of Gaussoids. <i>Foundations of Computational Mathematics</i> , 2019, 19, 775-812.	2.5	8
46	The geometry of SDP-exactness in quadratic optimization. <i>Mathematical Programming</i> , 2020, 182, 399-428.	2.4	7
47	Hypersurfaces and Their Singularities in Partial Correlation Testing. <i>Foundations of Computational Mathematics</i> , 2014, 14, 1079-1116.	2.5	6
48	Rigid multiview varieties. <i>International Journal of Algebra and Computation</i> , 2016, 26, 775-788.	0.5	6
49	Distortion Varieties. <i>Foundations of Computational Mathematics</i> , 2018, 18, 1043-1071.	2.5	6
50	Toric cubes. <i>Rendiconti Del Circolo Matematico Di Palermo</i> , 2013, 62, 67-78.	1.3	5
51	Real rank two geometry. <i>Journal of Algebra</i> , 2017, 484, 310-333.	0.7	5
52	Sixty-Four Curves of Degree Six. <i>Experimental Mathematics</i> , 2019, 28, 132-150.	0.7	5
53	Linear PDE with constant coefficients. <i>Glasgow Mathematical Journal</i> , 2023, 65, S2-S27.	0.3	5
54	Cayley-Bacharach Formulas. <i>American Mathematical Monthly</i> , 2015, 122, 845.	0.3	4

#	ARTICLE	IF	CITATIONS
55	Symmetric matrices, Catalan paths, and correlations. <i>Journal of Combinatorial Theory - Series A</i> , 2016, 144, 496-510.	0.8	4
56	Geometry of Log-Concave Density Estimation. <i>Discrete and Computational Geometry</i> , 2019, 61, 136-160.	0.6	4
57	The Schläfli Fan. <i>Discrete and Computational Geometry</i> , 2020, 64, 355-381.	0.6	4
58	Voronoi cells of varieties. <i>Journal of Symbolic Computation</i> , 2022, 109, 351-366.	0.8	4
59	Theta Surfaces. <i>Vietnam Journal of Mathematics</i> , 2021, 49, 319-347.	0.8	4
60	The Dubrovin threefold of an algebraic curve. <i>Nonlinearity</i> , 2021, 34, 3783-3812.	1.4	4
61	Structural Gröbner Basis Detection. <i>Applicable Algebra in Engineering, Communications and Computing</i> , 1997, 8, 257-263.	0.5	3
62	Maximum likelihood estimation for totally positive log-concave densities. <i>Scandinavian Journal of Statistics</i> , 2020, 48, 817.	1.4	3
63	Supernormal Vector Configurations. <i>Journal of Algebraic Combinatorics</i> , 2004, 19, 297-313.	0.8	2
64	Changing Views on Curves and Surfaces. <i>Acta Mathematica Vietnamica</i> , 2018, 43, 1-29.	0.4	2
65	Bad projections of the PSD cone. <i>Collectanea Mathematica</i> , 2021, 72, 261-280.	0.9	2
66	Orders and polytropes: matrix algebras from valuations. <i>Beitrage Zur Algebra Und Geometrie</i> , 2022, 63, 515-531.	0.5	2
67	Primary Decomposition with Differential Operators. <i>International Mathematics Research Notices</i> , 0, , .	1.0	2