

Thomas Sturm

List of Publications by Year in descending order

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53
papers

912
citations

759233

12
h-index

552781

26
g-index

59
all docs

59
docs citations

59
times ranked

259
citing authors

#	ARTICLE	IF	CITATIONS
1	REDLOG. SIGSAM Bulletin: A Quarterly Publication of the Special Interest Group on Symbolic & Algebraic Manipulation, 1997, 31, 2-9.	0.3	255
2	Simplification of Quantifier-free Formulae over Ordered Fields. Journal of Symbolic Computation, 1997, 24, 209-232.	0.8	77
3	A New Approach for Automatic Theorem Proving in Real Geometry. Journal of Automated Reasoning, 1998, 21, 357-380.	1.4	55
4	Efficient projection orders for CAD. , 2004, , .		49
5	Verification and synthesis using real quantifier elimination. , 2011, , .		48
6	Detection of Hopf bifurcations in chemical reaction networks using convex coordinates. Journal of Computational Physics, 2015, 291, 279-302.	3.8	41
7	Investigating Algebraic and Logical Algorithms to Solve Hopf Bifurcation Problems in Algebraic Biology. Mathematics in Computer Science, 2009, 2, 493-515.	0.4	32
8	Real Quantifier Elimination in Practice. , 1999, , 221-247.		29
9	A Case Study on the Parametric Occurrence of Multiple Steady States. , 2017, , .		19
10	Identifying the parametric occurrence of multiple steady states for some biological networks. Journal of Symbolic Computation, 2020, 98, 84-119.	0.8	17
11	SC^2 : Satisfiability Checking Meets Symbolic Computation. Lecture Notes in Computer Science, 2016, , 28-43.	1.3	17
12	Linear Problems in Valued Fields. Journal of Symbolic Computation, 2000, 30, 207-219.	0.8	16
13	A generic projection operator for partial cylindrical algebraic decomposition. , 2003, , .		15
14	Algorithmic Global Criteria for Excluding Oscillations. Bulletin of Mathematical Biology, 2011, 73, 899-916.	1.9	14
15	New Domains for Applied Quantifier Elimination. Lecture Notes in Computer Science, 2006, , 295-301.	1.3	14
16	Weak quantifier elimination for the full linear theory of the integers. Applicable Algebra in Engineering, Communications and Computing, 2007, 18, 545-574.	0.5	13
17	A Survey of Some Methods for Real Quantifier Elimination, Decision, and Satisfiability and Their Applications. Mathematics in Computer Science, 2017, 11, 483-502.	0.4	13
18	Investigating Generic Methods to Solve Hopf Bifurcation Problems in Algebraic Biology. Lecture Notes in Computer Science, 2008, , 200-215.	1.3	12

#	ARTICLE	IF	CITATIONS
19	Subtropical Satisfiability. Lecture Notes in Computer Science, 2017, , 189-206.	1.3	11
20	Symbolic Versus Numerical Computation and Visualization of Parameter Regions for Multistationarity of Biological Networks. Lecture Notes in Computer Science, 2017, , 93-108.	1.3	11
21	Reasoning over Networks by Symbolic Methods. Applicable Algebra in Engineering, Communications and Computing, 1999, 10, 79-96.	0.5	10
22	Thirty Years of Virtual Substitution. , 2018, , .		10
23	The SYMBIONT project. ACM Communications in Computer Algebra, 2019, 52, 67-70.	0.4	10
24	Computational geometry problems in REDLOG. Lecture Notes in Computer Science, 1997, , 58-86.	1.3	10
25	Guarded expressions in practice. , 1997, , .		9
26	Efficiently and Effectively Recognizing Toricity of Steady State Varieties. Mathematics in Computer Science, 2021, 15, 199-232.	0.4	9
27	An Algebraic Approach to Offsetting and Blending of Solids. , 2000, , 367-381.		8
28	P-adic constraint solving. , 1999, , .		7
29	Subtropical Real Root Finding. , 2015, , .		6
30	Better answers to real questions. Journal of Symbolic Computation, 2016, 74, 255-275.	0.8	6
31	Efficient Methods to Compute Hopf Bifurcations in Chemical Reaction Networks Using Reaction Coordinates. Lecture Notes in Computer Science, 2013, , 88-99.	1.3	6
32	Algorithmic Reduction of Biological Networks with Multiple Time Scales. Mathematics in Computer Science, 2021, 15, 499-534.	0.4	5
33	A Linear Algebra Approach for Detecting Binomiality of Steady State Ideals of Reversible Chemical Reaction Networks. Lecture Notes in Computer Science, 2020, , 492-509.	1.3	5
34	Towards Conflict-Driven Learning for Virtual Substitution. Lecture Notes in Computer Science, 2014, , 256-270.	1.3	5
35	Deciding First-Order Satisfiability when Universal and Existential Variables are Separated. , 2016, , .		4
36	Effective Quantifier Elimination for Presburger Arithmetic with Infinity. Lecture Notes in Computer Science, 2009, , 195-212.	1.3	4

#	ARTICLE	IF	CITATIONS
37	A Logic Based Approach to Finding Real Singularities of Implicit Ordinary Differential Equations. Mathematics in Computer Science, 2021, 15, 333-352.	0.4	3
38	Weak Integer Quantifier Elimination Beyond the Linear Case. Lecture Notes in Computer Science, 2007, , 275-294.	1.3	3
39	A complete and terminating approach to linear integer solving. Journal of Symbolic Computation, 2020, 100, 102-136.	0.8	2
40	First-Order Tests for Toricity. Lecture Notes in Computer Science, 2020, , 510-527.	1.3	2
41	Supporting Global Numerical Optimization of Rational Functions by Generic Symbolic Convexity Tests. Lecture Notes in Computer Science, 2010, , 205-219.	1.3	2
42	Parametric Systems of Linear Congruences. , 2001, , 149-166.		2
43	Parametric quantified SAT solving. , 2010, , .		2
44	Parametric Qualitative Analysis of Ordinary Differential Equations: Computer Algebra Methods for Excluding Oscillations (Extended Abstract) (Invited Talk). Lecture Notes in Computer Science, 2010, , 267-279.	1.3	2
45	Quantifier Elimination for Constraint Logic Programming. Lecture Notes in Computer Science, 2005, , 416-430.	1.3	1
46	Automatic Verification of the Adequacy of Models for Families of Geometric Objects. Lecture Notes in Computer Science, 2011, , 116-140.	1.3	1
47	Positive Solutions of Systems of Signed Parametric Polynomial Inequalities. Lecture Notes in Computer Science, 2018, , 238-253.	1.3	1
48	Applications of Computer Algebra. , 2003, , 163-260.		0
49	Foreword to the Special Focus on Constraints and Combinations. Mathematics in Computer Science, 2015, 9, 265-265.	0.4	0
50	Testing Binomiality of Chemical Reaction Networks Using Comprehensive Gr�bner Systems. Lecture Notes in Computer Science, 2021, , 334-352.	1.3	0
51	Parametric Toricity of Steady State Varieties of Reaction Networks. Lecture Notes in Computer Science, 2021, , 314-333.	1.3	0
52	Integration of Quantifier Elimination with Constraint Logic Programming. Lecture Notes in Computer Science, 2002, , 7-11.	1.3	0
53	Presburger Arithmetic in Memory Access Optimization for Data-Parallel Languages. Lecture Notes in Computer Science, 2013, , 56-70.	1.3	0