

Vijay Ganesh

List of Publications by Year in descending order

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Version: 2024-02-01

70
papers

2,807
citations

471371

17
h-index

414303

32
g-index

77
all docs

77
docs citations

77
times ranked

1544
citing authors

#	ARTICLE	IF	CITATIONS
1	When satisfiability solving meets symbolic computation. Communications of the ACM, 2022, 65, 64-72.	3.3	1
2	Complex Golay pairs up to length 28: A search via computer algebra and programmatic SAT. Journal of Symbolic Computation, 2021, 102, 153-172.	0.5	6
3	On the Hierarchical Community Structure of Practical Boolean Formulas. Lecture Notes in Computer Science, 2021, , 359-376.	1.0	1
4	MachSMT: A Machine Learning-based Algorithm Selector for SMT Solvers. Lecture Notes in Computer Science, 2021, , 303-325.	1.0	11
5	String Theories Involving Regular Membership Predicates: From Practice to Theory and Back. Lecture Notes in Computer Science, 2021, , 50-64.	1.0	6
6	An SMT Solver for Regular Expressions and Linear Arithmetic over String Length. Lecture Notes in Computer Science, 2021, , 289-312.	1.0	14
7	Z3str4: A Multi-armed String Solver. Lecture Notes in Computer Science, 2021, , 389-406.	1.0	11
8	BanditFuzz: Fuzzing SMT Solvers with Multi-agent Reinforcement Learning. Lecture Notes in Computer Science, 2021, , 103-121.	1.0	9
9	Applying computer algebra systems with SAT solvers to the Williamson conjecture. Journal of Symbolic Computation, 2020, 100, 187-209.	0.5	11
10	New Infinite Families of Perfect Quaternion Sequences and Williamson Sequences. IEEE Transactions on Information Theory, 2020, 66, 7739-7751.	1.5	4
11	Metagenomic sequencing with spiked primer enrichment for viral diagnostics and genomic surveillance. Nature Microbiology, 2020, 5, 443-454.	5.9	114
12	A nonexistence certificate for projective planes of order ten with weight 15 codewords. Applicable Algebra in Engineering, Communications and Computing, 2020, 31, 195-213.	0.3	4
13	Jamestown Canyon virus in Massachusetts: clinical case series and vector screening. Emerging Microbes and Infections, 2020, 9, 903-912.	3.0	20
14	Community and LBD-Based Clause Sharing Policy for Parallel SAT Solving. Lecture Notes in Computer Science, 2020, , 11-27.	1.0	1
15	BanditFuzz: A Reinforcement-Learning Based Performance Fuzzer for SMT Solvers. Lecture Notes in Computer Science, 2020, , 68-86.	1.0	10
16	Discovering symmetry invariants and conserved quantities by interpreting siamese neural networks. Physical Review Research, 2020, 2, .	1.3	40
17	Nonexistence Certificates for Ovals in a Projective Plane of Order Ten. Lecture Notes in Computer Science, 2020, , 97-111.	1.0	0
18	Towards a Complexity-Theoretic Understanding of Restarts in SAT Solvers. Lecture Notes in Computer Science, 2020, , 233-249.	1.0	4

#	ARTICLE	IF	CITATIONS
19	Effective Problem Solving Using SAT Solvers. Communications in Computer and Information Science, 2020, , 205-219.	0.4	5
20	Unsatisfiability Proofs for Weight 16 Codewords in Lam's Problem. , 2020, , .		3
21	Theory and practice of string solvers (invited talk abstract). , 2019, , .		1
22	The SAT+CAS paradigm and the Williamson conjecture. ACM Communications in Computer Algebra, 2019, 52, 82-84.	0.2	2
23	MPro: Combining Static and Symbolic Analysis for Scalable Testing of Smart Contract. , 2019, , .		15
24	The SAT+CAS method for combinatorial search with applications to best matrices. Annals of Mathematics and Artificial Intelligence, 2019, 87, 321-342.	0.9	2
25	Interpolating Strong Induction. Lecture Notes in Computer Science, 2019, , 367-385.	1.0	13
26	Accelerated Learning of Predictive Runtime Monitors for Rare Failure. Lecture Notes in Computer Science, 2019, , 111-128.	1.0	5
27	SMTIBEA: a hybrid multi-objective optimization algorithm for configuring large constrained software product lines. Software and Systems Modeling, 2019, 18, 1447-1466.	2.2	32
28	Rapid Detection of Powassan Virus in a Patient With Encephalitis by Metagenomic Sequencing. Clinical Infectious Diseases, 2018, 66, 789-792.	2.9	41
29	Enumeration of Complex Golay Pairs via Programmatic SAT. , 2018, , .		4
30	868. Prospective Pathogen Detection in Patients With Central Nervous System Inflammation Using Metagenomic Sequencing. Open Forum Infectious Diseases, 2018, 5, S23-S23.	0.4	0
31	The Satisfiability of Word Equations: Decidable and Undecidable Theories. Lecture Notes in Computer Science, 2018, , 15-29.	1.0	17
32	Learning-Sensitive Backdoors with Restarts. Lecture Notes in Computer Science, 2018, , 453-469.	1.0	2
33	The Effect of Structural Measures and Merges on SAT Solver Performance. Lecture Notes in Computer Science, 2018, , 436-452.	1.0	5
34	Machine Learning-Based Restart Policy for CDCL SAT Solvers. Lecture Notes in Computer Science, 2018, , 94-110.	1.0	15
35	Algebraic Fault Attack on SHA Hash Functions Using Programmatic SAT Solvers. Lecture Notes in Computer Science, 2018, , 737-754.	1.0	3
36	The Proof Complexity of SMT Solvers. Lecture Notes in Computer Science, 2018, , 275-293.	1.0	7

#	ARTICLE	IF	CITATIONS
37	StringFuzz: A Fuzzer for String Solvers. Lecture Notes in Computer Science, 2018, , 45-51.	1.0	29
38	An Empirical Study of Branching Heuristics through the Lens of Global Learning Rate. , 2018, , .		2
39	Combining SAT Solvers with Computer Algebra Systems to Verify Combinatorial Conjectures. Journal of Automated Reasoning, 2017, 58, 313-339.	1.1	16
40	An Empirical Study of Branching Heuristics Through the Lens of Global Learning Rate. Lecture Notes in Computer Science, 2017, , 119-135.	1.0	17
41	Z3str2: an efficient solver for strings, regular expressions, and length constraints. Formal Methods in System Design, 2017, 50, 249-288.	0.9	31
42	Reasoning about Probabilistic Defense Mechanisms against Remote Attacks. , 2017, , .		4
43	Z3str3: A String Solver with Theory-aware Heuristics. , 2017, , .		58
44	A Solver for a Theory of Strings and Bit-Vectors. , 2017, , .		3
45	Adaptive Restart and CEGAR-Based Solver for Inverting Cryptographic Hash Functions. Lecture Notes in Computer Science, 2017, , 120-131.	1.0	7
46	Learning Rate Based Branching Heuristic for SAT Solvers. Lecture Notes in Computer Science, 2016, , 123-140.	1.0	72
47	Code obfuscation against symbolic execution attacks. , 2016, , .		88
48	MathCheck2: A SAT+CAS Verifier for Combinatorial Conjectures. Lecture Notes in Computer Science, 2016, , 117-133.	1.0	7
49	SAT-based analysis of large real-world feature models is easy. , 2015, , .		36
50	Short Paper. , 2015, , .		1
51	SATGraf: Visualizing the Evolution of SAT Formula Structure in Solvers. Lecture Notes in Computer Science, 2015, , 62-70.	1.0	5
52	Effective Search-Space Pruning for Solvers of String Equations, Regular Expressions and Length Constraints. Lecture Notes in Computer Science, 2015, , 235-254.	1.0	24
53	Understanding VSIDS Branching Heuristics in Conflict-Driven Clause-Learning SAT Solvers. Lecture Notes in Computer Science, 2015, , 225-241.	1.0	24
54	Impact of Community Structure on SAT Solver Performance. Lecture Notes in Computer Science, 2014, , 252-268.	1.0	30

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55	Z3-str: a z3-based string solver for web application analysis. , 2013, , .		138
56	Mohawk. ACM Transactions on Information and System Security, 2013, 15, 1-28.	4.5	32
57	Word Equations with Length Constraints: Whatâ€™s Decidable?. Lecture Notes in Computer Science, 2013, , 209-226.	1.0	46
58	HAMPI. ACM Transactions on Software Engineering and Methodology, 2012, 21, 1-28.	4.8	48
59	Automatic input rectification. , 2012, , .		23
60	Lynx: A Programmatic SAT Solver for the RNA-Folding Problem. Lecture Notes in Computer Science, 2012, , 143-156.	1.0	15
61	Automatic error finding in access-control policies. , 2011, , .		43
62	HAMPI: A String Solver for Testing, Analysis and Vulnerability Detection. Lecture Notes in Computer Science, 2011, , 1-19.	1.0	23
63	HAMPI. , 2009, , .		167
64	Taint-based directed whitebox fuzzing. , 2009, , .		232
65	EXE. ACM Transactions on Information and System Security, 2008, 12, 1-38.	4.5	244
66	A Decision Procedure for Bit-Vectors and Arrays. , 2007, , 519-531.		285
67	EXE. , 2006, , .		544
68	An Online Proof-Producing Decision Procedure for Mixed-Integer Linear Arithmetic. Lecture Notes in Computer Science, 2003, , 521-536.	1.0	20
69	Deciding Presburger Arithmetic by Model Checking and Comparisons with Other Methods. Lecture Notes in Computer Science, 2002, , 171-186.	1.0	23
70	A SAT+CAS Approach to Finding Good Matrices: New Examples and Counterexamples. Proceedings of the AAAI Conference on Artificial Intelligence, 0, 33, 1435-1442.	3.6	3