Erika Abraham

List of Publications by Year
in descending order

88	1,686	430442	377514
papers	citations	18 h-index	34 g-index

99	99	99	907
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	HyperPCTL Model Checking byÂProbabilistic Decomposition. Lecture Notes in Computer Science, 2022, , 209-226.	1.0	1
2	Deciding the consistency of non-linear real arithmetic constraints with a conflict driven search using cylindrical algebraic coverings. Journal of Logical and Algebraic Methods in Programming, 2021, 119, 100633.	0.4	18
3	Extending the Fundamental Theorem of Linear Programming for Strict Inequalities. , 2021, , .		1
4	On the Implementation of Cylindrical Algebraic Coverings for Satisfiability Modulo Theories Solving. , 2021, , .		2
5	Fully incremental cylindrical algebraic decomposition. Journal of Symbolic Computation, 2020, 100, 11-37.	0.5	14
6	Probabilistic Hyperproperties with Nondeterminism. Lecture Notes in Computer Science, 2020, , 518-534.	1.0	13
7	Abstract domains in SMT solving for real algebra (invited talk). , 2020, , .		0
8	Integrated Synthesis and Execution of Optimal Plans for Multi-Robot Systems in Logistics. Information Systems Frontiers, 2019, 21, 87-107.	4.1	15
9	Context-Dependent Reachability Analysis for Hybrid Systems. , 2018, , .		0
10	Task Planning with OMT: AnÂApplication to Production Logistics. Lecture Notes in Computer Science, 2018, , 316-325.	1.0	2
11	Efficient Dynamic Error Reduction for Hybrid Systems Reachability Analysis. Lecture Notes in Computer Science, 2018, , 287-302.	1.0	8
12	HyperPCTL: A Temporal Logic for Probabilistic Hyperproperties. Lecture Notes in Computer Science, 2018, , 20-35.	1.0	25
13	Modular strategic SMT solving with SMT-RAT. Acta Universitatis Sapientiae: Informatica, 2018, 10, 5-25.	0.3	1
14	Spread the Work: Multi-threaded Safety Analysis for Hybrid Systems. Lecture Notes in Computer Science, 2018, , 89-104.	1.0	2
15	SMT Solving for Arithmetic Theories: Theory and Tool Support. , 2017, , .		0
16	On the Synthesis of Guaranteed-Quality Plans for Robot Fleets in Logistics Scenarios via Optimization Modulo Theories. , 2017, , .		8
17	HyPro: A C++ÂLibrary of State Set Representations for Hybrid Systems Reachability Analysis. Lecture Notes in Computer Science, 2017, , 288-294.	1.0	29
18	Two CEGAR-based approaches for the safety verification of PLC-controlled plants. Information Systems Frontiers, 2016, 18, 927-952.	4.1	13

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19	Symbolic Computation Techniques in Satisfiability Checking. , 2016, , .		0
20	Observable interface behaviour and inheritance. Mathematical Structures in Computer Science, 2016, 26, 561-605.	0.5	0
21	A Generalised Branch-and-Bound Approach and Its Application in SAT Modulo Nonlinear Integer Arithmetic. Lecture Notes in Computer Science, 2016, , 315-335.	1.0	11
22	Combining Static and Runtime Methods to Achieve Safe Standing-Up for Humanoid Robots. Lecture Notes in Computer Science, 2016, , 496-514.	1.0	4
23	Satisfiability Checking: Theory and Applications. Lecture Notes in Computer Science, 2016, , 9-23.	1.0	5
24	Linear relaxations of polynomial positivity for polynomial Lyapunov function synthesis. IMA Journal of Mathematical Control and Information, 2016, 33, 723-756.	1.1	24
25	Some recent advances in automated analysis. International Journal on Software Tools for Technology Transfer, 2016, 18, 121-128.	1.7	1
26	$$mathsf {SC}^mathsf{2} $$: Satisfiability Checking Meets Symbolic Computation. Lecture Notes in Computer Science, 2016, , 28-43.	1.0	17
27	Preparing HPC Applications for Exascale: Challenges and Recommendations. , 2015, , .		19
28	Learning-based control strategies for hybrid electric vehicles. , 2015, , .		2
29	Sound and complete timed CTL model checking of timed Kripke structures and real-time rewrite theories. Science of Computer Programming, 2015, 99, 128-192.	1.5	15
30	Formal modeling and analysis of interacting hybrid systems in HI-Maude: What happened at the 2010 Sauna World Championships?. Science of Computer Programming, 2015, 99, 95-127.	1.5	3
31	SMT-RAT: An Open Source C++ Toolbox for Strategic and Parallel SMT Solving. Lecture Notes in Computer Science, 2015, , 360-368.	1.0	47
32	Current Challenges in the Verification of Hybrid Systems. Lecture Notes in Computer Science, 2015, , 8-24.	1.0	22
33	Building Bridges between Symbolic Computation and Satisfiability Checking. , 2015, , .		20
34	A Greedy Approach for the Efficient Repair of Stochastic Models. Lecture Notes in Computer Science, 2015, , 295-309.	1.0	33
35	A Benchmark Suite for Hybrid Systems Reachability Analysis. Lecture Notes in Computer Science, 2015, , 408-414.	1.0	22
36	Counterexamples for Expected Rewards. Lecture Notes in Computer Science, 2015, , 435-452.	1.0	4

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37	PROPhESY: A PRObabilistic ParamEter SYnthesis Tool. Lecture Notes in Computer Science, 2015, , 214-231.	1.0	78
38	A CEGAR approach for the reachability analysis of PLC-controlled chemical plants. , 2014, , .		2
39	Symbolic counterexample generation for large discrete-time Markov chains. Science of Computer Programming, 2014, 91, 90-114.	1.5	16
40	Minimal counterexamples for linear-time probabilistic verification. Theoretical Computer Science, 2014, 549, 61-100.	0.5	20
41	Under-approximate flowpipes for non-linear continuous systems. , 2014, , .		6
42	Counterexample Generation for Discrete-Time Markov Models: An Introductory Survey. Lecture Notes in Computer Science, 2014, , 65-121.	1.0	32
43	Accelerating Parametric Probabilistic Verification. Lecture Notes in Computer Science, 2014, , 404-420.	1.0	40
44	Fast Debugging of PRISM Models. Lecture Notes in Computer Science, 2014, , 146-162.	1.0	18
45	Counterexample Generation for Hybrid Automata. Communications in Computer and Information Science, 2014, , 88-106.	0.4	1
46	From statistical model checking to statistical model inference: Characterizing the effect of process variations in analog circuits. , 2013, , .		6
47	Lyapunov Function Synthesis using Handelman Representations.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 576-581.	0.4	29
48	A Symbiosis of Interval Constraint Propagation and Cylindrical Algebraic Decomposition. Lecture Notes in Computer Science, 2013, , 193-207.	1.0	10
49	Flow*: An Analyzer for Non-linear Hybrid Systems. Lecture Notes in Computer Science, 2013, , 258-263.	1.0	277
50	High-Level Counterexamples for Probabilistic Automata. Lecture Notes in Computer Science, 2013, , 39-54.	1.0	16
51	A Timed CTL Model Checker for Real-Time Maude. Lecture Notes in Computer Science, 2013, , 334-339.	1.0	3
52	On GrÃ¶bner Bases in the Context of Satisfiability-Modulo-Theories Solving over the Real Numbers. Lecture Notes in Computer Science, 2013, , 186-198.	1.0	8
53	Symbolic Counterexample Generation for Discrete-Time Markov Chains. Lecture Notes in Computer Science, 2013, , 134-151.	1.0	5
54	Taylor Model Flowpipe Construction for Non-linear Hybrid Systems. , 2012, , .		132

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55	Minimal Critical Subsystems for Discrete-Time Markov Models. Lecture Notes in Computer Science, 2012, , 299-314.	1.0	29
56	SMT-RAT: An SMT-Compliant Nonlinear Real Arithmetic Toolbox. Lecture Notes in Computer Science, 2012, , 442-448.	1.0	17
57	The COMICS Tool â€“ Computing Minimal Counterexamples for DTMCs. Lecture Notes in Computer Science, 2012, , 349-353.	1.0	12
58	Timed CTL Model Checking in Real-Time Maude. Lecture Notes in Computer Science, 2012, , 182-200.	1.0	10
59	Formal modeling and analysis of hybrid systems in rewriting logic using higher-order numerical methods and discrete-event detection. , 2011, , .		5
60	Optimisation of Concentrating Solar Thermal Power Plants with Neural Networks. Lecture Notes in Computer Science, 2011, , 190-199.	1.0	7
61	Adaptive-Step-Size Numerical Methods in Rewriting-Logic-Based Formal Analysis of Interacting Hybrid Systems. Electronic Notes in Theoretical Computer Science, 2011, 274, 17-32.	0.9	5
62	On collaboratively conveying computer science to pupils. , 2011, , .		0
63	Parallel SAT Solving in Bounded Model Checking. Journal of Logic and Computation, 2011, 21, 5-21.	0.5	8
64	Counterexample Generation for Markov Chains Using SMT-Based Bounded Model Checking. Lecture Notes in Computer Science, 2011, , 75-89.	1.0	6
65	Virtual Substitution for SMT-Solving. Lecture Notes in Computer Science, 2011, , 360-371.	1.0	9
66	I-RiSC: An SMT-Compliant Solver for the Existential Fragment of Real Algebra. Lecture Notes in Computer Science, 2011, , 230-246.	1.0	0
67	The Scalasca performance toolset architecture. Concurrency Computation Practice and Experience, 2010, 22, 702-719.	1.4	191
68	DTMC Model Checking by SCC Reduction. , 2010, , .		20
69	Behavioral interface description of an object-oriented language with futures and promises. The Journal of Logic and Algebraic Programming, 2009, 78, 491-518.	1.4	24
70	Abstract Interface Behavior of Object-Oriented Languages with Monitors. Theory of Computing Systems, 2008, 43, 322-361.	0.7	4
71	Heap-abstraction for an object-oriented calculus with thread classes. Software and Systems Modeling, 2008, 7, 177-208.	2.2	2
72	Usage of the SCALASCA toolset for scalable performance analysis of large-scale parallel applications. , 2008, , 157-167.		39

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73	On Variable Selection in SAT-LP-based Bounded Model Checking of Linear Hybrid Automata. , 2007, , .		0
74	Bounded Model Checking with Parametric Data Structures. Electronic Notes in Theoretical Computer Science, 2007, 174, 3-16.	0.9	16
75	Parallel SAT Solving in Bounded Model Checking. Lecture Notes in Computer Science, 2007, , 301-315.	1.0	8
76	Inductive Proof Outlines for Exceptions in Multithreaded Java. Electronic Notes in Theoretical Computer Science, 2006, 159, 281-297.	0.9	0
77	Abstract Interface Behavior of Object-Oriented Languages with Monitors. Lecture Notes in Computer Science, 2006, , 218-232.	1.0	5
78	An assertion-based proof system for multithreaded Java. Theoretical Computer Science, 2005, 331, 251-290.	0.5	23
79	Optimizing Bounded Model Checking for Linear Hybrid Systems. Lecture Notes in Computer Science, 2005, , 396-412.	1.0	13
80	Object Connectivity and Full Abstraction for a Concurrent Calculus of Classes. Lecture Notes in Computer Science, 2005, , 37-51.	1.0	7
81	A Tool-Supported Proof System for Multithreaded Java. Lecture Notes in Computer Science, 2003, , 1-32.	1.0	10
82	A Compositional Operational Semantics for Java MT. Lecture Notes in Computer Science, 2003, , 290-303.	1.0	7
83	Inductive Proof Outlines for Monitors in Java. Lecture Notes in Computer Science, 2003, , 155-169.	1.0	8
84	High-level Counterexamples for Probabilistic Automata. Logical Methods in Computer Science, 0, Volume 11, Issue 1, .	0.4	10
85	Divide and Conquer: Variable Set Separation in Hybrid Systems Reachability Analysis. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 250, 1-14.	0.8	8
86	Model Checking Classes of Metric LTL Properties of Object-Oriented Real-Time Maude Specifications. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 36, 117-136.	0.8	8
87	A Rewriting-Logic-Based Technique for Modeling Thermal Systems. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 36, 82-100.	0.8	5
88	Robot Swarms as Hybrid Systems: Modelling and Verification. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 361, 61-77.	0.8	0