

David Parker

List of Publications by Year in descending order

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92
papers

5,435
citations

136885

32
h-index

91828

69
g-index

97
all docs

97
docs citations

97
times ranked

2160
citing authors

#	ARTICLE	IF	CITATIONS
1	PRISM 4.0: Verification of Probabilistic Real-Time Systems. Lecture Notes in Computer Science, 2011, , 585-591.	1.0	1,371
2	PRISM: Probabilistic Symbolic Model Checker. Lecture Notes in Computer Science, 2002, , 200-204.	1.0	343
3	Probabilistic symbolic model checking with PRISM: a hybrid approach. International Journal on Software Tools for Technology Transfer, 2004, 6, 128-142.	1.7	244
4	Automated Verification Techniques for Probabilistic Systems. Lecture Notes in Computer Science, 2011, , 53-113.	1.0	176
5	Numerical vs. statistical probabilistic model checking. International Journal on Software Tools for Technology Transfer, 2006, 8, 216-228.	1.7	148
6	Performance analysis of probabilistic timed automata using digital clocks. Formal Methods in System Design, 2006, 29, 33-78.	0.9	138
7	Probabilistic model checking of complex biological pathways. Theoretical Computer Science, 2008, 391, 239-257.	0.5	136
8	Engineering failure analysis and design optimisation with HiP-HOPS. Engineering Failure Analysis, 2011, 18, 590-608.	1.8	118
9	Verification of Markov Decision Processes Using Learning Algorithms. Lecture Notes in Computer Science, 2014, , 98-114.	1.0	105
10	Model checking for probabilistic timed automata. Formal Methods in System Design, 2013, 43, 164-190.	0.9	87
11	Automatic verification of competitive stochastic systems. Formal Methods in System Design, 2013, 43, 61-92.	0.9	87
12	Symmetry Reduction for Probabilistic Model Checking. Lecture Notes in Computer Science, 2006, , 234-248.	1.0	82
13	A formal analysis of bluetooth device discovery. International Journal on Software Tools for Technology Transfer, 2006, 8, 621-632.	1.7	79
14	The PRISM Benchmark Suite. , 2012, , .		79
15	Quantitative Analysis With the Probabilistic Model Checker PRISM. Electronic Notes in Theoretical Computer Science, 2006, 153, 5-31.	0.9	76
16	A game-based abstraction-refinement framework for Markov decision processes. Formal Methods in System Design, 2010, 36, 246-280.	0.9	75
17	Assume-Guarantee Verification for Probabilistic Systems. Lecture Notes in Computer Science, 2010, , 23-37.	1.0	75
18	PRISM-games: A Model Checker for Stochastic Multi-Player Games. Lecture Notes in Computer Science, 2013, , 185-191.	1.0	75

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19	Design and analysis of DNA strand displacement devices using probabilistic model checking. Journal of the Royal Society Interface, 2012, 9, 1470-1485.	1.5	68
20	Quantitative Multi-objective Verification for Probabilistic Systems. Lecture Notes in Computer Science, 2011, , 112-127.	1.0	67
21	Symbolic Model Checking of Probabilistic Processes Using MTBDDs and the Kronecker Representation. Lecture Notes in Computer Science, 2000, , 395-410.	1.0	64
22	On the use of MTBDDs for performability analysis and verification of stochastic systems. The Journal of Logic and Algebraic Programming, 2003, 56, 23-67.	1.4	59
23	Pareto Curves for Probabilistic Model Checking. Lecture Notes in Computer Science, 2012, , 317-332.	1.0	59
24	The Hanoi Omega-Automata Format. Lecture Notes in Computer Science, 2015, , 479-486.	1.0	56
25	Using probabilistic model checking for dynamic power management. Formal Aspects of Computing, 2005, 17, 160-176.	1.4	50
26	Controller dependability analysis by probabilistic model checking. Control Engineering Practice, 2007, 15, 1427-1434.	3.2	47
27	Incremental quantitative verification for Markov decision processes. , 2011, , .		44
28	Verification and control of partially observable probabilistic systems. Real-Time Systems, 2017, 53, 354-402.	1.1	42
29	The Quantitative Verification Benchmark Set. Lecture Notes in Computer Science, 2019, , 344-350.	1.0	42
30	Advances and challenges of probabilistic model checking. , 2010, , .		40
31	Ensuring the Reliability of Your Model Checker: Interval Iteration for Markov Decision Processes. Lecture Notes in Computer Science, 2017, , 160-180.	1.0	40
32	Stochastic Games for Verification of Probabilistic Timed Automata. Lecture Notes in Computer Science, 2009, , 212-227.	1.0	40
33	Symbolic Representations and Analysis of Large Probabilistic Systems. Lecture Notes in Computer Science, 2004, , 296-338.	1.0	38
34	Abstraction Refinement for Probabilistic Software. Lecture Notes in Computer Science, 2008, , 182-197.	1.0	38
35	Probabilistic verification of Herman's self-stabilisation algorithm. Formal Aspects of Computing, 2012, 24, 661-670.	1.4	36
36	Performance modelling and verification of cloud-based auto-scaling policies. Future Generation Computer Systems, 2018, 87, 629-638.	4.9	34

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37	PRISM-games: verification and strategy synthesis for stochastic multi-player games with multiple objectives. <i>International Journal on Software Tools for Technology Transfer</i> , 2018, 20, 195-210.	1.7	34
38	PRISM-games 3.0: Stochastic Game Verification with Concurrency, Equilibria and Time. <i>Lecture Notes in Computer Science</i> , 2020, , 475-487.	1.0	34
39	Numerical vs. Statistical Probabilistic Model Checking: An Empirical Study. <i>Lecture Notes in Computer Science</i> , 2004, , 46-60.	1.0	32
40	Probabilistic planning with formal performance guarantees for mobile service robots. <i>International Journal of Robotics Research</i> , 2019, 38, 1098-1123.	5.8	32
41	The 2019 Comparison of Tools for the Analysis of Quantitative Formal Models. <i>Lecture Notes in Computer Science</i> , 2019, , 69-92.	1.0	31
42	Compositional probabilistic verification through multi-objective model checking. <i>Information and Computation</i> , 2013, 232, 38-65.	0.5	30
43	Compositional Verification of Probabilistic Systems Using Learning. , 2010, , .		27
44	PRISM-Games 2.0: A Tool for Multi-objective Strategy Synthesis for Stochastic Games. <i>Lecture Notes in Computer Science</i> , 2016, , 560-566.	1.0	23
45	A Symbolic Out-of-Core Solution Method for Markov Models. <i>Electronic Notes in Theoretical Computer Science</i> , 2002, 68, 589-604.	0.9	22
46	Probabilistic Mobile Ambients. <i>Theoretical Computer Science</i> , 2009, 410, 1272-1303.	0.5	22
47	Probabilistic Point-to-Point Information Leakage. , 2013, , .		21
48	Automated Learning of Probabilistic Assumptions for Compositional Reasoning. <i>Lecture Notes in Computer Science</i> , 2011, , 2-17.	1.0	20
49	Game-Based Probabilistic Predicate Abstraction in PRISM. <i>Electronic Notes in Theoretical Computer Science</i> , 2008, 220, 5-21.	0.9	19
50	Game-based Abstraction and Controller Synthesis for Probabilistic Hybrid Systems. , 2011, , .		19
51	Learning-Based Compositional Verification for Synchronous Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2011, , 511-521.	1.0	19
52	Model Checking Probabilistic and Stochastic Extensions of the π -Calculus. <i>IEEE Transactions on Software Engineering</i> , 2009, 35, 209-223.	4.3	18
53	Verifying Team Formation Protocols with Probabilistic Model Checking. <i>Lecture Notes in Computer Science</i> , 2011, , 190-207.	1.0	18
54	Automatic Verification of Competitive Stochastic Systems. <i>Lecture Notes in Computer Science</i> , 2012, , 315-330.	1.0	17

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55	Language-Level Symmetry Reduction for Probabilistic Model Checking. , 2009, , .		16
56	SMT-Based Bisimulation Minimisation of Markov Models. Lecture Notes in Computer Science, 2013, , 28-47.	1.0	16
57	Simulation and Verification for Computational Modelling of Signalling Pathways. , 2006, , .		14
58	Fault diagnosis in labelled Petri nets: A Fourier-Motzkin based approach. Automatica, 2021, 132, 109831.	3.0	14
59	On Correctness, Precision, and Performance in Quantitative Verification. Lecture Notes in Computer Science, 2021, , 216-241.	1.0	14
60	ATEN: And/Or tree ensemble for inferring accurate Boolean network topology and dynamics. Bioinformatics, 2020, 36, 578-585.	1.8	13
61	Equilibria-Based Probabilistic Model Checking for Concurrent Stochastic Games. Lecture Notes in Computer Science, 2019, , 298-315.	1.0	13
62	Probabilistic Guarantees for Safe Deep Reinforcement Learning. Lecture Notes in Computer Science, 2020, , 231-248.	1.0	13
63	GRIP: Generic Representatives in PRISM. , 2007, , .		12
64	Automatic verification of concurrent stochastic systems. Formal Methods in System Design, 2021, 58, 188-250.	0.9	11
65	Automated Verification of Concurrent Stochastic Games. Lecture Notes in Computer Science, 2018, , 223-239.	1.0	11
66	Bisimulation for Demonic Schedulers. Lecture Notes in Computer Science, 2009, , 318-332.	1.0	11
67	A Framework for Verification of Software with Time and Probabilities. Lecture Notes in Computer Science, 2010, , 25-45.	1.0	10
68	Software Adaptation for an Unmanned Undersea Vehicle. IEEE Software, 2019, 36, 91-96.	2.1	10
69	Formal Quantitative Analysis of Reaction Networks Using Chemical Organisation Theory. Lecture Notes in Computer Science, 2016, , 232-251.	1.0	10
70	Model checking the probabilistic pi-calculus. , 2007, , .		9
71	Performance Modelling and Verification of Cloud-Based Auto-Scaling Policies. , 2017, , .		9
72	Permissive Controller Synthesis for Probabilistic Systems. Logical Methods in Computer Science, 0, Volume 11, Issue 2, .	0.4	9

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73	Synthesizing efficient systems in probabilistic environments. Acta Informatica, 2016, 53, 425-457.	0.5	8
74	Verification and Control of Turn-Based Probabilistic Real-Time Games. Lecture Notes in Computer Science, 2019, , 379-396.	1.0	8
75	Quantitative Verification Techniques for Biological Processes. Natural Computing Series, 2009, , 391-409.	2.2	8
76	Strategic Analysis of Trust Models for User-Centric Networks. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 112, 53-59.	0.8	8
77	Multi-player Equilibria Verification for Concurrent Stochastic Games. Lecture Notes in Computer Science, 2020, , 74-95.	1.0	7
78	Verification and Control of Partially Observable Probabilistic Real-Time Systems. Lecture Notes in Computer Science, 2015, , 240-255.	1.0	7
79	Local abstraction refinement for probabilistic timed programs. Theoretical Computer Science, 2014, 538, 37-53.	0.5	6
80	Organisation-Oriented Coarse Graining and Refinement of Stochastic Reaction Networks. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2018, 15, 1152-1166.	1.9	5
81	Variability management in safety-critical systems design and dependability analysis. Journal of Software: Evolution and Process, 2019, 31, e2202.	1.2	5
82	Multi-scale stochastic organization-oriented coarse-graining exemplified on the human mitotic checkpoint. Scientific Reports, 2019, 9, 3902.	1.6	5
83	On Reduction Criteria for Probabilistic Reward Models. Lecture Notes in Computer Science, 2006, , 309-320.	1.0	5
84	Generating Compact MTBDD-Representations from Probmela Specifications. Lecture Notes in Computer Science, 2008, , 60-76.	1.0	5
85	Symbolic Magnifying Lens Abstraction in Markov Decision Processes. , 2008, , .		4
86	Can aquatic flightless birds allocate Automotive Safety requirements?. , 2015, , .		4
87	Quantitative Verification of Certificate Transparency Gossip Protocols. , 2020, , .		3
88	Quantitative Verification of Numerical Stability for Kalman Filters. Lecture Notes in Computer Science, 2019, , 425-441.	1.0	2
89	Online Fault Diagnosis in Petri Net Models of Discrete-Event Systems Using Fourier-Motzkin. , 2018, , .		1
90	Online monitoring for diagnosis of violations of constraints in Petri net models. IFAC-PapersOnLine, 2019, 52, 25-30.	0.5	1

#	ARTICLE	IF	CITATIONS
91	Quantitative verification of Kalman filters. <i>Formal Aspects of Computing</i> , 2021, 33, 669-693.	1.4	1
92	Automated Formal Analysis of Side-Channel Attacks on Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2019, , 319-337.	1.0	0