

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	Quantitative verification of Kalman filters. Formal Aspects of Computing, 2021, 33, 669-693.	1.4	1
2	Fault diagnosis in labelled Petri nets: A Fourier-Motzkin based approach. Automatica, 2021, 132, 109831.	3.0	14
3	On Correctness, Precision, and Performance in Quantitative Verification. Lecture Notes in Computer Science, 2021, , 216-241.	1.0	14
4	Automatic verification of concurrent stochastic systems. Formal Methods in System Design, 2021, 58, 188-250.	0.9	11
5	ATEN: And/Or tree ensemble for inferring accurate Boolean network topology and dynamics. Bioinformatics, 2020, 36, 578-585.	1.8	13
6	Quantitative Verification of Certificate Transparency Gossip Protocols. , 2020, , .		3
7	PRISM-games 3.0: Stochastic Game Verification with Concurrency, Equilibria and Time. Lecture Notes in Computer Science, 2020, , 475-487.	1.0	34
8	Probabilistic Guarantees for Safe Deep Reinforcement Learning. Lecture Notes in Computer Science, 2020, , 231-248.	1.0	13
9	Multi-player Equilibria Verification for Concurrent Stochastic Games. Lecture Notes in Computer Science, 2020, , 74-95.	1.0	7
10	Variability management in safety-critical systems design and dependability analysis. Journal of Software: Evolution and Process, 2019, 31, e2202.	1.2	5
11	Probabilistic planning with formal performance guarantees for mobile service robots. International Journal of Robotics Research, 2019, 38, 1098-1123.	5.8	32
12	Software Adaptation for an Unmanned Undersea Vehicle. IEEE Software, 2019, 36, 91-96.	2.1	10
13	Multi-scale stochastic organization-oriented coarse-graining exemplified on the human mitotic checkpoint. Scientific Reports, 2019, 9, 3902.	1.6	5
14	Online monitoring for diagnosis of violations of constraints in Petri net models. IFAC-PapersOnLine, 2019, 52, 25-30.	0.5	1
15	The Quantitative Verification Benchmark Set. Lecture Notes in Computer Science, 2019, , 344-350.	1.0	42
16	The 2019 Comparison of Tools for the Analysis of Quantitative Formal Models. Lecture Notes in Computer Science, 2019, , 69-92.	1.0	31
17	Equilibria-Based Probabilistic Model Checking for Concurrent Stochastic Games. Lecture Notes in Computer Science, 2019, , 298-315.	1.0	13
18	Quantitative Verification of Numerical Stability for Kalman Filters. Lecture Notes in Computer Science, 2019, , 425-441.	1.0	2

#	ARTICLE	IF	CITATIONS
19	Verification and Control of Turn-Based Probabilistic Real-Time Games. Lecture Notes in Computer Science, 2019, , 379-396.	1.0	8
20	Automated Formal Analysis of Side-Channel Attacks on Probabilistic Systems. Lecture Notes in Computer Science, 2019, , 319-337.	1.0	0
21	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
22	Performance modelling and verification of cloud-based auto-scaling policies. Future Generation Computer Systems, 2018, 87, 629-638.	4.9	34
23	PRISM-games: verification and strategy synthesis for stochastic multi-player games with multiple objectives. International Journal on Software Tools for Technology Transfer, 2018, 20, 195-210.	1.7	34
24	Online Fault Diagnosis in Petri Net Models of Discrete-Event Systems Using Fourier-Motzkin. , 2018, , .		1
25	Automated Verification of Concurrent Stochastic Games. Lecture Notes in Computer Science, 2018, , 223-239.	1.0	11
26	Performance Modelling and Verification of Cloud-Based Auto-Scaling Policies. , 2017, , .		9
27	Verification and control of partially observable probabilistic systems. Real-Time Systems, 2017, 53, 354-402.	1.1	42
28	Ensuring the Reliability of Your Model Checker: Interval Iteration for Markov Decision Processes. Lecture Notes in Computer Science, 2017, , 160-180.	1.0	40
29	Synthesizing efficient systems in probabilistic environments. Acta Informatica, 2016, 53, 425-457.	0.5	8
30	Formal Quantitative Analysis of Reaction Networks Using Chemical Organisation Theory. Lecture Notes in Computer Science, 2016, , 232-251.	1.0	10
31	PRISM-Games 2.0: A Tool for Multi-objective Strategy Synthesis for Stochastic Games. Lecture Notes in Computer Science, 2016, , 560-566.	1.0	23
32	Can aquatic flightless birds allocate Automotive Safety requirements?. , 2015, , .		4
33	The Hanoi Omega-Automata Format. Lecture Notes in Computer Science, 2015, , 479-486.	1.0	56
34	Verification and Control of Partially Observable Probabilistic Real-Time Systems. Lecture Notes in Computer Science, 2015, , 240-255.	1.0	7
35	Local abstraction refinement for probabilistic timed programs. Theoretical Computer Science, 2014, 538, 37-53.	0.5	6
36	Verification of Markov Decision Processes Using Learning Algorithms. Lecture Notes in Computer Science, 2014, , 98-114.	1.0	105

#	ARTICLE	IF	CITATIONS
37	Model checking for probabilistic timed automata. Formal Methods in System Design, 2013, 43, 164-190.	0.9	87
38	Automatic verification of competitive stochastic systems. Formal Methods in System Design, 2013, 43, 61-92.	0.9	87
39	Probabilistic Point-to-Point Information Leakage. , 2013, , .		21
40	Compositional probabilistic verification through multi-objective model checking. Information and Computation, 2013, 232, 38-65.	0.5	30
41	SMT-Based Bisimulation Minimisation of Markov Models. Lecture Notes in Computer Science, 2013, , 28-47.	1.0	16
42	PRISM-games: A Model Checker for Stochastic Multi-Player Games. Lecture Notes in Computer Science, 2013, , 185-191.	1.0	75
43	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
44	The PRISM Benchmark Suite. , 2012, , .		79
45	Probabilistic verification of Herman's self-stabilisation algorithm. Formal Aspects of Computing, 2012, 24, 661-670.	1.4	36
46	Automatic Verification of Competitive Stochastic Systems. Lecture Notes in Computer Science, 2012, , 315-330.	1.0	17
47	Pareto Curves for Probabilistic Model Checking. Lecture Notes in Computer Science, 2012, , 317-332.	1.0	59
48	Incremental quantitative verification for Markov decision processes. , 2011, , .		44
49	Game-based Abstraction and Controller Synthesis for Probabilistic Hybrid Systems. , 2011, , .		19
50	Engineering failure analysis and design optimisation with HiP-HOPS. Engineering Failure Analysis, 2011, 18, 590-608.	1.8	118
51	PRISM 4.0: Verification of Probabilistic Real-Time Systems. Lecture Notes in Computer Science, 2011, , 585-591.	1.0	1,371
52	Automated Learning of Probabilistic Assumptions for Compositional Reasoning. Lecture Notes in Computer Science, 2011, , 2-17.	1.0	20
53	Quantitative Multi-objective Verification for Probabilistic Systems. Lecture Notes in Computer Science, 2011, , 112-127.	1.0	67
54	Automated Verification Techniques for Probabilistic Systems. Lecture Notes in Computer Science, 2011, , 53-113.	1.0	176

#	ARTICLE	IF	CITATIONS
55	Verifying Team Formation Protocols with Probabilistic Model Checking. Lecture Notes in Computer Science, 2011, , 190-207.	1.0	18
56	Learning-Based Compositional Verification for Synchronous Probabilistic Systems. Lecture Notes in Computer Science, 2011, , 511-521.	1.0	19
57	A game-based abstraction-refinement framework for Markov decision processes. Formal Methods in System Design, 2010, 36, 246-280.	0.9	75
58	Advances and challenges of probabilistic model checking. , 2010, , .		40
59	A Framework for Verification of Software with Time and Probabilities. Lecture Notes in Computer Science, 2010, , 25-45.	1.0	10
60	Compositional Verification of Probabilistic Systems Using Learning. , 2010, , .		27
61	Assume-Guarantee Verification for Probabilistic Systems. Lecture Notes in Computer Science, 2010, , 23-37.	1.0	75
62	Probabilistic Mobile Ambients. Theoretical Computer Science, 2009, 410, 1272-1303.	0.5	22
63	Language-Level Symmetry Reduction for Probabilistic Model Checking. , 2009, , .		16
64	Model Checking Probabilistic and Stochastic Extensions of the π -Calculus. IEEE Transactions on Software Engineering, 2009, 35, 209-223.	4.3	18
65	Quantitative Verification Techniques for Biological Processes. Natural Computing Series, 2009, , 391-409.	2.2	8
66	Bisimulation for Demonic Schedulers. Lecture Notes in Computer Science, 2009, , 318-332.	1.0	11
67	Stochastic Games for Verification of Probabilistic Timed Automata. Lecture Notes in Computer Science, 2009, , 212-227.	1.0	40
68	Probabilistic model checking of complex biological pathways. Theoretical Computer Science, 2008, 391, 239-257.	0.5	136
69	Game-Based Probabilistic Predicate Abstraction in PRISM. Electronic Notes in Theoretical Computer Science, 2008, 220, 5-21.	0.9	19
70	Symbolic Magnifying Lens Abstraction in Markov Decision Processes. , 2008, , .		4
71	Generating Compact MTBDD-Representations from Probmela Specifications. Lecture Notes in Computer Science, 2008, , 60-76.	1.0	5
72	Abstraction Refinement for Probabilistic Software. Lecture Notes in Computer Science, 2008, , 182-197.	1.0	38

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73	Model checking the probabilistic pi-calculus. , 2007, , .		9
74	GRIP: Generic Representatives in PRISM. , 2007, , .		12
75	Controller dependability analysis by probabilistic model checking. Control Engineering Practice, 2007, 15, 1427-1434.	3.2	47
76	Performance analysis of probabilistic timed automata using digital clocks. Formal Methods in System Design, 2006, 29, 33-78.	0.9	138
77	Numerical vs. statistical probabilistic model checking. International Journal on Software Tools for Technology Transfer, 2006, 8, 216-228.	1.7	148
78	A formal analysis of bluetooth device discovery. International Journal on Software Tools for Technology Transfer, 2006, 8, 621-632.	1.7	79
79	Quantitative Analysis With the Probabilistic Model Checker PRISM. Electronic Notes in Theoretical Computer Science, 2006, 153, 5-31.	0.9	76
80	Simulation and Verification for Computational Modelling of Signalling Pathways. , 2006, , .		14
81	Symmetry Reduction for Probabilistic Model Checking. Lecture Notes in Computer Science, 2006, , 234-248.	1.0	82
82	On Reduction Criteria for Probabilistic Reward Models. Lecture Notes in Computer Science, 2006, , 309-320.	1.0	5
83	Using probabilistic model checking for dynamic power management. Formal Aspects of Computing, 2005, 17, 160-176.	1.4	50
84	Numerical vs. Statistical Probabilistic Model Checking: An Empirical Study. Lecture Notes in Computer Science, 2004, , 46-60.	1.0	32
85	Probabilistic symbolic model checking with PRISM: a hybrid approach. International Journal on Software Tools for Technology Transfer, 2004, 6, 128-142.	1.7	244
86	Symbolic Representations and Analysis of Large Probabilistic Systems. Lecture Notes in Computer Science, 2004, , 296-338.	1.0	38
87	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
88	PRISM: Probabilistic Symbolic Model Checker. Lecture Notes in Computer Science, 2002, , 200-204.	1.0	343
89	A Symbolic Out-of-Core Solution Method for Markov Models. Electronic Notes in Theoretical Computer Science, 2002, 68, 589-604.	0.9	22
90	Symbolic Model Checking of Probabilistic Processes Using MTBDDs and the Kronecker Representation. Lecture Notes in Computer Science, 2000, , 395-410.	1.0	64

#	ARTICLE	IF	CITATIONS
91	Permissive Controller Synthesis for Probabilistic Systems. Logical Methods in Computer Science, 0, Volume 11, Issue 2, .	0.4	9
92	Strategic Analysis of Trust Models for User-Centric Networks. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 112, 53-59.	0.8	8