

David Parker

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

114
papers

4,870
citations

34
h-index

68
g-index

115
ext. papers

5,448
ext. citations

1.4
avg, IF

5.83
L-index

#	Paper	IF	Citations
114	Correlated Equilibria and Fairness in Concurrent Stochastic Games. <i>Lecture Notes in Computer Science</i> , 2022 , 60-78	0.9	
113	Probabilistic Model Checking and Autonomy. <i>Annual Review of Control, Robotics, and Autonomous Systems</i> , 2022 , 5,	11.8	2
112	Verified Probabilistic Policies for Deep Reinforcement Learning. <i>Lecture Notes in Computer Science</i> , 2022 , 193-212	0.9	1
111	Quantitative verification of Kalman filters. <i>Formal Aspects of Computing</i> , 2021 , 33, 669-693	1.2	
110	Fault diagnosis in labelled Petri nets: A Fourier-Motzkin based approach. <i>Automatica</i> , 2021 , 132, 109831	5.7	4
109	On Correctness, Precision, and Performance in Quantitative Verification. <i>Lecture Notes in Computer Science</i> , 2021 , 216-241	0.9	9
108	ATEN: And/Or tree ensemble for inferring accurate Boolean network topology and dynamics. <i>Bioinformatics</i> , 2020 , 36, 578-585	7.2	1
107	PRISM-games 3.0: Stochastic Game Verification with Concurrency, Equilibria and Time. <i>Lecture Notes in Computer Science</i> , 2020 , 475-487	0.9	19
106	Probabilistic Guarantees for Safe Deep Reinforcement Learning. <i>Lecture Notes in Computer Science</i> , 2020 , 231-248	0.9	5
105	Multi-player Equilibria Verification for Concurrent Stochastic Games. <i>Lecture Notes in Computer Science</i> , 2020 , 74-95	0.9	5
104	Quantitative Verification of Certificate Transparency Gossip Protocols 2020 ,		2
103	Probabilistic planning with formal performance guarantees for mobile service robots. <i>International Journal of Robotics Research</i> , 2019 , 38, 1098-1123	5.7	21
102	Software Adaptation for an Unmanned Undersea Vehicle. <i>IEEE Software</i> , 2019 , 36, 91-96	1.5	5
101	Multi-scale stochastic organization-oriented coarse-graining exemplified on the human mitotic checkpoint. <i>Scientific Reports</i> , 2019 , 9, 3902	4.9	3
100	Automated Formal Analysis of Side-Channel Attacks on Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2019 , 319-337	0.9	
99	The Quantitative Verification Benchmark Set. <i>Lecture Notes in Computer Science</i> , 2019 , 344-350	0.9	32
98	The 2019 Comparison of Tools for the Analysis of Quantitative Formal Models. <i>Lecture Notes in Computer Science</i> , 2019 , 69-92	0.9	27

97	Equilibria-Based Probabilistic Model Checking for Concurrent Stochastic Games. <i>Lecture Notes in Computer Science</i> , 2019 , 298-315	0.9	9
96	Quantitative Verification of Numerical Stability for Kalman Filters. <i>Lecture Notes in Computer Science</i> , 2019 , 425-441	0.9	1
95	Verification and Control of Turn-Based Probabilistic Real-Time Games. <i>Lecture Notes in Computer Science</i> , 2019 , 379-396	0.9	7
94	Online monitoring for diagnosis of violations of constraints in Petri net models. <i>IFAC-PapersOnLine</i> , 2019 , 52, 25-30	0.7	0
93	Organisation-Oriented Coarse Graining and Refinement of Stochastic Reaction Networks. <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , 2018 , 15, 1152-1166	3	4
92	Performance modelling and verification of cloud-based auto-scaling policies. <i>Future Generation Computer Systems</i> , 2018 , 87, 629-638	7.5	19
91	Replicated Computational Results (RCR) Report for ProPPA: Probabilistic Programming for Stochastic Dynamical Systems <i>ACM Transactions on Modeling and Computer Simulation</i> , 2018 , 28, 1-3	0.6	
90	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	1.3	25
89	Probabilistic Model Checking: Advances and Applications 2018 , 73-121		14
88	Automated Verification of Concurrent Stochastic Games. <i>Lecture Notes in Computer Science</i> , 2018 , 223-239		8
87	Simultaneous Task Allocation and Planning Under Uncertainty 2018 ,		10
86	2018 ,		1
85	Performance Modelling and Verification of Cloud-Based Auto-Scaling Policies 2017 ,		7
84	Verification and control of partially observable probabilistic systems. <i>Real-Time Systems</i> , 2017 , 53, 354-403	0.2	27
83	Ensuring the Reliability of Your Model Checker: Interval Iteration for Markov Decision Processes. <i>Lecture Notes in Computer Science</i> , 2017 , 160-180	0.9	34
82	Symbolic Verification and Strategy Synthesis for Linearly-Priced Probabilistic Timed Automata. <i>Lecture Notes in Computer Science</i> , 2017 , 289-309	0.9	2
81	Synthesizing efficient systems in probabilistic environments. <i>Acta Informatica</i> , 2016 , 53, 425-457	0.9	5
80	Finite-Horizon Bisimulation Minimisation for Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2016 , 147-164	0.9	2

79	Formal Quantitative Analysis of Reaction Networks Using Chemical Organisation Theory. <i>Lecture Notes in Computer Science</i> , 2016 , 232-251	0.9	7
78	PRISM-Games 2.0: A Tool for Multi-objective Strategy Synthesis for Stochastic Games. <i>Lecture Notes in Computer Science</i> , 2016 , 560-566	0.9	18
77	Quantitative Verification and Synthesis of Attack-Defence Scenarios 2016 ,		35
76	Permissive Controller Synthesis for Probabilistic Systems. <i>Logical Methods in Computer Science</i> , 2015 , 11,		7
75	The Hanoi Omega-Automata Format. <i>Lecture Notes in Computer Science</i> , 2015 , 479-486	0.9	46
74	Verification and Control of Partially Observable Probabilistic Real-Time Systems. <i>Lecture Notes in Computer Science</i> , 2015 , 240-255	0.9	5
73	Local abstraction refinement for probabilistic timed programs. <i>Theoretical Computer Science</i> , 2014 , 538, 37-53	1.1	3
72	Optimal and dynamic planning for Markov decision processes with co-safe LTL specifications 2014 ,		25
71	Probabilistic Model Checking of Labelled Markov Processes via Finite Approximate Bisimulations. <i>Lecture Notes in Computer Science</i> , 2014 , 40-58	0.9	12
70	Verification of Markov Decision Processes Using Learning Algorithms. <i>Lecture Notes in Computer Science</i> , 2014 , 98-114	0.9	91
69	Permissive Controller Synthesis for Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2014 , 531-546		9
68	Model checking for probabilistic timed automata. <i>Formal Methods in System Design</i> , 2013 , 43, 164-190	1.4	66
67	Automatic verification of competitive stochastic systems. <i>Formal Methods in System Design</i> , 2013 , 43, 61-92	1.4	69
66	2013 ,		16
65	Compositional probabilistic verification through multi-objective model checking. <i>Information and Computation</i> , 2013 , 232, 38-65	0.8	22
64	Automated Verification and Strategy Synthesis for Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2013 , 5-22	0.9	32
63	Incremental Runtime Verification of Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2013 , 314-349		17
62	SMT-Based Bisimulation Minimisation of Markov Models. <i>Lecture Notes in Computer Science</i> , 2013 , 28-47	0.9	12

61	PRISM-games: A Model Checker for Stochastic Multi-Player Games. <i>Lecture Notes in Computer Science</i> , 2013 , 185-191	0.9	57
60	Design and analysis of DNA strand displacement devices using probabilistic model checking. <i>Journal of the Royal Society Interface</i> , 2012 , 9, 1470-85	4.1	58
59	The PRISM Benchmark Suite 2012 ,		69
58	Probabilistic verification of Herman's self-stabilisation algorithm. <i>Formal Aspects of Computing</i> , 2012 , 24, 661-670	1.2	24
57	Automatic Verification of Competitive Stochastic Systems. <i>Lecture Notes in Computer Science</i> , 2012 , 315-330	0.9	14
56	Pareto Curves for Probabilistic Model Checking. <i>Lecture Notes in Computer Science</i> , 2012 , 317-332	0.9	44
55	An approach to optimization of fault tolerant architectures using HiP-HOPS. <i>Software - Practice and Experience</i> , 2011 , 41, 1303-1327	2.5	29
54	Incremental quantitative verification for Markov decision processes 2011 ,		36
53	Game-based Abstraction and Controller Synthesis for Probabilistic Hybrid Systems 2011 ,		12
52	PRISM 4.0: Verification of Probabilistic Real-Time Systems. <i>Lecture Notes in Computer Science</i> , 2011 , 585-591	0.9	953
51	Automated Learning of Probabilistic Assumptions for Compositional Reasoning. <i>Lecture Notes in Computer Science</i> , 2011 , 2-17	0.9	14
50	Quantitative Multi-objective Verification for Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2011 , 112-127	0.9	52
49	Automated Verification Techniques for Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2011 , 53-113	0.9	140
48	Verifying Team Formation Protocols with Probabilistic Model Checking. <i>Lecture Notes in Computer Science</i> , 2011 , 190-207	0.9	14
47	Learning-Based Compositional Verification for Synchronous Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2011 , 511-521	0.9	17
46	Advances and challenges of probabilistic model checking 2010 ,		27
45	A Framework for Verification of Software with Time and Probabilities. <i>Lecture Notes in Computer Science</i> , 2010 , 25-45	0.9	5
44	Compositional Verification of Probabilistic Systems Using Learning 2010 ,		22

43	A game-based abstraction-refinement framework for Markov decision processes. <i>Formal Methods in System Design</i> , 2010 , 36, 246-280	1.4	62
42	Assume-Guarantee Verification for Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2010 , 23-370.9		59
41	PRISM. <i>Performance Evaluation Review</i> , 2009 , 36, 40-45	0.4	152
40	Model Checking Probabilistic and Stochastic Extensions of the \mathcal{E} Calculus. <i>IEEE Transactions on Software Engineering</i> , 2009 , 35, 209-223	3.5	16
39	Quantitative Verification Techniques for Biological Processes. <i>Natural Computing Series</i> , 2009 , 391-409	2.5	8
38	Bisimulation for Demonic Schedulers. <i>Lecture Notes in Computer Science</i> , 2009 , 318-332	0.9	7
37	Stochastic Games for Verification of Probabilistic Timed Automata. <i>Lecture Notes in Computer Science</i> , 2009 , 212-227	0.9	32
36	Symbolic Magnifying Lens Abstraction in Markov Decision Processes 2008 ,		3
35	Probabilistic model checking of complex biological pathways. <i>Theoretical Computer Science</i> , 2008 , 391, 239-257	1.1	110
34	Game-Based Probabilistic Predicate Abstraction in PRISM. <i>Electronic Notes in Theoretical Computer Science</i> , 2008 , 220, 5-21	0.7	13
33	Using probabilistic model checking in systems biology. <i>Performance Evaluation Review</i> , 2008 , 35, 14-21	0.4	57
32	Analysis of a gossip protocol in PRISM. <i>Performance Evaluation Review</i> , 2008 , 36, 17-22	0.4	28
31	Generating Compact MTBDD-Representations from Probmela Specifications. <i>Lecture Notes in Computer Science</i> , 2008 , 60-76	0.9	4
30	Abstraction Refinement for Probabilistic Software. <i>Lecture Notes in Computer Science</i> , 2008 , 182-197	0.9	32
29	GRIP: Generic Representatives in PRISM 2007 ,		6
28	Stochastic Model Checking 2007 , 220-270		259
27	Controller dependability analysis by probabilistic model checking. <i>Control Engineering Practice</i> , 2007 , 15, 1427-1434	3.9	34
26	Model checking the probabilistic pi-calculus 2007 ,		9

25	Quantitative Analysis With the Probabilistic Model Checker PRISM. <i>Electronic Notes in Theoretical Computer Science</i> , 2006 , 153, 5-31	0.7	60
24	Performance analysis of probabilistic timed automata using digital clocks. <i>Formal Methods in System Design</i> , 2006 , 29, 33-78	1.4	111
23	Numerical vs. statistical probabilistic model checking. <i>International Journal on Software Tools for Technology Transfer</i> , 2006 , 8, 216-228	1.3	117
22	A formal analysis of bluetooth device discovery. <i>International Journal on Software Tools for Technology Transfer</i> , 2006 , 8, 621-632	1.3	55
21	PRISM: A Tool for Automatic Verification of Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2006 , 441-444	0.9	289
20	Symmetry Reduction for Probabilistic Model Checking. <i>Lecture Notes in Computer Science</i> , 2006 , 234-248	0.9	56
19	On Reduction Criteria for Probabilistic Reward Models. <i>Lecture Notes in Computer Science</i> , 2006 , 309-320	0.9	4
18	Using probabilistic model checking for dynamic power management. <i>Formal Aspects of Computing</i> , 2005 , 17, 160-176	1.2	38
17	Probabilistic model checking in practice. <i>Performance Evaluation Review</i> , 2005 , 32, 16-21	0.4	39
16	Numerical vs. Statistical Probabilistic Model Checking: An Empirical Study. <i>Lecture Notes in Computer Science</i> , 2004 , 46-60	0.9	26
15	Probabilistic symbolic model checking with PRISM: a hybrid approach. <i>International Journal on Software Tools for Technology Transfer</i> , 2004 , 6, 128-142	1.3	189
14	Controller Dependability Analysis by Probabilistic Model Checking. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2004 , 37, 177-182		3
13	Symbolic Representations and Analysis of Large Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2004 , 296-338	0.9	31
12	Performance Analysis of Probabilistic Timed Automata Using Digital Clocks. <i>Lecture Notes in Computer Science</i> , 2004 , 105-120	0.9	11
11	Mathematical Techniques for Analyzing Concurrent and Probabilistic Systems. <i>CRM Monograph Series</i> , 2004 ,		95
10	On the use of MTBDDs for performability analysis and verification of stochastic systems. <i>The Journal of Logic and Algebraic Programming</i> , 2003 , 56, 23-67		44
9	A Symbolic Out-of-Core Solution Method for Markov Models. <i>Electronic Notes in Theoretical Computer Science</i> , 2002 , 68, 589-604	0.7	21
8	Probabilistic Symbolic Model Checking with PRISM: A Hybrid Approach. <i>Lecture Notes in Computer Science</i> , 2002 , 52-66	0.9	71

7	PRISM: Probabilistic Symbolic Model Checker. <i>Lecture Notes in Computer Science</i> , 2002 , 200-204	0.9	223
6	Faster and Symbolic CTMC Model Checking. <i>Lecture Notes in Computer Science</i> , 2001 , 23-38	0.9	25
5	Symbolic Model Checking of Probabilistic Processes Using MTBDDs and the Kronecker Representation. <i>Lecture Notes in Computer Science</i> , 2000 , 395-410	0.9	52
4	Strategic Analysis of Trust Models for User-Centric Networks. <i>Electronic Proceedings in Theoretical Computer Science</i> , <i>EPTCS</i> ,112, 53-59		7
3	Automatic verification of concurrent stochastic systems. <i>Formal Methods in System Design</i> ,1	1.4	7
2	Verification of Real-Time Probabilistic Systems249-288		7
1	Practical Applications of Probabilistic Model Checking to Communication Protocols133-150		8