Holger Hermanns

List of Publications by Year
in descending order

117 papers	3,383 citations	230014 27 h-index	206121 51 g-index
123 all docs	123 docs citations	123 times ranked	1173 citing authors

#	Article	IF	Citations
1	On the scalability of battery‑aware contact plan design for LEO satellite constellations. International Journal of Satellite Communications and Networking, 2021, 39, 193-204.	1.2	6
2	A Modest Approach to Markov Automata. ACM Transactions on Modeling and Computer Simulation, 2021, 31, 1-34.	0.6	4
3	Towards Perspicuity Requirements. , 2021, , .		3
4	Connection models for the Internet-of-Things. Frontiers of Computer Science, 2020, 14, 1.	1.6	2
5	Managing Fleets of LEO Satellites: Nonlinear, Optimal, Efficient, Scalable, Usable, and Robust. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 3762-3773.	1.9	7
6	On the probabilistic bisimulation spectrum with silent moves. Acta Informatica, 2020, 57, 465-512.	0.5	1
7	Battery-aware scheduling in low orbit: the GomX‑3 case. Formal Aspects of Computing, 2019, 31, 261-285.	1.4	12
8	A Modest Approach to Modelling and Checking Markov Automata. Lecture Notes in Computer Science, 2019, , 52-69.	1.0	6
9	A Modest Markov Automata Tutorial. Lecture Notes in Computer Science, 2019, , 250-276.	1.0	4
10	The 10,000 Facets of MDP Model Checking. Lecture Notes in Computer Science, 2019, , 420-451.	1.0	12
11	Probabilistic bisimulation for realistic schedulers. Acta Informatica, 2018, 55, 461-488.	0.5	2
12	The quest for minimal quotients for probabilistic and Markov automata. Information and Computation, 2018, 262, 162-186.	0.5	2
13	Mastering operational limitations of LEO satellites – The GomX-3 approach. Acta Astronautica, 2018, 151, 726-735.	1.7	11
14	Markov Automata on Discount!. Lecture Notes in Computer Science, 2018, , 19-34.	1.0	2
15	Cost vs. time in stochastic games and Markov automata. Formal Aspects of Computing, 2017, 29, 629-649.	1.4	2
16	Models of Connected Things: On Priced Probabilistic Timed Reo. , 2017, , .		4
17	Modelling and certification for electric mobility. , 2017, , .		5
18	Model-Based Testing for Asynchronous Systems. Lecture Notes in Computer Science, 2017, , 66-82.	1.0	7

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19	Pareto Optimal Reachability Analysis for Simple Priced Timed Automata. Lecture Notes in Computer Science, 2017, , 481-495.	1.0	2
20	From Lotosphere to Thermosphere. Lecture Notes in Computer Science, 2017, , 357-367.	1.0	0
21	The Value of Attack-Defence Diagrams. Lecture Notes in Computer Science, 2016, , 163-185.	1.0	27
22	Deciding probabilistic automata weak bisimulation: theory and practice. Formal Aspects of Computing, 2016, 28, 109-143.	1.4	12
23	PTRebeca: Modeling and analysis of distributed and asynchronous systems. Science of Computer Programming, 2016, 128, 22-50.	1.5	27
24	Exploiting Robust Optimization for Interval Probabilistic Bisimulation. Lecture Notes in Computer Science, 2016, , 55-71.	1.0	5
25	Battery-Aware Scheduling in Low Orbit: The GomX–3 Case. Lecture Notes in Computer Science, 2016, , 559-576.	1.0	18
26	Compositional Bisimulation Minimization for Interval Markov Decision Processes. Lecture Notes in Computer Science, 2016, , 114-126.	1.0	5
27	Distributed Synthesis in Continuous Time. Lecture Notes in Computer Science, 2016, , 353-369.	1.0	1
28	Transient Reward Approximation for Continuous-Time Markov Chains. IEEE Transactions on Reliability, 2015, 64, 1254-1275.	3.5	5
29	Improving time bounded reachability computations in interactive Markov chains. Science of Computer Programming, 2015, 112, 58-74.	1.5	1
30	Cost vs. Time in Stochastic Games and Markov Automata. Lecture Notes in Computer Science, 2015, , 19-34.	1.0	4
31	Polynomial time decision algorithms for probabilistic automata. Information and Computation, 2015, 244, 134-171.	0.5	16
32	In the quantitative automata zoo. Science of Computer Programming, 2015, 112, 3-23.	1.5	10
33	A construction and minimization service for continuous probability distributions. International Journal on Software Tools for Technology Transfer, 2015, 17, 77-90.	1.7	6
34	Optimal Continuous Time Markov Decisions. Lecture Notes in Computer Science, 2015, , 166-182.	1.0	23
35	Abstraction-Based Computation of Reward Measures for Markov Automata. Lecture Notes in Computer Science, 2015, , 172-189.	1.0	4
36	Incremental Bisimulation Abstraction Refinement. Transactions on Embedded Computing Systems, 2014, 13, 1-23.	2.1	3

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37	Time-Dependent Analysis of Attacks. Lecture Notes in Computer Science, 2014, , 285-305.	1.0	58
38	The Modest Toolset: An Integrated Environment for Quantitative Modelling and Verification. Lecture Notes in Computer Science, 2014, , 593-598.	1.0	98
39	Probabilistic Bisimulation: Naturally on Distributions. Lecture Notes in Computer Science, 2014, , 249-265.	1.0	17
40	A compositional modelling and analysis framework for stochastic hybrid systems. Formal Methods in System Design, 2013, 43, 191-232.	0.9	98
41	Incremental Bisimulation Abstraction Refinement. , 2013, , .		1
42	Rewarding probabilistic hybrid automata. , 2013, , .		0
43	The Quest for Minimal Quotients for Probabilistic Automata. Lecture Notes in Computer Science, 2013, , 16-31.	1.0	8
44	A Semantics for Every GSPN. Lecture Notes in Computer Science, 2013, , 90-109.	1.0	47
45	Modelling, Reduction and Analysis of Markov Automata. Lecture Notes in Computer Science, 2013, , 55-71.	1.0	31
46	Deciding Bisimilarities on Distributions. Lecture Notes in Computer Science, 2013, , 72-88.	1.0	12
47	Compositional Verification and Optimization of Interactive Markov Chains. Lecture Notes in Computer Science, 2013, , 364-379.	1.0	7
48	Cost Preserving Bisimulations for Probabilistic Automata. Lecture Notes in Computer Science, 2013, , 349-363.	1.0	2
49	Improving Time Bounded Reachability Computations in Interactive Markov Chains. Lecture Notes in Computer Science, 2013, , 250-266.	1.0	8
50	Safety Verification for Probabilistic Hybrid Systems. European Journal of Control, 2012, 18, 572-587.	1.6	22
51	A comparative analysis of decentralized power grid stabilization strategies. , 2012, , .		10
52	Efficient CSL Model Checking Using Stratification. Logical Methods in Computer Science, 2012, 8, .	0.4	6
53	mctau: Bridging the Gap between Modest and UPPAAL. Lecture Notes in Computer Science, 2012, , 227-233.	1.0	7
54	Probabilistic Logical Characterization. Information and Computation, 2011, 209, 154-172.	0.5	50

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55	Probabilistic reachability for parametric Markov models. International Journal on Software Tools for Technology Transfer, 2011, 13, 3-19.	1.7	124
56	Bounding the equilibrium distribution of Markov population models. Numerical Linear Algebra With Applications, 2011, 18, 931-946.	0.9	34
57	The ins and outs of the probabilistic model checker MRMC. Performance Evaluation, 2011, 68, 90-104.	0.9	174
58	Partial Order Methods for Statistical Model Checking and Simulation. Lecture Notes in Computer Science, 2011, , 59-74.	1.0	38
59	Automata-Based CSL Model Checking. Lecture Notes in Computer Science, 2011, , 271-282.	1.0	11
60	Performance evaluation and model checking join forces. Communications of the ACM, 2010, 53, 76-85.	3.3	64
61	Ten Years of Performance Evaluation for Concurrent Systems Using CADP. Lecture Notes in Computer Science, 2010, , 128-142.	1.0	17
62	Performability assessment by model checking of Markov reward models. Formal Methods in System Design, 2010, 36, 1-36.	0.9	21
63	Symbolic partition refinement with automatic balancing of time and space. Performance Evaluation, 2010, 67, 816-836.	0.9	14
64	Concurrency and Composition in a Stochastic World. Lecture Notes in Computer Science, 2010, , 21-39.	1.0	31
65	Synthesis and stochastic assessment of cost-optimal schedules. International Journal on Software Tools for Technology Transfer, 2010, 12, 305-318.	1.7	9
66	Symblicit Calculation of Long-Run Averages for Concurrent Probabilistic Systems. , 2010, , .		20
67	On Probabilistic Automata in Continuous Time. , 2010, , .		107
68	Aggregation Ordering for Massively Compositional Models. , 2010, , .		8
69	Safety Verification for Probabilistic Hybrid Systems. Lecture Notes in Computer Science, 2010, , 196-211.	1.0	33
70	PARAM: A Model Checker for Parametric Markov Models. Lecture Notes in Computer Science, 2010, , 660-664.	1.0	74
71	The How and Why of Interactive Markov Chains. Lecture Notes in Computer Science, 2010, , 311-337.	1.0	28
72	Time-Bounded Model Checking of Infinite-State Continuous-Time Markov Chains. Fundamenta Informaticae, 2009, 95, 129-155.	0.3	13

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73	The Ins and Outs of the Probabilistic Model Checker MRMC. , 2009, , .		59
74	FlowSim Simulation Benchmarking Platform. , 2009, , .		0
75	Acyclic Minimality by Construction---Almost. , 2009, , .		4
76	Compositional Dependability Evaluation for STATEMATE. IEEE Transactions on Software Engineering, 2009, 35, 274-292.	4.3	29
77	Probabilistic Reachability for Parametric Markov Models. Lecture Notes in Computer Science, 2009, , 88-106.	1.0	26
78	Towards Performance Prediction of Compositional Models in Industrial GALS Designs. Lecture Notes in Computer Science, 2009, , 204-218.	1.0	36
79	INFAMY: An Infinite-State Markov Model Checker. Lecture Notes in Computer Science, 2009, , 641-647.	1.0	14
80	Improving the effectiveness of system verification. International Journal on Software Tools for Technology Transfer, 2008, 10, 111-112.	1.7	0
81	Time-bounded model checking of infinite-state continuous-time Markov chains. , 2008, , .		4
82	Symbolic Partition Refinement with Dynamic Balancing of Time and Space. , 2008, , .		6
83	Effective Minimization of Acyclic Phase-Type Representations. , 2008, , 128-143.		5
84	An Experimental Evaluation of Probabilistic Simulation. Lecture Notes in Computer Science, 2008, , 37-52.	1.0	2
85	Probabilistic Model Checking Modulo Theories. , 2007, , .		15
86	motor:The modest Tool Environment. Lecture Notes in Computer Science, 2007, , 500-504.	1.0	10
87	Deciding Simulations on Probabilistic Automata. , 2007, , 207-222.		11
88	Does Clock Precision Influence ZigBeeâ€™s Energy Consumptions?. , 2007, , 174-188.		6
89	Flow Faster: Efficient Decision Algorithms for Probabilistic Simulations. , 2007, , 155-169.		7
90	Bisimulation and Simulation Relations for Markov Chains. Electronic Notes in Theoretical Computer Science, 2006, 162, 73-78.	0.9	8

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91	YMCA. Electronic Notes in Theoretical Computer Science, 2006, 162, 107-112.	0.9	12
92	Efficient computation of time-bounded reachability probabilities in uniform continuous-time Markov decision processes. Theoretical Computer Science, 2005, 345, 2-26.	0.5	100
93	Comparative branching-time semantics for Markov chains. Information and Computation, 2005, 200, 149-214.	0.5	128
94	Axiomatising divergence. Information and Computation, 2005, 203, 115-144.	0.5	14
95	QoS modelling and analysis with UML-statecharts. Performance Evaluation Review, 2005, 32, 28-33.	0.4	8
96	Model checking meets performance evaluation. Performance Evaluation Review, 2005, 32, 10-15.	0.4	15
97	Probabilistic weak simulation is decidable in polynomial time. Information Processing Letters, 2004, 89, 123-130.	0.4	15
98	A tool for model-checking Markov chains. International Journal on Software Tools for Technology Transfer, 2003, 4, 153-172.	1.7	61
99	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
100	Optimal state-space lumping in Markov chains. Information Processing Letters, 2003, 87, 309-315.	0.4	166
101	A Set of Performance and Dependability Analysis Components for CADP. Lecture Notes in Computer Science, 2003, , 425-430.	1.0	10
102	Comparative Branching-Time Semantics for Markov Chains. Lecture Notes in Computer Science, 2003, , 492-507.	1.0	12
103	Process algebra for performance evaluation. Theoretical Computer Science, 2002, 274, 43-87.	0.5	189
104	On Combining Functional Verification and Performance Evaluation Using CADP. Lecture Notes in Computer Science, 2002, , 410-429.	1.0	38
105	Automated Performance and Dependability Evaluation Using Model Checking. Lecture Notes in Computer Science, 2002, , 261-289.	1.0	19
106	Interactive Markov Chains. Lecture Notes in Computer Science, 2002, , .	1.0	176
107	Performance Evaluation:= (Process Algebra + Model Checking) X Markov Chains. Lecture Notes in Computer Science, 2001, , 59-81.	1.0	9
108	Process Algebra and Markov Chains. Lecture Notes in Computer Science, 2001, , 183-231.	1.0	35

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109	Automated compositional Markov chain generation for a plain-old telephone system. Science of Computer Programming, 2000, 36, 97-127.	1.5	67
110	Model Checking Continuous-Time Markov Chains by Transient Analysis. Lecture Notes in Computer Science, 2000, , 358-372.	1.0	90
111	On the Logical Characterisation of Performability Properties. Lecture Notes in Computer Science, 2000, , 780-792.	1.0	63
112	Approximative Symbolic Model Checking of Continuous-Time Markov Chains. Lecture Notes in Computer Science, 1999, , 146-161.	1.0	111
113	On Generative Parallel Composition1 1Supported by the NWO/SION project 612-33-006 and the System Validation Centre/CTIT.. Electronic Notes in Theoretical Computer Science, 1999, 22, 30-54.	0.9	27
114	Bisimulation Algorithms for Stochastic Process Algebras and Their BDD-Based Implementation. Lecture Notes in Computer Science, 1999, , 244-264.	1.0	24
115	Weak bisimulation for fully probabilistic processes. Lecture Notes in Computer Science, 1997, , 119-130.	1.0	71
116	Analysis of Timed and Long-Run Objectives for Markov Automata. Logical Methods in Computer Science, 0, Volume 10, Issue 3, .	0.4	23
117	MeGARA: Menu-based Game Abstraction and Abstraction Refinement of Markov Automata. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 154, 48-63.	0.8	5