

# Holger Hermanns

## 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.

120  
papers

2,676  
citations

28  
h-index

47  
g-index

123  
ext. papers

2,907  
ext. citations

1  
avg, IF

5.21  
L-index

#	Paper	IF	Citations
120	Quantification of Battery Depletion Risk Made Efficient. <i>Lecture Notes in Computer Science</i> , <b>2022</b> , 156-174	1.9	1
119	Towards Perspicuity Requirements <b>2021</b> ,		1
118	A Modest Approach to Markov Automata. <i>ACM Transactions on Modeling and Computer Simulation</i> , <b>2021</b> , 31, 1-34	0.6	2
117	On the scalability of battery-aware contact plan design for LEO satellite constellations. <i>International Journal of Satellite Communications and Networking</i> , <b>2021</b> , 39, 193-204	1.7	4
116	On the probabilistic bisimulation spectrum with silent moves. <i>Acta Informatica</i> , <b>2020</b> , 57, 465-512	0.9	
115	Connection models for the Internet-of-Things. <i>Frontiers of Computer Science</i> , <b>2020</b> , 14, 1	2.2	1
114	. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , <b>2020</b> , 39, 3762-3773	2.5	4
113	A Modest Approach to Modelling and Checking Markov Automata. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 52-69	0.9	4
112	A Modest Markov Automata Tutorial. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 250-276	0.9	3
111	The 10,000 Facets of MDP Model Checking. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 420-451	0.9	8
110	Battery-aware scheduling in low orbit: the GomXB case. <i>Formal Aspects of Computing</i> , <b>2019</b> , 31, 261-285	1.2	6
109	Syntactic Partial Order Compression for Probabilistic Reachability. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 446-467	0.9	
108	Probabilistic bisimulation for realistic schedulers. <i>Acta Informatica</i> , <b>2018</b> , 55, 461-488	0.9	2
107	Markov Automata on Discount!. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 19-34	0.9	2
106	The quest for minimal quotients for probabilistic and Markov automata. <i>Information and Computation</i> , <b>2018</b> , 262, 162-186	0.8	1
105	Mastering operational limitations of LEO satellites □The GomX-3 approach. <i>Acta Astronautica</i> , <b>2018</b> , 151, 726-735	2.9	6
104	Cost vs. time in stochastic games and Markov automata. <i>Formal Aspects of Computing</i> , <b>2017</b> , 29, 629-649	1.2	2

103	Models of Connected Things: On Priced Probabilistic Timed Reo <b>2017</b> ,		4
102	Modelling and certification for electric mobility <b>2017</b> ,		5
101	Model-Based Testing for Asynchronous Systems. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 66-82	0.9	5
100	Pareto Optimal Reachability Analysis for Simple Priced Timed Automata. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 481-495	0.9	1
99	From Lotosphere to Thermosphere. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 357-367	0.9	
98	Deciding probabilistic automata weak bisimulation: theory and practice. <i>Formal Aspects of Computing</i> , <b>2016</b> , 28, 109-143	1.2	9
97	PTRebeca: Modeling and analysis of distributed and asynchronous systems. <i>Science of Computer Programming</i> , <b>2016</b> , 128, 22-50	1.1	25
96	Exploiting Robust Optimization for Interval Probabilistic Bisimulation. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 55-71	0.9	5
95	Battery-Aware Scheduling in Low Orbit: The GomXB Case. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 559-576		16
94	Compositional Bisimulation Minimization for Interval Markov Decision Processes. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 114-126	0.9	5
93	Distributed Synthesis in Continuous Time. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 353-369	0.9	1
92	The Value of Attack-Defence Diagrams. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 163-185	0.9	22
91	Improving time bounded reachability computations in interactive Markov chains. <i>Science of Computer Programming</i> , <b>2015</b> , 112, 58-74	1.1	1
90	Cost vs. Time in Stochastic Games and Markov Automata. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 19-34	0.9	4
89	A Compression App for Continuous Probability Distributions. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 113-121	0.9	
88	Polynomial time decision algorithms for probabilistic automata. <i>Information and Computation</i> , <b>2015</b> , 244, 134-171	0.8	10
87	In the quantitative automata zoo. <i>Science of Computer Programming</i> , <b>2015</b> , 112, 3-23	1.1	7
86	A construction and minimization service for continuous probability distributions. <i>International Journal on Software Tools for Technology Transfer</i> , <b>2015</b> , 17, 77-90	1.3	4

85	Probabilistic Bisimulation for Realistic Schedulers. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 248-264	0.9	3
84	Transient Reward Approximation for Continuous-Time Markov Chains. <i>IEEE Transactions on Reliability</i> , <b>2015</b> , 64, 1254-1275	4.6	4
83	Optimal Continuous Time Markov Decisions. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 166-182	0.9	19
82	Abstraction-Based Computation of Reward Measures for Markov Automata. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 172-189	0.9	4
81	Incremental Bisimulation Abstraction Refinement. <i>Transactions on Embedded Computing Systems</i> , <b>2014</b> , 13, 1-23	1.8	2
80	Analysis of Timed and Long-Run Objectives for Markov Automata. <i>Logical Methods in Computer Science</i> , <b>2014</b> , 10,		21
79	Time-Dependent Analysis of Attacks. <i>Lecture Notes in Computer Science</i> , <b>2014</b> , 285-305	0.9	37
78	The Modest Toolset: An Integrated Environment for Quantitative Modelling and Verification. <i>Lecture Notes in Computer Science</i> , <b>2014</b> , 593-598	0.9	81
77	Probabilistic Bisimulation: Naturally on Distributions. <i>Lecture Notes in Computer Science</i> , <b>2014</b> , 249-265	0.9	13
76	A compositional modelling and analysis framework for stochastic hybrid systems. <i>Formal Methods in System Design</i> , <b>2013</b> , 43, 191-232	1.4	77
75	Incremental Bisimulation Abstraction Refinement <b>2013</b> ,		1
74	The Quest for Minimal Quotients for Probabilistic Automata. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 16-31	0.9	4
73	A Semantics for Every GSPN. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 90-109	0.9	37
72	Modelling, Reduction and Analysis of Markov Automata. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 55-71	0.9	28
71	Deciding Bisimilarities on Distributions. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 72-88	0.9	9
70	Compositional Verification and Optimization of Interactive Markov Chains. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 364-379	0.9	6
69	Cost Preserving Bisimulations for Probabilistic Automata. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 349-363		1
68	Improving Time Bounded Reachability Computations in Interactive Markov Chains. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 250-266	0.9	6

67	Safety Verification for Probabilistic Hybrid Systems. <i>European Journal of Control</i> , <b>2012</b> , 18, 572-587	2.5	16
66	A comparative analysis of decentralized power grid stabilization strategies <b>2012</b> ,		9
65	Efficient CSL Model Checking Using Stratification. <i>Logical Methods in Computer Science</i> , <b>2012</b> , 8,		6
64	Modelling and Decentralised Runtime Control of Self-stabilising Power Micro Grids. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 420-439	0.9	11
63	mctau: Bridging the Gap between Modest and UPPAAL. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 227-233.	0.9	6
62	Probabilistic Logical Characterization. <i>Information and Computation</i> , <b>2011</b> , 209, 154-172	0.8	43
61	Probabilistic reachability for parametric Markov models. <i>International Journal on Software Tools for Technology Transfer</i> , <b>2011</b> , 13, 3-19	1.3	106
60	Bounding the equilibrium distribution of Markov population models. <i>Numerical Linear Algebra With Applications</i> , <b>2011</b> , 18, 931-946	1.6	29
59	The ins and outs of the probabilistic model checker MRMC. <i>Performance Evaluation</i> , <b>2011</b> , 68, 90-104	1.2	150
58	Partial Order Methods for Statistical Model Checking and Simulation. <i>Lecture Notes in Computer Science</i> , <b>2011</b> , 59-74	0.9	33
57	Automata-Based CSL Model Checking. <i>Lecture Notes in Computer Science</i> , <b>2011</b> , 271-282	0.9	9
56	Concurrency and Composition in a Stochastic World. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 21-39	0.9	23
55	Synthesis and stochastic assessment of cost-optimal schedules. <i>International Journal on Software Tools for Technology Transfer</i> , <b>2010</b> , 12, 305-318	1.3	9
54	Symblicit Calculation of Long-Run Averages for Concurrent Probabilistic Systems <b>2010</b> ,		19
53	On Probabilistic Automata in Continuous Time <b>2010</b> ,		88
52	Aggregation Ordering for Massively Compositional Models <b>2010</b> ,		7
51	Performance evaluation and model checking join forces. <i>Communications of the ACM</i> , <b>2010</b> , 53, 76-85	2.5	53
50	Ten Years of Performance Evaluation for Concurrent Systems Using CADP. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 128-142	0.9	14

49	Performability assessment by model checking of Markov reward models. <i>Formal Methods in System Design</i> , <b>2010</b> , 36, 1-36	1.4	14
48	Symbolic partition refinement with automatic balancing of time and space. <i>Performance Evaluation</i> , <b>2010</b> , 67, 816-836	1.2	10
47	Safety Verification for Probabilistic Hybrid Systems. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 196-211	0.9	25
46	PARAM: A Model Checker for Parametric Markov Models. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 660-664	0.4	59
45	The How and Why of Interactive Markov Chains. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 311-337	0.9	21
44	Time-Bounded Model Checking of Infinite-State Continuous-Time Markov Chains. <i>Fundamenta Informaticae</i> , <b>2009</b> , 95, 129-155	1	10
43	The Ins and Outs of the Probabilistic Model Checker MPMC <b>2009</b> ,		52
42	Acyclic Minimality by Construction---Almost <b>2009</b> ,		4
41	Compositional Dependability Evaluation for STATEMATE. <i>IEEE Transactions on Software Engineering</i> , <b>2009</b> , 35, 274-292	3.5	24
40	Probabilistic Reachability for Parametric Markov Models. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 88-106	0.9	24
39	Towards Performance Prediction of Compositional Models in Industrial GALS Designs. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 204-218	0.9	29
38	INFAMY: An Infinite-State Markov Model Checker. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 641-647	0.9	10
37	Symbolic Partition Refinement with Dynamic Balancing of Time and Space <b>2008</b> ,		6
36	Improving the effectiveness of system verification. <i>International Journal on Software Tools for Technology Transfer</i> , <b>2008</b> , 10, 111-112	1.3	
35	An Experimental Evaluation of Probabilistic Simulation. <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 37-52	0.9	1
34	Effective Minimization of Acyclic Phase-Type Representations <b>2008</b> , 128-143		5
33	Probabilistic Model Checking Modulo Theories <b>2007</b> ,		14
32	Flow Faster: Efficient Decision Algorithms for Probabilistic Simulations <b>2007</b> , 155-169		7

31	motor:The modest Tool Environment. <i>Lecture Notes in Computer Science</i> , <b>2007</b> , 500-504	0.9	10
30	Deciding Simulations on Probabilistic Automata <b>2007</b> , 207-222		9
29	Does Clock Precision Influence ZigBee's Energy Consumptions? <b>2007</b> , 174-188		5
28	YMCA. <i>Electronic Notes in Theoretical Computer Science</i> , <b>2006</b> , 162, 107-112	0.7	9
27	Bisimulation and Simulation Relations for Markov Chains. <i>Electronic Notes in Theoretical Computer Science</i> , <b>2006</b> , 162, 73-78	0.7	7
26	QoS modelling and analysis with UML-statecharts. <i>Performance Evaluation Review</i> , <b>2005</b> , 32, 28-33	0.4	7
25	Efficient computation of time-bounded reachability probabilities in uniform continuous-time Markov decision processes. <i>Theoretical Computer Science</i> , <b>2005</b> , 345, 2-26	1.1	83
24	Comparative branching-time semantics for Markov chains. <i>Information and Computation</i> , <b>2005</b> , 200, 149-214	1.4	103
23	Axiomatizing divergence. <i>Information and Computation</i> , <b>2005</b> , 203, 115-144	0.8	12
22	Model checking meets performance evaluation. <i>Performance Evaluation Review</i> , <b>2005</b> , 32, 10-15	0.4	12
21	Probabilistic weak simulation is decidable in polynomial time. <i>Information Processing Letters</i> , <b>2004</b> , 89, 123-130	0.8	14
20	A tool for model-checking Markov chains. <i>International Journal on Software Tools for Technology Transfer</i> , <b>2003</b> , 4, 153-172	1.3	44
19	On the use of MTBDDs for performability analysis and verification of stochastic systems. <i>The Journal of Logic and Algebraic Programming</i> , <b>2003</b> , 56, 23-67		44
18	Optimal state-space lumping in Markov chains. <i>Information Processing Letters</i> , <b>2003</b> , 87, 309-315	0.8	141
17	Comparative Branching-Time Semantics for Markov Chains. <i>Lecture Notes in Computer Science</i> , <b>2003</b> , 492-507	0.9	10
16	A Set of Performance and Dependability Analysis Components for CADP. <i>Lecture Notes in Computer Science</i> , <b>2003</b> , 425-430	0.9	9
15	Process algebra for performance evaluation. <i>Theoretical Computer Science</i> , <b>2002</b> , 274, 43-87	1.1	137
14	On Combining Functional Verification and Performance Evaluation Using CADP. <i>Lecture Notes in Computer Science</i> , <b>2002</b> , 410-429	0.9	28

13	Simulation for Continuous-Time Markov Chains. <i>Lecture Notes in Computer Science</i> , <b>2002</b> , 338-354	0.9	10
12	Automated Performance and Dependability Evaluation Using Model Checking. <i>Lecture Notes in Computer Science</i> , <b>2002</b> , 261-289	0.9	11
11	Interactive Markov Chains. <i>Lecture Notes in Computer Science</i> , <b>2002</b> ,	0.9	122
10	Performance Evaluation:= (Process Algebra + Model Checking) X Markov Chains. <i>Lecture Notes in Computer Science</i> , <b>2001</b> , 59-81	0.9	8
9	Process Algebra and Markov Chains. <i>Lecture Notes in Computer Science</i> , <b>2001</b> , 183-231	0.9	20
8	Automated compositional Markov chain generation for a plain-old telephone system. <i>Science of Computer Programming</i> , <b>2000</b> , 36, 97-127	1.1	54
7	Model Checking Continuous-Time Markov Chains by Transient Analysis. <i>Lecture Notes in Computer Science</i> , <b>2000</b> , 358-372	0.9	63
6	On the Logical Characterisation of Performability Properties. <i>Lecture Notes in Computer Science</i> , <b>2000</b> , 780-792	0.9	45
5	Approximative Symbolic Model Checking of Continuous-Time Markov Chains. <i>Lecture Notes in Computer Science</i> , <b>1999</b> , 146-161	0.9	99
4	On Generative Parallel Composition <sup>1</sup> <sup>1</sup> Supported by the NWO/SION project 612-33-006 and the System Validation Centre/CTIT.. <i>Electronic Notes in Theoretical Computer Science</i> , <b>1999</b> , 22, 30-54	0.7	14
3	Bisimulation Algorithms for Stochastic Process Algebras and Their BDD-Based Implementation. <i>Lecture Notes in Computer Science</i> , <b>1999</b> , 244-264	0.9	19
2	Weak bisimulation for fully probabilistic processes. <i>Lecture Notes in Computer Science</i> , <b>1997</b> , 119-130	0.9	53
1	MeGARA: Menu-based Game Abstraction and Abstraction Refinement of Markov Automata. <i>Electronic Proceedings in Theoretical Computer Science</i> , <b>EPTCS</b> ,154, 48-63		5