

Luca Bortolussi

List of Publications by Year in descending order

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124
papers

1,530
citations

430874

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454955

30
g-index

134
all docs

134
docs citations

134
times ranked

641
citing authors

#	ARTICLE	IF	CITATIONS
1	Efficient extraction of seismic reflection with Deep Learning. Computers and Geosciences, 2022, 166, 105190.	4.2	3
2	Abstraction of Markov Population Dynamics via Generative Adversarial Nets. Lecture Notes in Computer Science, 2021, , 19-35.	1.3	4
3	Abstraction-Guided Truncations for Stationary Distributions of Markov Population Models. Lecture Notes in Computer Science, 2021, , 351-371.	1.3	5
4	At the boundaries of syntactic prehistory. Philosophical Transactions of the Royal Society B: Biological Sciences, 2021, 376, 20200197.	4.0	7
5	Refining Mean-field Approximations by Dynamic State Truncation. , 2021, , .		0
6	Refining Mean-field Approximations by Dynamic State Truncation. Proceedings of the ACM on Measurement and Analysis of Computing Systems, 2021, 5, 1-30.	1.8	3
7	Improved estimations of stochastic chemical kinetics by finite-state expansion. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2021, 477, 20200964.	2.1	0
8	Neural Predictive Monitoring Under Partial Observability. Lecture Notes in Computer Science, 2021, , 121-141.	1.3	10
9	Refining Mean-field Approximations by Dynamic State Truncation. Performance Evaluation Review, 2021, 49, 31-32.	0.6	0
10	Fluid approximation of broadcasting systems. Theoretical Computer Science, 2020, 816, 221-248.	0.9	2
11	Rejection-Based Simulation of Non-Markovian Agents on Complex Networks. Studies in Computational Intelligence, 2020, , 349-361.	0.9	5
12	Bounding Mean First Passage Times in Population Continuous-Time Markov Chains. Lecture Notes in Computer Science, 2020, , 155-174.	1.3	5
13	Monitoring Spatio-Temporal Properties (Invited Tutorial). Lecture Notes in Computer Science, 2020, , 21-46.	1.3	3
14	Efficient simulation of non-Markovian dynamics on complex networks. PLoS ONE, 2020, 15, e0241394.	2.5	1
15	Velocity analysis on common offset GPR data: A deep learning approach. , 2020, , .		0
16	Efficient simulation of non-Markovian dynamics on complex networks. , 2020, 15, e0241394.		0
17	Efficient simulation of non-Markovian dynamics on complex networks. , 2020, 15, e0241394.		0
18	Efficient simulation of non-Markovian dynamics on complex networks. , 2020, 15, e0241394.		0

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19	Efficient simulation of non-Markovian dynamics on complex networks. , 2020, 15, e0241394.		0
20	Central Limit Model Checking. ACM Transactions on Computational Logic, 2019, 20, 1-35.	0.9	6
21	Size expansions of mean field approximation: Transient and steady-state analysis. Performance Evaluation, 2019, 129, 60-80.	1.2	19
22	Discontinuation of antidepressants in suicides findings from the Friuli Venezia Giulia Region, Italy, 2005-2014. Basic and Clinical Pharmacology and Toxicology, 2019, 124, 312-320.	2.5	3
23	Bayesian Abstraction of Markov Population Models. Lecture Notes in Computer Science, 2019, , 259-276.	1.3	3
24	Reducing Spreading Processes on Networks to Markov Population Models. Lecture Notes in Computer Science, 2019, , 292-309.	1.3	7
25	Control Variates for Stochastic Simulation of Chemical Reaction Networks. Lecture Notes in Computer Science, 2019, , 42-59.	1.3	6
26	Conformal Predictions for Hybrid System State Classification. Lecture Notes in Computer Science, 2019, , 225-241.	1.3	3
27	Neural Predictive Monitoring. Lecture Notes in Computer Science, 2019, , 129-147.	1.3	15
28	Size Expansions of Mean Field Approximation. Performance Evaluation Review, 2019, 46, 25-26.	0.6	1
29	Automatic Translation of Spatio-Temporal Logics to Streaming-Based Monitoring Applications for IoT-Equipped Autonomous Agents. , 2019, , .		2
30	Bounding First Passage Times in Chemical Reaction Networks. Lecture Notes in Computer Science, 2019, , 379-382.	1.3	0
31	Bayesian Statistical Parameter Synthesis for Linear Temporal Properties of Stochastic Models. Lecture Notes in Computer Science, 2018, , 396-413.	1.3	21
32	Lumping of degree-based mean-field and pair-approximation equations for multistate contact processes. Physical Review E, 2018, 97, 012301.	2.1	8
33	Moment-Based Parameter Estimation for Stochastic Reaction Networks in Equilibrium. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2018, 15, 1180-1192.	3.0	9
34	BAYESIAN STATISTICAL PARAMETRIC VERIFICATION AND SYNTHESIS BY MACHINE LEARNING. , 2018, , .		0
35	Model checking Markov population models by stochastic approximations. Information and Computation, 2018, 262, 189-220.	0.7	10
36	Deep Abstractions of Chemical Reaction Networks. Lecture Notes in Computer Science, 2018, , 21-38.	1.3	10

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37	A Robust Genetic Algorithm for Learning Temporal Specifications from Data. Lecture Notes in Computer Science, 2018, , 323-338.	1.3	25
38	Lumping the Approximate Master Equation for Multistate Processes on Complex Networks. Lecture Notes in Computer Science, 2018, , 157-172.	1.3	2
39	Signal Convolution Logic. Lecture Notes in Computer Science, 2018, , 267-283.	1.3	8
40	Reachability Computation for Switching Diffusions. , 2017, , .		9
41	Policy learning in continuous-time Markov decision processes using Gaussian Processes. Performance Evaluation, 2017, 116, 84-100.	1.2	7
42	Monitoring mobile and spatially distributed cyber-physical systems. , 2017, , .		43
43	Distribution Approximations for the Chemical Master Equation: Comparison of the Method of Moments and the System Size Expansion. Contributions in Mathematical and Computational Sciences, 2017, , 39-66.	0.3	16
44	An Active Learning Approach to the Falsification of Black Box Cyber-Physical Systems. Lecture Notes in Computer Science, 2017, , 3-17.	1.3	18
45	jSSTL - A Tool to Monitor Spatio-Temporal Properties. , 2017, , .		6
46	Mean Field Approximation of Uncertain Stochastic Models. , 2016, , .		9
47	Editorial: Quantitative Aspects of Programming Languages and Systems. Theoretical Computer Science, 2016, 655, 91.	0.9	0
48	Hybrid behaviour of Markov population models. Information and Computation, 2016, 247, 37-86.	0.7	18
49	Smoothed model checking for uncertain Continuous-Time Markov Chains. Information and Computation, 2016, 247, 235-253.	0.7	58
50	Mean-Field Limits Beyond Ordinary Differential Equations. Lecture Notes in Computer Science, 2016, , 61-82.	1.3	5
51	Logic-Based Multi-objective Design of Chemical Reaction Networks. Lecture Notes in Computer Science, 2016, , 164-178.	1.3	3
52	Matching Models Across Abstraction Levels with Gaussian Processes. Lecture Notes in Computer Science, 2016, , 49-66.	1.3	2
53	Policy Learning for Time-Bounded Reachability in Continuous-Time Markov Decision Processes via Doubly-Stochastic Gradient Ascent. Lecture Notes in Computer Science, 2016, , 244-259.	1.3	2
54	Coding Theory: A General Framework and Two Inverse Problems. Fundamenta Informaticae, 2015, 141, 297-310.	0.4	4

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55	Fluid Performability Analysis of Nested Automata Models. Electronic Notes in Theoretical Computer Science, 2015, 310, 27-47.	0.9	4
56	Model checking single agent behaviours by fluid approximation. Information and Computation, 2015, 242, 183-226.	0.7	22
57	On the impact of discreteness and abstractions on modelling noise in gene regulatory networks. Computational Biology and Chemistry, 2015, 56, 98-108.	2.3	4
58	System design of stochastic models using robustness of temporal properties. Theoretical Computer Science, 2015, 587, 3-25.	0.9	72
59	U-Check: Model Checking and Parameter Synthesis Under Uncertainty. Lecture Notes in Computer Science, 2015, , 89-104.	1.3	17
60	Efficient Stochastic Simulation of Systems with Multiple Time Scales via Statistical Abstraction. Lecture Notes in Computer Science, 2015, , 40-51.	1.3	7
61	Qualitative and Quantitative Monitoring of Spatio-Temporal Properties. Lecture Notes in Computer Science, 2015, , 21-37.	1.3	43
62	Machine Learning Methods in Statistical Model Checking and System Design “ Tutorial. Lecture Notes in Computer Science, 2015, , 323-341.	1.3	3
63	Studying Emergent Behaviours in Morphogenesis Using Signal Spatio-Temporal Logic. Lecture Notes in Computer Science, 2015, , 156-172.	1.3	14
64	Specifying and Monitoring Properties of Stochastic Spatio-Temporal Systems in Signal Temporal Logic. , 2015, , .		13
65	Model-Based Whole-Genome Analysis of DNA Methylation Fidelity. Lecture Notes in Computer Science, 2015, , 141-155.	1.3	1
66	Learning and Designing Stochastic Processes from Logical Constraints. Logical Methods in Computer Science, 2015, 11, .	0.4	1
67	Hybrid Systems and Biology. Information and Computation, 2014, 236, 1-2.	0.7	2
68	A Statistical Approach for Computing Reachability of Non-linear and Stochastic Dynamical Systems. Lecture Notes in Computer Science, 2014, , 41-56.	1.3	7
69	Mean-Field Approximation and Quasi-Equilibrium Reduction of Markov Population Models. Lecture Notes in Computer Science, 2014, , 106-121.	1.3	3
70	Stochastic Approximation of Global Reachability Probabilities of Markov Population Models. Lecture Notes in Computer Science, 2014, , 224-239.	1.3	8
71	Temporal Logic Based Monitoring of Assisted Ventilation in Intensive Care Patients. Lecture Notes in Computer Science, 2014, , 391-403.	1.3	33
72	HYPE: Hybrid modelling by composition of flows. Formal Aspects of Computing, 2013, 25, 503-541.	1.8	12

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73	Bounds on the deviation of discrete-time Markov chains from their mean-field model. Performance Evaluation, 2013, 70, 736-749.	1.2	14
74	Continuous approximation of collective system behaviour: A tutorial. Performance Evaluation, 2013, 70, 317-349.	1.2	142
75	(Hybrid) automata and (stochastic) programs * The hybrid automata lattice of a stochastic program. Journal of Logic and Computation, 2013, 23, 761-798.	0.8	13
76	Don't Just Go with the Flow: Cautionary Tales of Fluid Flow Approximation. Lecture Notes in Computer Science, 2013, , 156-171.	1.3	4
77	Stochastic Process Algebra and Stability Analysis of Collective Systems. Lecture Notes in Computer Science, 2013, , 1-15.	1.3	8
78	Learning and Designing Stochastic Processes from Logical Constraints. Lecture Notes in Computer Science, 2013, , 89-105.	1.3	28
79	Model Checking Markov Population Models by Central Limit Approximation. Lecture Notes in Computer Science, 2013, , 123-138.	1.3	19
80	A Temporal Logic Approach to Modular Design of Synthetic Biological Circuits. Lecture Notes in Computer Science, 2013, , 164-177.	1.3	24
81	Checking Individual Agent Behaviours in Markov Population Models by Fluid Approximation. Lecture Notes in Computer Science, 2013, , 113-149.	1.3	6
82	Fluid limits of queueing networks with batches. , 2012, , .		3
83	Fluid limit of an asynchronous optical packet switch with shared per link full range wavelength conversion. , 2012, , .		2
84	Spearman Permutation Distances and Shannon's Distinguishability. Fundamenta Informaticae, 2012, 118, 245-252.	0.4	5
85	Fluid limit of an asynchronous optical packet switch with shared per link full range wavelength conversion. Performance Evaluation Review, 2012, 40, 113-124.	0.6	2
86	Studying cancer-cell populations by programmable models of networks. Network Modeling Analysis in Health Informatics and Bioinformatics, 2012, 1, 117-133.	2.1	4
87	Fluid Approximation of CTMC with Deterministic Delays. , 2012, , .		12
88	Fluid Model Checking. Lecture Notes in Computer Science, 2012, , 333-347.	1.3	37
89	Hybrid Limits of Continuous Time Markov Chains. , 2011, , .		14
90	Hybrid dynamics of stochastic programs. Theoretical Computer Science, 2010, 411, 2052-2077.	0.9	31

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91	Hybrid Semantics for PEPA. , 2010, , .		7
92	Limit Behavior of the Hybrid Approximation of Stochastic Process Algebras. Lecture Notes in Computer Science, 2010, , 367-381.	1.3	7
93	Possibilistic Coding: Error Detection vs. Error Correction. Advances in Intelligent and Soft Computing, 2010, , 41-48.	0.2	6
94	Hybrid Dynamics of Stochastic π -Calculus. Mathematics in Computer Science, 2009, 2, 465-491.	0.4	7
95	The Importance of Being (A Little Bit) Discrete. Electronic Notes in Theoretical Computer Science, 2009, 229, 75-92.	0.9	8
96	CoBiC: Context-dependent Bioambient Calculus. Electronic Notes in Theoretical Computer Science, 2009, 253, 187-201.	0.9	5
97	Stochastic Programs and Hybrid Automata for (Biological) Modeling. Lecture Notes in Computer Science, 2009, , 37-48.	1.3	6
98	HYPE: A Process Algebra for Compositional Flows and Emergent Behaviour. Lecture Notes in Computer Science, 2009, , 305-320.	1.3	9
99	Dynamical Systems and Stochastic Programming: To Ordinary Differential Equations and Back. Lecture Notes in Computer Science, 2009, , 216-267.	1.3	14
100	HYPE Applied to the Modelling of Hybrid Biological Systems. Electronic Notes in Theoretical Computer Science, 2008, 218, 33-51.	0.9	11
101	Modeling Biological Systems in Stochastic Concurrent Constraint Programming. Constraints, 2008, 13, 66-90.	0.7	46
102	On the Approximation of Stochastic Concurrent Constraint Programming by Master Equation. Electronic Notes in Theoretical Computer Science, 2008, 220, 163-180.	0.9	13
103	Hybrid Systems and Biology. , 2008, , 424-448.		28
104	Hybrid approximation of stochastic process algebras for systems biology. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 12599-12606.	0.4	6
105	Hybrid Semantics for Stochastic π -Calculus. Lecture Notes in Computer Science, 2008, , 40-55.	1.3	0
106	Constraint-Based Simulation of Biological Systems Described by Molecular Interaction Maps. , 2007, , .		6
107	Agent-based protein structure prediction. Multiagent and Grid Systems, 2007, 3, 183-197.	0.9	12
108	Stochastic Concurrent Constraint Programming and Differential Equations. Electronic Notes in Theoretical Computer Science, 2007, 190, 27-42.	0.9	26

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109	Scoring predictive models using a reduced representation of proteins: model and energy definition. BMC Structural Biology, 2007, 7, 15.	2.3	25
110	Stochastic Concurrent Constraint Programming. Electronic Notes in Theoretical Computer Science, 2006, 164, 65-80.	0.9	26
111	Codeword distinguishability in minimum diversity decoding. Journal of Discrete Mathematical Sciences and Cryptography, 2006, 9, 487-502.	0.8	3
112	BuST-Bundled Suffix Trees. , 2006, , 91-102.		0
113	A Distributed and Probabilistic Concurrent Constraint Programming Language. Lecture Notes in Computer Science, 2005, , 143-158.	1.3	3
114	Concurrent Methodologies for Global Optimization. Lecture Notes in Computer Science, 2005, , 441-443.	1.3	0
115	FUZZY POSSIBILITIES AS UPPER PREVISIONS. International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, 2004, 12, 559-574.	1.9	1
116	Neural predictive monitoring and a comparison of frequentist and Bayesian approaches. International Journal on Software Tools for Technology Transfer, 0, , 1.	1.9	11
117	On the Robustness of Temporal Properties for Stochastic Models. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 125, 3-19.	0.8	35
118	CARMA: Collective Adaptive Resource-sharing Markovian Agents. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 194, 16-31.	0.8	30
119	HYPE with stochastic events. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 57, 120-133.	0.8	7
120	Hybrid Semantics of Stochastic Programs with Dynamic Reconfiguration. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 6, 63-76.	0.8	9
121	Programmable models of growth and mutation of cancer-cell populations. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 67, 19-33.	0.8	3
122	Hybrid performance modelling of opportunistic networks. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 85, 106-121.	0.8	12
123	Efficient Checking of Individual Rewards Properties in Markov Population Models. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 194, 32-47.	0.8	3
124	Location Aggregation of Spatial Population CTMC Models. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 227, 30-43.	0.8	0