

Ezio Bartocci

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.

115
papers

1,786
citations

24
h-index

37
g-index

121
ext. papers

2,083
ext. citations

1.5
avg, IF

5.28
L-index

#	Paper	IF	Citations
115	Information-flow Interfaces. <i>Lecture Notes in Computer Science</i> , 2022 , 3-22	0.9	1
114	Probabilistic Hyperproperties with Rewards. <i>Lecture Notes in Computer Science</i> , 2022 , 656-673	0.9	
113	Online monitoring of spatio-temporal properties for imprecise signals 2021 ,		2
112	HyperProb: A Model Checker for Probabilistic Hyperproperties. <i>Lecture Notes in Computer Science</i> , 2021 , 657-666	0.9	3
111	The Probabilistic Termination Tool Amber. <i>Lecture Notes in Computer Science</i> , 2021 , 667-675	0.9	1
110	Mining Shape Expressions with Shapelt. <i>Lecture Notes in Computer Science</i> , 2021 , 110-117	0.9	
109	Modeling and Analysis of Cardiac Hybrid Cellular Automata via GPU-Accelerated Monte Carlo Simulation. <i>Mathematics</i> , 2021 , 9, 164	2.3	5
108	Adaptive Testing for Specification Coverage in CPS Models. <i>IFAC-PapersOnLine</i> , 2021 , 54, 229-234	0.7	2
107	A Normative Supervisor for Reinforcement Learning Agents. <i>Lecture Notes in Computer Science</i> , 2021 , 565-576	0.9	3
106	A Novel Spatial-Temporal Specification-Based Monitoring System for Smart Cities. <i>IEEE Internet of Things Journal</i> , 2021 , 8, 11793-11806	10.7	9
105	Predictive Monitoring with Logic-Calibrated Uncertainty for Cyber-Physical Systems. <i>Transactions on Embedded Computing Systems</i> , 2021 , 20, 1-25	1.8	2
104	Automated Termination Analysis of Polynomial Probabilistic Programs. <i>Lecture Notes in Computer Science</i> , 2021 , 491-518	0.9	7
103	Mining Shape Expressions From Positive Examples. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2020 , 39, 3809-3820	2.5	5
102	SaSTL: Spatial Aggregation Signal Temporal Logic for Runtime Monitoring in Smart Cities 2020 ,		8
101	CPSDebug: a tool for explanation of failures in cyber-physical systems 2020 ,		2
100	Probabilistic Hyperproperties with Nondeterminism. <i>Lecture Notes in Computer Science</i> , 2020 , 518-534	0.9	7
99	Mora - Automatic Generation of Moment-Based Invariants. <i>Lecture Notes in Computer Science</i> , 2020 , 492-498	0.9	6

98	Monitoring Spatio-Temporal Properties (Invited Tutorial). <i>Lecture Notes in Computer Science</i> , 2020 , 21-46.	0.9	1
97	MoonLight: A Lightweight Tool for Monitoring Spatio-Temporal Properties. <i>Lecture Notes in Computer Science</i> , 2020 , 417-428	0.9	5
96	Runtime Verification of Autonomous Driving Systems in CARLA. <i>Lecture Notes in Computer Science</i> , 2020 , 172-183	0.9	7
95	Analysis of Bayesian Networks via Prob-Solvable Loops. <i>Lecture Notes in Computer Science</i> , 2020 , 221-241.	0.9	6
94	Automated Synthesis of Safe Digital Controllers for Sampled-Data Stochastic Nonlinear Systems. <i>IEEE Access</i> , 2020 , 8, 180825-180843	3.5	3
93	TOOLympics 2019: An Overview of Competitions in Formal Methods. <i>Lecture Notes in Computer Science</i> , 2019 , 3-24	0.9	25
92	International Competition on Runtime Verification (CRV). <i>Lecture Notes in Computer Science</i> , 2019 , 41-49.	0.9	1
91	A survey of challenges for runtime verification from advanced application domains (beyond software). <i>Formal Methods in System Design</i> , 2019 , 54, 279-335	1.4	32
90	Adaptive Fault Detection Exploiting Redundancy with Uncertainties in Space and Time 2019 ,		1
89	Quantitative Regular Expressions for Arrhythmia Detection. <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , 2019 , 16, 1586-1597	3	7
88	Piecewise Robust Barrier Tubes for Nonlinear Hybrid Systems with Uncertainty. <i>Lecture Notes in Computer Science</i> , 2019 , 123-141	0.9	0
87	Extending a Hodgkin-Huxley Model for Larval Drosophila Muscle Excitability via Particle Swarm Fitting. <i>Lecture Notes in Computer Science</i> , 2019 , 120-139	0.9	
86	Automatic Failure Explanation in CPS Models. <i>Lecture Notes in Computer Science</i> , 2019 , 69-86	0.9	13
85	Automatic Generation of Moment-Based Invariants for Prob-Solvable Loops. <i>Lecture Notes in Computer Science</i> , 2019 , 255-276	0.9	14
84	Control from Signal Temporal Logic Specifications with Smooth Cumulative Quantitative Semantics 2019 ,		14
83	Capacitive Soil Moisture Sensor Node for IoT in Agriculture and Home 2019 ,		4
82	A Roadmap Toward the Resilient Internet of Things for Cyber-Physical Systems. <i>IEEE Access</i> , 2019 , 7, 13260-13283	3.5	52
81	First international Competition on Runtime Verification: rules, benchmarks, tools, and final results of CRV 2014. <i>International Journal on Software Tools for Technology Transfer</i> , 2019 , 21, 31-70	1.3	39

80	Parallel reachability analysis of hybrid systems in XSpeed. <i>International Journal on Software Tools for Technology Transfer</i> , 2019 , 21, 401-423	1.3	8
79	Introduction to Runtime Verification. <i>Lecture Notes in Computer Science</i> , 2018 , 1-33	0.9	90
78	Specification-Based Monitoring of Cyber-Physical Systems: A Survey on Theory, Tools and Applications. <i>Lecture Notes in Computer Science</i> , 2018 , 135-175	0.9	95
77	A Formal Methods Approach to Pattern Recognition and Synthesis in Reaction Diffusion Networks. <i>IEEE Transactions on Control of Network Systems</i> , 2018 , 5, 308-320	4	17
76	Reachable Set Over-Approximation for Nonlinear Systems Using Piecewise Barrier Tubes. <i>Lecture Notes in Computer Science</i> , 2018 , 449-467	0.9	6
75	Quantitative monitoring of STL with edit distance. <i>Formal Methods in System Design</i> , 2018 , 53, 83-112	1.4	24
74	Signal Convolution Logic. <i>Lecture Notes in Computer Science</i> , 2018 , 267-283	0.9	5
73	Parameter-Independent Strategies for pMDPs via POMDPs. <i>Lecture Notes in Computer Science</i> , 2018 , 53-70	0.9	5
72	RV-TheToP: Runtime Verification from Theory to the Industry Practice (Track Introduction). <i>Lecture Notes in Computer Science</i> , 2018 , 3-8	0.9	
71	A Counting Semantics for Monitoring LTL Specifications over Finite Traces. <i>Lecture Notes in Computer Science</i> , 2018 , 547-564	0.9	6
70	Verifying nonlinear analog and mixed-signal circuits with inputs. <i>IFAC-PapersOnLine</i> , 2018 , 51, 241-246	0.7	3
69	Guest Editors Introduction to the Special Section on the 14th International Conference on Computational Methods in Systems Biology (CMSB 2016). <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , 2018 , 15, 1122-1123	3	
68	Monitoring, Learning and Control of Cyber-Physical Systems with STL (Tutorial). <i>Lecture Notes in Computer Science</i> , 2018 , 35-42	0.9	2
67	An Algebraic Framework for Runtime Verification. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2018 , 37, 2233-2243	2.5	13
66	A Robust Genetic Algorithm for Learning Temporal Specifications from Data. <i>Lecture Notes in Computer Science</i> , 2018 , 323-338	0.9	17
65	Localizing Faults in Simulink/Stateflow Models with STL 2018 ,		17
64	Policy learning in continuous-time Markov decision processes using Gaussian Processes. <i>Performance Evaluation</i> , 2017 , 116, 84-100	1.2	5
63	Introduction to the special issue on runtime verification. <i>Formal Methods in System Design</i> , 2017 , 51, 1-4	1.4	1

62	Monitoring mobile and spatially distributed cyber-physical systems 2017 ,		32
61	A Linear Programming-based Iterative Approach to Stabilizing Polynomial Dynamics. <i>IFAC-PapersOnLine</i> , 2017 , 50, 10462-10469	0.7	3
60	Runtime Monitoring with Recovery of the SENT Communication Protocol. <i>Lecture Notes in Computer Science</i> , 2017 , 336-355	0.9	12
59	Quantitative Regular Expressions for Arrhythmia Detection Algorithms. <i>Lecture Notes in Computer Science</i> , 2017 , 23-39	0.9	9
58	SMT-based Synthesis of Safe and Robust PID Controllers for Stochastic Hybrid Systems. <i>Lecture Notes in Computer Science</i> , 2017 , 131-146	0.9	5
57	ARES: Adaptive Receding-Horizon Synthesis of Optimal Plans. <i>Lecture Notes in Computer Science</i> , 2017 , 286-302	0.9	5
56	Computing with Biophysical and Hardware-Efficient Neural Models. <i>Lecture Notes in Computer Science</i> , 2017 , 535-547	0.9	
55	A Probabilistic Small Model Theorem to Assess Confidentiality of Dispersed Cloud Storage. <i>Lecture Notes in Computer Science</i> , 2017 , 123-139	0.9	1
54	The HARMONIA Project: Hardware Monitoring for Automotive Systems-of-Systems. <i>Lecture Notes in Computer Science</i> , 2016 , 371-379	0.9	8
53	Applying Runtime Monitoring for Automotive Electronic Development. <i>Lecture Notes in Computer Science</i> , 2016 , 462-469	0.9	11
52	Quantitative Monitoring of STL with Edit Distance. <i>Lecture Notes in Computer Science</i> , 2016 , 201-218	0.9	19
51	Runtime Verification and Enforcement, the (Industrial) Application Perspective (Track Introduction). <i>Lecture Notes in Computer Science</i> , 2016 , 333-338	0.9	3
50	Preface of the special issue on Model Checking of Software. <i>International Journal on Software Tools for Technology Transfer</i> , 2016 , 18, 355-357	1.3	0
49	Temporal Logic as Filtering 2016 ,		20
48	Monitoring of MTL specifications with IBM's spiking-neuron model 2016 ,		8
47	Discrete Abstraction of Multiaffine Systems. <i>Lecture Notes in Computer Science</i> , 2016 , 128-144	0.9	2
46	Policy Learning for Time-Bounded Reachability in Continuous-Time Markov Decision Processes via Doubly-Stochastic Gradient Ascent. <i>Lecture Notes in Computer Science</i> , 2016 , 244-259	0.9	2
45	Computational Modeling, Formal Analysis, and Tools for Systems Biology. <i>PLoS Computational Biology</i> , 2016 , 12, e1004591	5	115

44	Parallel reachability analysis for hybrid systems 2016 ,		7
43	System design of stochastic models using robustness of temporal properties. <i>Theoretical Computer Science</i> , 2015 , 587, 3-25	1.1	52
42	SpaTeL 2015 ,		61
41	Model-order reduction of ion channel dynamics using approximate bisimulation. <i>Theoretical Computer Science</i> , 2015 , 599, 34-46	1.1	5
40	From signal temporal logic to FPGA monitors 2015 ,		32
39	XSpeed: Accelerating Reachability Analysis on Multi-core Processors. <i>Lecture Notes in Computer Science</i> , 2015 , 3-18	0.9	14
38	Abstraction-Based Parameter Synthesis for Multiaffine Systems. <i>Lecture Notes in Computer Science</i> , 2015 , 19-35	0.9	16
37	Studying Emergent Behaviours in Morphogenesis Using Signal Spatio-Temporal Logic. <i>Lecture Notes in Computer Science</i> , 2015 , 156-172	0.9	10
36	A formal methods approach to pattern synthesis in reaction diffusion systems 2014 ,		23
35	Towards a GPGPU-parallel SPIN model checker 2014 ,		17
34	Hybrid Systems and Biology. <i>Information and Computation</i> , 2014 , 236, 1-2	0.8	2
33	Data-Driven Statistical Learning of Temporal Logic Properties. <i>Lecture Notes in Computer Science</i> , 2014 , 23-37	0.9	55
32	First International Competition on Software for Runtime Verification. <i>Lecture Notes in Computer Science</i> , 2014 , 1-9	0.9	29
31	Medical Cyber-Physical Systems. <i>Lecture Notes in Computer Science</i> , 2014 , 353-355	0.9	1
30	Temporal Logic Based Monitoring of Assisted Ventilation in Intensive Care Patients. <i>Lecture Notes in Computer Science</i> , 2014 , 391-403	0.9	26
29	Curvature analysis of cardiac excitation wavefronts. <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , 2013 , 10, 323-36	3	10
28	Adaptive Runtime Verification. <i>Lecture Notes in Computer Science</i> , 2013 , 168-182	0.9	33
27	A Temporal Logic Approach to Modular Design of Synthetic Biological Circuits. <i>Lecture Notes in Computer Science</i> , 2013 , 164-177	0.9	22

26	Runtime Verification with Particle Filtering. <i>Lecture Notes in Computer Science</i> , 2013 , 149-166	0.9	28
25	Runtime Verification with State Estimation. <i>Lecture Notes in Computer Science</i> , 2012 , 193-207	0.9	57
24	On Temporal Logic and Signal Processing. <i>Lecture Notes in Computer Science</i> , 2012 , 92-106	0.9	47
23	Approximate Bisimulations for Sodium Channel Dynamics. <i>Lecture Notes in Computer Science</i> , 2012 , 267-287	0.9	8
22	Multiple Verification in Complex Biological Systems: The Bone Remodelling Case Study. <i>Lecture Notes in Computer Science</i> , 2012 , 53-76	0.9	7
21	UBioLab: a web-laboratory for ubiquitous in-silico experiments. <i>Journal of Integrative Bioinformatics</i> , 2012 , 9, 192	3.8	
20	Modeling the cell cycle: from deterministic models to hybrid systems. <i>BioSystems</i> , 2011 , 105, 34-40	1.9	8
19	Teaching cardiac electrophysiology modeling to undergraduate students: laboratory exercises and GPU programming for the study of arrhythmias and spiral wave dynamics. <i>American Journal of Physiology - Advances in Physiology Education</i> , 2011 , 35, 427-37	1.9	16
18	Model Repair for Probabilistic Systems. <i>Lecture Notes in Computer Science</i> , 2011 , 326-340	0.9	63
17	From Cardiac Cells to Genetic Regulatory Networks. <i>Lecture Notes in Computer Science</i> , 2011 , 396-411	0.9	54
16	Detecting synchronisation of biological oscillators by model checking. <i>Theoretical Computer Science</i> , 2010 , 411, 1999-2018	1.1	18
15	Learning and detecting emergent behavior in networks of cardiac myocytes. <i>Communications of the ACM</i> , 2009 , 52, 97-105	2.5	55
14	Model Checking Biological Oscillators. <i>Electronic Notes in Theoretical Computer Science</i> , 2009 , 229, 41-58	0.7	12
13	CellExcite: an efficient simulation environment for excitable cells. <i>BMC Bioinformatics</i> , 2008 , 9 Suppl 2, S3	3.6	12
12	Spatial Networks of Hybrid I/O Automata for Modeling Excitable Tissue. <i>Electronic Notes in Theoretical Computer Science</i> , 2008 , 194, 51-67	0.7	3
11	StonyCam: A Formal Framework for Modeling, Analyzing and Regulating Cardiac Myocytes. <i>Lecture Notes in Computer Science</i> , 2008 , 493-502	0.9	1
10	An agent-based multilayer architecture for bioinformatics grids. <i>IEEE Transactions on Nanobioscience</i> , 2007 , 6, 142-8	3.4	12
9	Biowep: a workflow enactment portal for bioinformatics applications. <i>BMC Bioinformatics</i> , 2007 , 8 Suppl 1, S19	3.6	24

8	BioWMS: a web-based Workflow Management System for bioinformatics. <i>BMC Bioinformatics</i> , 2007 , 8 Suppl 1, S2	3.6	26
7	Enacting Proactive Workflows Engine in e-Science. <i>Lecture Notes in Computer Science</i> , 2006 , 1012-1015	0.9	
6	Expressionview: visualization of quantitative trait loci and gene-expression data in Ensembl. <i>Genome Biology</i> , 2003 , 4, R77	18.3	16
5	Monitoring with uncertainty. <i>Electronic Proceedings in Theoretical Computer Science, EPTCS</i> ,124, 1-4		4
4	Sampling-based Decentralized Monitoring for Networked Embedded Systems. <i>Electronic Proceedings in Theoretical Computer Science, EPTCS</i> ,124, 85-99		7
3	On the Robustness of Temporal Properties for Stochastic Models. <i>Electronic Proceedings in Theoretical Computer Science, EPTCS</i> ,125, 3-19		30
2	SEA-PARAM: Exploring Schedulers in Parametric MDPs. <i>Electronic Proceedings in Theoretical Computer Science, EPTCS</i> ,250, 25-38		2
1	CPSDebug: Automatic failure explanation in CPS models. <i>International Journal on Software Tools for Technology Transfer</i> ,1	1.3	3