# Ezio Bartocci

## List of Publications by Citations



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|---|---|---|---|
| 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 | Computational Modeling, Formal Analysis, and Tools for Systems Biology. *PLoS Computational Biology*, **2016**, 12, e1004591 | 5 | 115 |
| 114 | Specification-Based Monitoring of Cyber-Physical Systems: A Survey on Theory, Tools and Applications. *Lecture Notes in Computer Science*, **2018**, 135-175 | 0.9 | 95 |
| 113 | Introduction to Runtime Verification. *Lecture Notes in Computer Science*, **2018**, 1-33 | 0.9 | 90 |
| 112 | Model Repair for Probabilistic Systems. *Lecture Notes in Computer Science*, **2011**, 326-340 | 0.9 | 63 |
| 111 | SpaTeL **2015**, | | 61 |
| 110 | Runtime Verification with State Estimation. *Lecture Notes in Computer Science*, **2012**, 193-207 | 0.9 | 57 |
| 109 | Learning and detecting emergent behavior in networks of cardiac myocytes. *Communications of the ACM*, **2009**, 52, 97-105 | 2.5 | 55 |
| 108 | Data-Driven Statistical Learning of Temporal Logic Properties. *Lecture Notes in Computer Science*, **2014**, 23-37 | 0.9 | 55 |
| 107 | From Cardiac Cells to Genetic Regulatory Networks. *Lecture Notes in Computer Science*, **2011**, 396-411 | 0.9 | 54 |
| 106 | System design of stochastic models using robustness of temporal properties. *Theoretical Computer Science*, **2015**, 587, 3-25 | 1.1 | 52 |
| 105 | A Roadmap Toward the Resilient Internet of Things for Cyber-Physical Systems. *IEEE Access*, **2019**, 7, 13260-13283 | 3.5 | 52 |
| 104 | On Temporal Logic and Signal Processing. *Lecture Notes in Computer Science*, **2012**, 92-106 | 0.9 | 47 |
| 103 | First international Competition on Runtime Verification: rules, benchmarks, tools, and final results of CRV 2014. *International Journal on Software Tools for Technology Transfer*, **2019**, 21, 31-70 | 1.3 | 39 |
| 102 | Adaptive Runtime Verification. *Lecture Notes in Computer Science*, **2013**, 168-182 | 0.9 | 33 |
| 101 | A survey of challenges for runtime verification from advanced application domains (beyond software). *Formal Methods in System Design*, **2019**, 54, 279-335 | 1.4 | 32 |
| 100 | Monitoring mobile and spatially distributed cyber-physical systems **2017**, | | 32 |
| 99 | From signal temporal logic to FPGA monitors **2015**, | | 32 |

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| 98 | On the Robustness of Temporal Properties for Stochastic Models. *Electronic Proceedings in Theoretical Computer Science, EPTCS*,125, 3-19 | | 30 |
| 97 | First International Competition on Software for Runtime Verification. *Lecture Notes in Computer Science*, **2014**, 1-9 | 0.9 | 29 |
| 96 | Runtime Verification with Particle Filtering. *Lecture Notes in Computer Science*, **2013**, 149-166 | 0.9 | 28 |
| 95 | BioWMS: a web-based Workflow Management System for bioinformatics. *BMC Bioinformatics*, **2007**, 8 Suppl 1, S2 | 3.6 | 26 |
| 94 | Temporal Logic Based Monitoring of Assisted Ventilation in Intensive Care Patients. *Lecture Notes in Computer Science*, **2014**, 391-403 | 0.9 | 26 |
| 93 | TOOLympics 2019: An Overview of Competitions in Formal Methods. *Lecture Notes in Computer Science*, **2019**, 3-24 | 0.9 | 25 |
| 92 | Quantitative monitoring of STL with edit distance. *Formal Methods in System Design*, **2018**, 53, 83-112 | 1.4 | 24 |
| 91 | Biowep: a workflow enactment portal for bioinformatics applications. *BMC Bioinformatics*, **2007**, 8 Suppl 1, S19 | 3.6 | 24 |
| 90 | A formal methods approach to pattern synthesis in reaction diffusion systems **2014**, | | 23 |
| 89 | A Temporal Logic Approach to Modular Design of Synthetic Biological Circuits. *Lecture Notes in Computer Science*, **2013**, 164-177 | 0.9 | 22 |
| 88 | Temporal Logic as Filtering **2016**, | | 20 |
| 87 | Quantitative Monitoring of STL with Edit Distance. *Lecture Notes in Computer Science*, **2016**, 201-218 | 0.9 | 19 |
| 86 | Detecting synchronisation of biological oscillators by model checking. *Theoretical Computer Science*, **2010**, 411, 1999-2018 | 1.1 | 18 |
| 85 | A Formal Methods Approach to Pattern Recognition and Synthesis in Reaction Diffusion Networks. *IEEE Transactions on Control of Network Systems*, **2018**, 5, 308-320 | 4 | 17 |
| 84 | Towards a GPGPU-parallel SPIN model checker **2014**, | | 17 |
| 83 | A Robust Genetic Algorithm for Learning Temporal Specifications from Data. *Lecture Notes in Computer Science*, **2018**, 323-338 | 0.9 | 17 |
| 82 | Localizing Faults in Simulink/Stateflow Models with STL **2018**, | | 17 |
| 81 | Teaching cardiac electrophysiology modeling to undergraduate students: laboratory exercises and GPU programming for the study of arrhythmias and spiral wave dynamics. *American Journal of Physiology - Advances in Physiology Education*, **2011**, 35, 427-37 | 1.9 | 16 |

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| 80 | Expressionview: visualization of quantitative trait loci and gene-expression data in Ensembl. *Genome Biology*, **2003**, 4, R77 | 18.3 | 16 |
| 79 | Abstraction-Based Parameter Synthesis for Multiaffine Systems. *Lecture Notes in Computer Science*, **2015**, 19-35 | 0.9 | 16 |
| 78 | Automatic Generation of Moment-Based Invariants for Prob-Solvable Loops. *Lecture Notes in Computer Science*, **2019**, 255-276 | 0.9 | 14 |
| 77 | XSpeed: Accelerating Reachability Analysis on Multi-core Processors. *Lecture Notes in Computer Science*, **2015**, 3-18 | 0.9 | 14 |
| 76 | Control from Signal Temporal Logic Specifications with Smooth Cumulative Quantitative Semantics **2019**, | | 14 |
| 75 | Automatic Failure Explanation in CPS Models. *Lecture Notes in Computer Science*, **2019**, 69-86 | 0.9 | 13 |
| 74 | An Algebraic Framework for Runtime Verification. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2018**, 37, 2233-2243 | 2.5 | 13 |
| 73 | Model Checking Biological Oscillators. *Electronic Notes in Theoretical Computer Science*, **2009**, 229, 41-58 | 0.7 | 12 |
| 72 | CellExcite: an efficient simulation environment for excitable cells. *BMC Bioinformatics*, **2008**, 9 Suppl 2, S3 | 3.6 | 12 |
| 71 | An agent-based multilayer architecture for bioinformatics grids. *IEEE Transactions on Nanobioscience*, **2007**, 6, 142-8 | 3.4 | 12 |
| 70 | Runtime Monitoring with Recovery of the SENT Communication Protocol. *Lecture Notes in Computer Science*, **2017**, 336-355 | 0.9 | 12 |
| 69 | Applying Runtime Monitoring for Automotive Electronic Development. *Lecture Notes in Computer Science*, **2016**, 462-469 | 0.9 | 11 |
| 68 | Curvature analysis of cardiac excitation wavefronts. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, **2013**, 10, 323-36 | 3 | 10 |
| 67 | Studying Emergent Behaviours in Morphogenesis Using Signal Spatio-Temporal Logic. *Lecture Notes in Computer Science*, **2015**, 156-172 | 0.9 | 10 |
| 66 | Quantitative Regular Expressions for Arrhythmia Detection Algorithms. *Lecture Notes in Computer Science*, **2017**, 23-39 | 0.9 | 9 |
| 65 | A Novel Spatial–Temporal Specification-Based Monitoring System for Smart Cities. *IEEE Internet of Things Journal*, **2021**, 8, 11793-11806 | 10.7 | 9 |
| 64 | SaSTL: Spatial Aggregation Signal Temporal Logic for Runtime Monitoring in Smart Cities **2020**, | | 8 |
| 63 | The HARMONIA Project: Hardware Monitoring for Automotive Systems-of-Systems. *Lecture Notes in Computer Science*, **2016**, 371-379 | 0.9 | 8 |

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| 62 | Modeling the cell cycle: from deterministic models to hybrid systems. *BioSystems*, **2011**, 105, 34-40 | 1.9 | 8 |
| 61 | Monitoring of MTL specifications with IBM's spiking-neuron model **2016**, | | 8 |
| 60 | Approximate Bisimulations for Sodium Channel Dynamics. *Lecture Notes in Computer Science*, **2012**, 267-287 | 0.9 | 8 |
| 59 | Parallel reachability analysis of hybrid systems in XSpeed. *International Journal on Software Tools for Technology Transfer*, **2019**, 21, 401-423 | 1.3 | 8 |
| 58 | Quantitative Regular Expressions for Arrhythmia Detection. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, **2019**, 16, 1586-1597 | 3 | 7 |
| 57 | Probabilistic Hyperproperties with Nondeterminism. *Lecture Notes in Computer Science*, **2020**, 518-534 | 0.9 | 7 |
| 56 | Sampling-based Decentralized Monitoring for Networked Embedded Systems. *Electronic Proceedings in Theoretical Computer Science, EPTCS*,124, 85-99 | | 7 |
| 55 | Runtime Verification of Autonomous Driving Systems in CARLA. *Lecture Notes in Computer Science*, **2020**, 172-183 | 0.9 | 7 |
| 54 | Multiple Verification in Complex Biological Systems: The Bone Remodelling Case Study. *Lecture Notes in Computer Science*, **2012**, 53-76 | 0.9 | 7 |
| 53 | Parallel reachability analysis for hybrid systems **2016**, | | 7 |
| 52 | Automated Termination Analysis of Polynomial Probabilistic Programs. *Lecture Notes in Computer Science*, **2021**, 491-518 | 0.9 | 7 |
| 51 | Reachable Set Over-Approximation for Nonlinear Systems Using Piecewise Barrier Tubes. *Lecture Notes in Computer Science*, **2018**, 449-467 | 0.9 | 6 |
| 50 | Mora - Automatic Generation of Moment-Based Invariants. *Lecture Notes in Computer Science*, **2020**, 492-498 | 0.9 | 6 |
| 49 | Analysis of Bayesian Networks via Prob-Solvable Loops. *Lecture Notes in Computer Science*, **2020**, 221-241 | 0.9 | 6 |
| 48 | A Counting Semantics for Monitoring LTL Specifications over Finite Traces. *Lecture Notes in Computer Science*, **2018**, 547-564 | 0.9 | 6 |
| 47 | Model-order reduction of ion channel dynamics using approximate bisimulation. *Theoretical Computer Science*, **2015**, 599, 34-46 | 1.1 | 5 |
| 46 | Mining Shape Expressions From Positive Examples. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, **2020**, 39, 3809-3820 | 2.5 | 5 |
| 45 | Policy learning in continuous-time Markov decision processes using Gaussian Processes. *Performance Evaluation*, **2017**, 116, 84-100 | 1.2 | 5 |

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| 44 | Signal Convolution Logic. *Lecture Notes in Computer Science*, **2018**, 267-283 | 0.9 | 5 |
| 43 | Parameter-Independent Strategies for pMDPs via POMDPs. *Lecture Notes in Computer Science*, **2018**, 53-70 | 0.9 | 5 |
| 42 | MoonLight: A Lightweight Tool for Monitoring Spatio-Temporal Properties. *Lecture Notes in Computer Science*, **2020**, 417-428 | 0.9 | 5 |
| 41 | SMT-based Synthesis of Safe and Robust PID Controllers for Stochastic Hybrid Systems. *Lecture Notes in Computer Science*, **2017**, 131-146 | 0.9 | 5 |
| 40 | ARES: Adaptive Receding-Horizon Synthesis of Optimal Plans. *Lecture Notes in Computer Science*, **2017**, 286-302 | 0.9 | 5 |
| 39 | Modeling and Analysis of Cardiac Hybrid Cellular Automata via GPU-Accelerated Monte Carlo Simulation. *Mathematics*, **2021**, 9, 164 | 2.3 | 5 |
| 38 | Monitoring with uncertainty. *Electronic Proceedings in Theoretical Computer Science, EPTCS*,124, 1-4 | | 4 |
| 37 | Capacitive Soil Moisture Sensor Node for IoT in Agriculture and Home **2019**, | | 4 |
| 36 | Runtime Verification and Enforcement, the (Industrial) Application Perspective (Track Introduction). *Lecture Notes in Computer Science*, **2016**, 333-338 | 0.9 | 3 |
| 35 | A Linear Programming-based Iterative Approach to Stabilizing Polynomial Dynamics. *IFAC-PapersOnLine*, **2017**, 50, 10462-10469 | 0.7 | 3 |
| 34 | Spatial Networks of Hybrid I/O Automata for Modeling Excitable Tissue. *Electronic Notes in Theoretical Computer Science*, **2008**, 194, 51-67 | 0.7 | 3 |
| 33 | HyperProb: A Model Checker for Probabilistic Hyperproperties. *Lecture Notes in Computer Science*, **2021**, 657-666 | 0.9 | 3 |
| 32 | Automated Synthesis of Safe Digital Controllers for Sampled-Data Stochastic Nonlinear Systems. *IEEE Access*, **2020**, 8, 180825-180843 | 3.5 | 3 |
| 31 | A Normative Supervisor for Reinforcement Learning Agents. *Lecture Notes in Computer Science*, **2021**, 565-576 | 0.9 | 3 |
| 30 | Verifying nonlinear analog and mixed-signal circuits with inputs. *IFAC-PapersOnLine*, **2018**, 51, 241-246 | 0.7 | 3 |
| 29 | CPSDebug: Automatic failure explanation in CPS models. *International Journal on Software Tools for Technology Transfer*,1 | 1.3 | 3 |
| 28 | Hybrid Systems and Biology. *Information and Computation*, **2014**, 236, 1-2 | 0.8 | 2 |
| 27 | Online monitoring of spatio-temporal properties for imprecise signals **2021**, | | 2 |

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| 26 | CPSDebug: a tool for explanation of failures in cyber-physical systems **2020**, | | 2 |
| 25 | Discrete Abstraction of Multiaffine Systems. *Lecture Notes in Computer Science*, **2016**, 128-144 | 0.9 | 2 |
| 24 | 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 | 0.9 | 2 |
| 23 | SEA-PARAM: Exploring Schedulers in Parametric MDPs. *Electronic Proceedings in Theoretical Computer Science, EPTCS*,250, 25-38 | | 2 |
| 22 | Adaptive Testing for Specification Coverage in CPS Models. *IFAC-PapersOnLine*, **2021**, 54, 229-234 | 0.7 | 2 |
| 21 | Monitoring, Learning and Control of Cyber-Physical Systems with STL (Tutorial). *Lecture Notes in Computer Science*, **2018**, 35-42 | 0.9 | 2 |
| 20 | Predictive Monitoring with Logic-Calibrated Uncertainty for Cyber-Physical Systems. *Transactions on Embedded Computing Systems*, **2021**, 20, 1-25 | 1.8 | 2 |
| 19 | International Competition on Runtime Verification (CRV). *Lecture Notes in Computer Science*, **2019**, 41-49 | 0.9 | 1 |
| 18 | Adaptive Fault Detection Exploiting Redundancy with Uncertainties in Space and Time **2019**, | | 1 |
| 17 | Introduction to the special issue on runtime verification. *Formal Methods in System Design*, **2017**, 51, 1-4 | 1.4 | 1 |
| 16 | The Probabilistic Termination Tool Amber. *Lecture Notes in Computer Science*, **2021**, 667-675 | 0.9 | 1 |
| 15 | Monitoring Spatio-Temporal Properties (Invited Tutorial). *Lecture Notes in Computer Science*, **2020**, 21-46 | 0.9 | 1 |
| 14 | StonyCam: A Formal Framework for Modeling, Analyzing and Regulating Cardiac Myocytes. *Lecture Notes in Computer Science*, **2008**, 493-502 | 0.9 | 1 |
| 13 | Medical Cyber-Physical Systems. *Lecture Notes in Computer Science*, **2014**, 353-355 | 0.9 | 1 |
| 12 | A Probabilistic Small Model Theorem to Assess Confidentiality of Dispersed Cloud Storage. *Lecture Notes in Computer Science*, **2017**, 123-139 | 0.9 | 1 |
| 11 | Information-flow Interfaces. *Lecture Notes in Computer Science*, **2022**, 3-22 | 0.9 | 1 |
| 10 | Preface of the special issue on Model Checking of Software. *International Journal on Software Tools for Technology Transfer*, **2016**, 18, 355-357 | 1.3 | 0 |
| 9 | Piecewise Robust Barrier Tubes for Nonlinear Hybrid Systems with Uncertainty. *Lecture Notes in Computer Science*, **2019**, 123-141 | 0.9 | 0 |

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| 8 | Mining Shape Expressions with ShapeIt. *Lecture Notes in Computer Science*, **2021**, 110-117 | 0.9 |
| 7 | Enacting Proactive Workflows Engine in e-Science. *Lecture Notes in Computer Science*, **2006**, 1012-1015 | 0.9 |
| 6 | RV-TheToP: Runtime Verification from Theory to the Industry Practice (Track Introduction). *Lecture Notes in Computer Science*, **2018**, 3-8 | 0.9 |
| 5 | Extending a Hodgkin-Huxley Model for Larval Drosophila Muscle Excitability via Particle Swarm Fitting. *Lecture Notes in Computer Science*, **2019**, 120-139 | 0.9 |
| 4 | Computing with Biophysical and Hardware-Efficient Neural Models. *Lecture Notes in Computer Science*, **2017**, 535-547 | 0.9 |
| 3 | Guest Editors Introduction to the Special Section on the 14th International Conference on Computational Methods in Systems Biology (CMSB 2016). *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, **2018**, 15, 1122-1123 | 3 |
| 2 | UBioLab: a web-laboratory for ubiquitous in-silico experiments. *Journal of Integrative Bioinformatics* , **2012**, 9, 192 | 3.8 |
| 1 | Probabilistic Hyperproperties with Rewards. *Lecture Notes in Computer Science*, **2022**, 656-673 | 0.9 |