

Ezio Bartocci

Curriculum Vitae

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Personal Information

Citizenship Italian

Education

- 2019 **(Expected) Habilitation in Computer Science, TU Wien, Austria,**
Thesis: "Formal Analysis of Cyber-Physical Systems".
(thesis submitted in August 2018, defense expected in May 2019)
- 2006-2009 **PhD in Information Science and Complex Systems (20/01/2009),** *School of Advances Studies, University of Camerino, Italy,* Thesis: "A Formal Framework for Modeling, Simulating and Analyzing Networks of Excitable Cells".
Marks: Ottimo (the highest mark)
- 2002-2005 **Master Degree in Bioinformatics (14/04/2005),** *University of Camerino, Italy,*
Thesis: "Multi-agents system for the orthology-based prediction of protein-protein interaction".
Marks: 110/110 with honors (cum laude)
- 1999-2002 **Bachelor Degree in Computer Science (18/09/2002),** *University of Camerino, Italy,* Thesis: AIXO: A generalized XML wrapper, University of Camerino, Italy.
Marks: 110/110 with honors (cum laude)

Qualification

- 2017 **Scientific National Italian Habilitation (03/04/2017) as Associate Professor in Computer Engineering,** *granted by the Italian Ministry of Education, Universities and Research, sc 09/H1 "Ingegneria Informatica" - ssd ING-INF/05 "Sistemi di elaborazione delle informazioni".*
- 2014 **Scientific National Italian Habilitation (29/01/2014) as Associate Professor in Computer Science,** *granted by the Italian Ministry of Education, Universities and Research, sc 01/B1 "Informatica" - ssd INF/01 "Informatica".*

Academic Appointments

- 2015 - **Tenure-track Assistant Professor (Laufbahnstelle),** *Faculty of informatics, Institute of Computer Engineering, Vienna University of Technology, Austria.*
- 2012-2015 **University Assistant,** *Faculty of informatics, Institute of Computer Engineering, Vienna University of Technology, Austria.*
- 2011-2012 **Research Scientist,** *(from March 2011), Department of Computer Science, Stony Brook University, USA and Visiting Academic (from Oct. 2010) at Courant Institute, New York University (NYU).*

- 2010-2011 **Research Associate**, (from Feb. 2010), Department of Applied Math and Statistics, Stony Brook University, USA.
- 2009-2010 **Postdoctoral researcher (Assegno di Ricerca in INF01)**, (from Apr. 2009 to Feb. 2010), University of Camerino, Italy.
- 2006-2009 **Research assistant**, during my PhD in Complex Systems and Information Science (from Jan. 2006 to Jan. 2009), University of Camerino, Italy.
- 2005 **Research collaborator**, (from Oct 2005 to Dic 2005), Dipartimento di Matematica e Informatica, University of Camerino (MC), Italy.
- 2003-2004 **Fellowship as Junior Researcher**, (Giu 2003/Feb 2004) during my MD in Bioinformatics, Dipartimento di Matematica e Informatica, University of Camerino, Italy.

Visiting Positions

- 2018 **Research visit (one month) at Università Politecnica delle Marche**, (with Prof. Spalazzi), Ancona, Italy.
- 2017 **Research visit (one month) at Università Politecnica delle Marche**, (with Prof. Spalazzi), Ancona, Italy.
- 2015 **Research visit (two weeks) at Minatec**, (with Prof. Falcone), Grenoble, France.
- 2010-2011 **Visiting academic (one year) at Courant Institute, New York University**, (with Prof. Bud Mishra), New York, NY, USA.
- 2008 **Research visit (three months) at Department of Computer Science, Stony Brook University**, (with Prof. Smolka, Prof. Grosu, Prof. Entcheva), NY, USA.
- 2007 **Research visit (three months) at Department of Computer Science, Stony Brook University**, (with Prof. Smolka, Prof. Grosu, Prof. Entcheva), NY, USA.
- 2006 **Research visit (three months) at Department of Computer Science, Stony Brook University**, (with Prof. Smolka, Prof. Grosu, Prof. Entcheva), NY, USA.
- 2002 **Research visit (two months) at Proteum-Zentrum of Rostock University - Germany**, (with Dr. Steffen Möller), Rostock, Germany.

Honors & Awards

- 2016 **Invited to the final interview for the ERC Starting Grant**, Bruxelles, Belgium.
- 2016 **Honorable mention for the Best Student Paper Award at HSCC 2016: the 19th Intern. Conf. on Hybrid Systems: Computation and Control**, Vienna, Austria.
- 2015 **Winner of a "Laufbahnstelle" (tenure-track position) at the Faculty of Informatics, TU Wien, Austria**, 4 positions granted out of 180 applications.
- 2014 **Editorial Board Member of Information and Computation International Journal, Elsevier**, The journal was founded in 1957.
- 2011 **Best Paper Award at RV2011: the 2nd International Conference on Runtime Verification**, San Fransisco, USA.

Current Projects and Grants funded

- 2018-2023 **Doctoral College "Resilient Embedded Systems" (RES) (Total Funding 3.5 Mio Euro)**, *Funded by the Austrian Bundesministerium für Bildung, Wissenschaft und Forschung, (Role in the project: advisory board and faculty member of the doctoral college, 2 PhD positions (4 years) under my supervision for a value of 300K Euro).*
<http://www.informatik.tuwien.ac.at/teaching/phdschool/ResilientEmbeddedSystems>
- 2018-2022 **Doctoral College "Logical Methods in Computer Science" (LogiCS) (Total Funding 3.6 Mio Euro)**, *Funded by the Austrian Science Fund (FWF), Convenors: E. Bartocci, A. Biere, R. Bloem, A. Ciabattoni, T. Eiter, G. Gottlob, R. Grosu, L. Kovacs, M. Maffei, M. Ortiz, U. Schmidt, S. Szeider, G. Weissenbacher, S. Woltran, (Role in the project: co-author of the proposal and faculty member of the DK, 1 PhD position (4 years) fully funded assigned under my supervision (180K Euro)).*
<http://logic-cs.at/phd/faculty/>
- 2017-2020 **Trustworthy IoT for Cyber-Physical-Systems (IoT4CPS) (Total Funding 3 Mio Euro, 174k Euro to TUWien)**, *Funded by Austrian FFG, (Role in the project: Project Leader for TU Wien).*
- 2018-2020 **SeClude: Novel and Optimal Solutions for Metering and Enforcing Security and Privacy in Cloud Systems, Collaborative project (Total funding ~ 30 K Euro)**, *funded by Università Politecnica delle Marche, Ancona, Italy, PIs: M. Baldi, E. Bartocci, F. Chiaraluce, A. Cucchiarelli, C. Diamantini, F. Francescangeli, S. Kumar, F. Marinelli, A. Mircoli, G. Ricciutelli, R. Rosetti, L. Spalazzi, F. Spegni, N. Zannone, P. Zingaretti.*
- 2015-2019 **SHiNE: Systematic Methods in Systems Engineering, 2nd funding period of the "Nationales Forschungsnetzwerk" Rigorous Systems Engineering (RISE) (Total Funding 4,2 Mio Euro, 278k Euro (1 PostDoc for 4 years) to my task)**, *Funded by Austrian FWF, Role in the project: Task leader, PIs: E. Bartocci, A. Biere, R. Bloem, K. Chatterjee, U. Egly, R. Grosu, T. A. Henzinger, C. Kirsch, L. Kovacs, U. Schmid, M. Seidl, A. Sokolova, H. Veith, G. Weissenbacher, F. Zuleger <http://arise.or.at/principal-investigators/>.*
- 2015-2019 **Reversible computation - extending horizons of computing, EU ICT COST Action IC1405**, *Funded by EU Horizon 2020, I represent Austria in the Man. Committee. <http://www.revcomp.eu/>.*
- 2014-2018 **ARVI: Runtime Verification beyond Monitoring (ARVI), EU ICT COST Action IC1402**, *Funded by EU Horizon 2020, co-Chair of the RV Core Working Group, I represent Austria in the Management Committee. <http://www.cost-arvi.eu>.*

Past Projects and Grants

- 2014-2017 **HARMONIA: Assertion-based Hardware Monitors for Automotive Systems, (262K Euro to TU Wien)**, *funded by the IKT der Zukunft Austrian FFG (nr. 845631), 09/2014-08/2017, PI: Dr. Thang Nguyen (Infineon), co-PIs: Dr. Ezio Bartocci (TU Wien), Prof. Grosu (TU Wien), Dr. Dejan Nickovick (AIT).*
<http://harmonia.vmars.tuwien.ac.at/>

- 2014-2017 **FCLOSE: Federated CLOud SEcurity, Collaborative project (Total funding ~ 30 K Euro)**, funded by *Università Politecnica delle Marche, Ancona, Italy*, PIs: *M. Baldi, E. Bartocci, F. Chiaraluce, A. Cucchiarelli, F. Francescangeli, G. Luchetti, F. Marinelli, D. Schipani, G. Ricciutelli, L. Spalazzi, F. Spegni, M. Sturari, P. Zingaretti*.
<http://cybsec.univpm.it/fclose>
- 2014-2017 **Doctoral College in Cyber-Physical Production Systems (CPPS)**, funded by *Vienna University of Technology (Total funding 10 PhD positions)*, co-proposer with *Prof. Radu Grosu* for the topic of "Smart Attributes for CPPS".
http://dc-cpps.tuwien.ac.at/dissertation_subjects/smart_attributes_for_cppps/
- 2014-2018 **Associated Faculty Member of the Doctoral School in Logical Methods in Computer Science (DK LogiCS), (Total funding 2,7 Mio Euro)**, Funded by *Austrian FWF, Associated Faculty Member*.
<http://logic-cs.at/phd/faculty/>
- 2009-2014 **Computational Modeling and Analysis for Complex Systems (CMACS)"** , *US NSF Expedition award CCF-0926190, (Total Funding 10 Mio of - 2 Mio of \$ to Stony Brook University)*, (My role: project member).
<http://www.vet.cornell.edu/news/Chaos.cfm>,
http://cmacs.cs.cmu.edu/pages/news/transactions_bioinformatics.html,
http://cmacs.cs.cmu.edu/pages/news/cardiac_cell.html
- 2010-2012 **Collaborative Research: Survivable Software Survivable Software, AFOSR award FA0550-09-1-0481, (Total funding 810K of \$)**, My role: I was a project member.
<http://www.fsl.cs.sunysb.edu/ssw/member.html>
- 2009-2010 **BEAT: Behavior modeling, Efficient Analysis Techniques and regulation strategies for excitable cells using hybrid automata, Assegno di ricerca funded by University of Camerino, (Total Funding ~ 32K of Euro)**.
- 2008 **ASSINT Mobility Grant, 1,800 Euro**, grant to visit and to collaborate with *Scott A. Smolka, Radu Grosu, Emilia Entcheva at Stony Brook University*..
- 2006,2007 **ASSICOS Mobility Grant, 1,800 Euro**, grant to visit and to collaborate with *Scott A. Smolka, Radu Grosu, Emilia Entcheva at Stony Brook University*..
- 2005-2010 **Laboratory for Interdisciplinary Technologies in Bioinformatics (LITBIO)**, funded by *Ministero dell'Istruzione, dell'Università e della Ricerca (MIUR - Italy)* through a *FIRB 2003 grant for a period 2005 - 2010*, <http://litbio.cs.unicam.it>.
- 2002-2005 **Oncology Over Internet (O2I)**, funded by *Ministero dell'Istruzione, dell'Università e della Ricerca (MIUR - Italy)* through a *FIRB 2003 grant for a period 2005 - 2010*, Junior Researcher - Project member.

Professional Activities

Member of Editorial Board

- 2014–now **Information and Computation International Journal, Elsevier**,
<https://www.journals.elsevier.com/information-and-computation/editorial-board>.

Responsability in Doctoral Colleges

- 2018–now **Member of the Advisory Board and Faculty Member of the PhD School on Resilient Embedded Systems (TU Wien + Technion)**, *Vienna, Austria*.
<http://www.informatik.tuwien.ac.at/teaching/phdschool/ResilientEmbeddedSystems>

- 2018–now **Faculty Member of the Doctoral College in Logical Methods for Computer Science**, *Vienna, Austria*.
<http://logic-cs.at/phd/faculty/>
- 2015–2018 **Associated Faculty Member of the Doctoral College in Logical Methods for Computer Science**, *Vienna, Austria*.
<http://logic-cs.at/phd/faculty/>
- [Steering Committee Members](#)
- 2018–now **MTCPS, Intern. Workshop on Monitoring and Testing of CPS**.
- 2012–now **HSB, International Workshop on Hybrid Systems and Biology**.
- 2012–now **CRV, International Competition on Runtime Verification**.
- 2016–now **CMSB, International Conference on Computational Systems Biology**.
- [Award Committees](#)
- 2014–2017 **Vienna Center for Logic and Algorithms International Student Awards**.
[PhD Examiner](#)
- 2019 **Stefano Tognazzi, Ph.D. student at IMT School for Advanced Studies Lucca (Examiner of the final dissertation - in progress)**, *Lucca, Italy*.
- 2019 **Oscar Cornejo, Ph.D. student at University of Milano Bicocca (Examiner of the final dissertation - in progress)**, *Milan, Italy*.
- 2018 **Francesco Santoni, Ph.D. student at Smart Computing PhD School, University of Florence (Examiner of the proficiency exam)**, *Florence, Italy*.
- 2018 **Luca Laurenti, Ph.D. student at Faculty of Computer Science, Oxford University (Examiner of the VIVA)**, *Oxford, UK*.
- 2016 **Martin Demko, Ph.D. student at Faculty of Informatics, Masaryk University (Examiner of the proficiency exam)**, *Brno, Czech republic*.
- 2015 **Maria Svorenova, Ph.D. student at Faculty of Informatics, Masaryk University (Examiner of the final dissertation)**, *Brno, Czech republic*.
- [Reviewer for Grant Proposals](#)
- 2017 **I served as a expert evaluator for the projects submitted to the H2020 Call Cyber-Physical Systems Engineering (CPSE) Labs**.
- 2016 **I served as a expert evaluator for the projects submitted to the H2020 Call FET OPEN RIA 2016-1 call**.
- 2015 **I served as a reviewer for a project submitted to the Natural Sciences and Engineering Research Council of Canada (NSERC)**.
- [Academic Services](#)
- 2018 - now **Departmental Coordinator of the ERASMUS+ agreement with Aristotle University of Thessaloniki, Greece**, *Faculty of Informatics, TU Wien, Austria*.
- 2014 - now **Departmental Coordinator of the ERASMUS+ agreement with University of Milano Bicocca, Italy**, *Faculty of Informatics, TU Wien, Austria*.
- Jan 2018 **Representative for Computer Engineering in the jury for EPILOG (Best Master thesis award)**, *Faculty of Informatics, TU Wien, Austria*.
- Dec 2016 **Representative for Computer Engineering in EPILOG (Best Master thesis award)**, *Faculty of Informatics, TU Wien, Austria*.

- 2016–2017 **Member of the hiring committee for the Chair of Nonclassical Logics in Computer Science**, *Faculty of Informatics, TU Wien, Austria.*
- 2018–2019 **Substitute member of the hiring committee for the Chair of Machine Learning**, *Faculty of Informatics, TU Wien, Austria.*
- 2006–2008 **Representative of all the PhD students of the School of Advanced Studies**, *University of Camerino, Italy.*
- 2002–2005 **Representative of all the students of the Faculty of Technology and Science**, *University of Camerino, Italy.*

Organisation of International Events

- 2020 **General Chair of QONFEST 2020**, *umbrella event comprising the joint international 2020 meetings CONCUR, QEST, FORMATS, alongside with several workshops and tutorials, 31-08-2020 to 05-09-2020 (Expected 300 people) , Vienna, Austria.*
- 2019 **Organizer of SmolkaFest 2019**, *Conference in honour of S.A. Smolka on the occasion of his 65th birthday, 1-2 August, 2019, Stony Brook, NY, US.*
- 2018 **co-Chair of VSS'18**, *Vienna young Scientists Symposium on Intelligent Data Systems, 7-8 June, 2018, Vienna, Austria.*
- 2018 **Track co-Chair of ISoLA'18**, *RV-TheToP: Runtime Verification from the Theory to the industry Practice, Cyprus.*
- 2018 **co-Organizer of ETAPS 2018**, *European Joint Conferences on Theory and Practice of Software, 14-21 April, Thessaloniki, UK.*
- 2018 **Chair of RV4RISE@CAV**, *Workshop on Runtime Verification for Rigorous Systems Engineering, 13 July, Oxford, UK.*
- 2017 **Chair of RISE4CPS@CAV**, *1st Workshop on Formal Methods for Rigorous Systems Engineering of Cyber-Physical Systems, 22-23 July, Heidelberg, Germany.*
- 2016 **Track co-Chair of ISoLA'16**, *RVE: Runtime Verification and Enforcement, the (industrial) application perspective, 10-14 October, Corfú, Greece.*
- 2016 **Local Organisation Chair and Web and Social Media Chair of CPS Week**, *Cyber-Physical Systems Week 2016, 11th-14th April 2016 (~1000 people), Hofburg Palace, Vienna, Austria.*
- 2016 **PC co-Chair of CMSB'16**, *the 14th International Conference on Computational Methods in Systems Biology, Cambridge, UK.*
- 2016 **PC co-Chair of MedCPS'16**, *the 7th International Workshop of Medical Cyber-Physical Systems, 11th April 2016, Vienna, Austria.*
- 2015 **PC co-Chair of RV'16**, *the 15th International Conference on Runtime Verification, 22nd-25th September 2015, Vienna, Austria.*
- 2014 **Track co-Chair of ISoLA'14**, *Medical Cyber-Physical Systems, Corfú, Greece.*
- 2014 **co-Chair of CSRV-2014**, *1st International Competition of Software for Runtime Verification, Toronto, Canada.*
- 2014 **Tool Track co-Chair of RV'14**, *the 14th International Conference on Runtime Verification, 22nd-25th September 2014, Toronto, Canada.*
- 2013 **PC co-Chair of SPIN'13**, *the 20th international SPIN Symposium on Model Checking of Software, 8-9 July 2013, Stony Brook, NY, USA.*
- 2012 **PC co-Chair of HSB'12**, *the First International Workshop on Hybrid Systems and Biology, 3rd September 2012, Newcastle upon Tyne, UK.*

Program Committees

- 2020 **TACAS 2020**, the 26th International Conference on Tools and Algorithms for the Construction and Analysis of Systems, which will take place, *Dublin*, Ireland.
- 2019 **HSB 2019**, the 6th Workshop on Hybrid Systems & Biology, *Prague*, Czech Republic.
- 2019 **CMSB 2019**, the 17th International Conference on Computational Methods in Systems Biology, *Trieste*, Italy.
- 2019 **QEST 2019**, the 16th International Conference on Quantitative Evaluation of SysTems, *Glasgow*, UK.
- 2019 **SVT-SAC 2019**, Software Verification and Testing track at the 34th ACM/SIGAPP Symposium on Applied Computing, *University of Cyprus in Limassol*, Cyprus.
- 2019 **DATE 2019**, Design, Automation and Test in Europe, *Florence*, Italy.
- 2019 **FSEN 2019**, the 8th IPM International Conference on Fundamentals of Software Engineering, *Theran*, Iran.
- 2018 **CAV 2018**, the 30th International Conference of Computer Aided Verification, *Oxford*, UK.
- 2018 **SHPCS 2018**, the 13th International Workshop on Security and High Performance Computing Systems, *Orléans*, France.
- 2018 **RV 2018**, the 18th International Conference on Runtime Verification, *Limassol*, Cyprus.
- 2018 **CMSB 2018**, the 16th International Conference on Computational Methods for Systems Biology, *Brno*, Czech Republic.
- 2018 **QEST 2018**, the 15th International Conference on Quantitative Evaluation of Systems, *Beijing*, China.
- 2018 **ADHS'18**, the IFAC Conference on Analysis and Design of Hybrid Systems, *Oxford*, UK.
- 2018 **HSCC'18**, the 21st ACM International Conference on Hybrid Systems: Computation and Control, *Porto*, Portugal.
- 2018 **DOCEIS 2018**, the 9th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems, *Lisbon*, Portugal.
- 2018 **SAC 2018**, the 33rd ACM/SIGAPP Symposium On Applied Computing, *France*, Italy.
- 2018 **ISoLA'18**, the 8th Int. Symposium on On Leveraging Applications of Formal Methods, Verification and Validation, *Limassol*, Cyprus.
- 2018 **SEAA 2018**, the 44th Euromicro Conference on Software Engineering and Advanced Applications, *Prague*, Czech Republic.
- 2018 **SNR 2018**, the 4th International Workshop on Symbolic and Numerical Methods for Reachability Analysis, *Thessaloniki*, Greece.
- 2018 **MT-CPS 2018**, the 3rd International Workshop on Monitoring and Testing of Cyber-Physical Systems, *Porto*, Portugal.
- 2018 **MedCPS 2018**, the 8th International Workshop on Medical Cyber Physical Systems, *Porto*, Portugal.

- 2018 **SmartFarming 2018**, the 8th International Workshop on Smart Farming, *Porto*, Portugal.
- 2018 **SCAV 2018**, the 2nd International Workshop on Safe Control of Autonomous Vehicles, *Porto*, Portugal.
- 2018 **DARS 2018**, the 3rd Third Workshop on Design and Analysis of Robust Systems, *Porto*, Portugal.
- 2018 **MOVEP 2018**, the 13th Summer School on Modelling and Verification of Parallel Processes, *Cachan*, France.
- 2018 **Ada-Europe 2018**, the 23rd International Conference on Reliable Software Technologies, *Lisbon*, Portugal.
- 2017 **DataMod 2017**, 6th International Symposium "From Data to Models and Back", *Trento*, Italy.
- 2017 **CILC 2017**, 32nd Italian Conference on Computational Logic, *Naples*, Italy.
- 2017 **ICTCS 2017**, 18th Italian Conf. on Theor. Computer Science, *Naples*, Italy.
- 2017 **RV-CuBES 2017**, International Workshop on Competitions, Usability, Benchmarks, Evaluation, and Standardisation for Runtime Verification Tools, *Seattle*, USA.
- 2017 **SHPCS 2017**, 12th International Workshop on Security and High Performance Computing Systems, *Genoa*, Italy.
- 2017 **1st Workshop on Architectures, Languages and Paradigms for IoT**, *Turin*, Italy.
- 2017 **VORTEX Workshop on Runtime Verification**, *Barcelona*, Spain.
- 2017 **MT-CPS 2017**, the 2nd Workshop on Monitoring and Testing of Cyber-Physical Systems, *Pittsburgh, PA*, USA.
- 2017 **RV 2017**, the 17th Intern. Conference on Runtime Verification, *Seattle*, USA.
- 2017 **CMSB 2017**, the 15th conference on Computational Methods for Systems Biology, *Darmstadt*, Germany.
- 2017 **Ada-Europe 2017**, the 22nd International Conference on Reliable Software Technologies, *Vienna*, Austria.
- 2017 **SCAV'17**, the 1st International Workshop on Safe Control of Connected and Autonomous Vehicles, *Pittsburgh, PA*, USA.
- 2017 **ICFEM'17**, the 19th International Conference on Formal Engineering Methods, *Xi'an*, China.
- 2017 **SPIN'17**, the 24th International SPIN Symposium on Model Checking of Software, *Santa Barbara, CA*, USA.
- 2017 **QEST'17**, the 13th International Conference on Quantitative Evaluation of SysTems, *Berlin*, Germany.
- 2017 **FSEN'17**, the 7th IPM International Conference on Fundamentals of Software Engineering, *Tehran*, Iran.
- 2016 **DoCEIS'17**, the 8th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems, *May 03-05, Caparica (Lisbon)*, Portugal.
- 2017 **HSCC'17**, the 20th ACM International Conference on Hybrid Systems: Computation and Control, *Pittsburgh, PA*, USA.

- 2017 **SVT'17, Software Verification and Testing 2017**, Marrakech, Morocco.
- 2016 **eCAS'16, the 1st International Workshop on Engineering Collective Adaptive Systems**, September, Augsburg, Germany.
- 2016 **MT CPS'16, the 1st International Workshop on Monitoring and Testing of Cyber-Physical Systems**, April 11, Vienna, Austria.
- 2016 **MedCPS'16, the 7th International Workshop on Medical Cyber-Physical Systems**, April 11, Vienna, Austria.
- 2016 **NSV'16, the 9th International Workshop on Numerical Software Verification**, July 17-18, Toronto, Ontario, Canada.
- 2016 **SNR'16, the 2nd International Workshop on Symbolic and Numerical Methods for Reachability Analysis**, April 11, Vienna, Austria.
- 2016 **QAPL'16, the 14th International Workshop on Quantitative Aspects of Programming. Languages and Systems**, Eindhoven, The Netherlands.
- 2016 **ICFEM 2016, the 18th International Conference on Formal Engineering Methods**, November 14-18, Tokyo, Japan.
- 2016 **CPPS 2016, the 1st International Workshop on Cyber Physical Production Systems**, April 12, Vienna, Austria.
- 2016 **SHPCS 2016, the 11th International Workshop on Security and High Performance Computing Systems**, July 18-22, Innsbruck, Austria.
- 2016 **FORECAST'16, the 1st International Workshop on FORmal methods for the quantitative Evaluation of Collective Adaptive SysTems**, July 8, Vienna, Austria.
- 2016 **DataMod'16, the 5th International Symposium on From Data to Models and Back (DataMod)**, July 8, Vienna, Austria.
- 2016 **HSB'16, the 5th International Workshop on Hybrid Systems and Biology**, October 19-21, Grenoble, France.
- 2016 **RV'16, the 16th International Conference on Runtime Verification**, September 23-30, Madrid, Spain.
- 2016 **HSCC'16, the 19th International Conference on Hybrid Systems: Computation and Control**, April 11-14, Vienna, Austria.
- 2016 **CMSB'16, the 13th International Conference on Computational Methods for Systems Biology**, September 21-23, Cambridge, UK.
- 2016 **ISoLa'16, the 7th International Symposium on On Leveraging Applications of Formal Methods, Verification and Validation**, Oct. 2016, Crete, Greece.
- 2016 **DoCEIS'16, the 7th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems**, April 11-13, Caparica (Lisbon), Portugal.
- 2015 **MEMICS'15, the 10th International PhD Workshop on Mathematical and Engineering Methods in Computer Science**, October 23-25, Telc, Czech Republic.
- 2015 **SCOPES'15, International Workshop on Spatial and Collective Pervasive Computing Systems at IEEE SASO 2015**, September 21, Cambridge, USA.
- 2015 **RTSI'15, the First International Forum on Research and Technologies for Society and Industry**, Torino, Italy.

- 2015 **HSB'15**, the 4th International Workshop on Hybrid Systems and Biology, *Madrid*, Spain.
- 2015 **NSV'15**, the 8th International Workshop on Numerical Software Verification, *WA*, USA.
- 2015 **QAPL'15**, the 13th International Workshop on Quantitative Aspects of Programming. Languages and Systems, *London*, UK.
- 2015 **FSEN'15**, 6th IPM International Conference on Fundamentals of Software Engineering, *Tehran*, Iran.
- 2015 **RV'15**, the 15th Intern. Conference on Runtime Verification, *Vienna*, Austria.
- 2014 **MOD*'14**, the 1st Int. Workshop on Logics and MODEL-checking for self-*systems, *Bertinoro*, Italy.
- 2014 **HSCC'14 Repeatability Evaluation Committee (REC)**, the 17th International Conference on Hybrid Systems: Computation and Control, *Berlin*, Germany.
- 2014 **ISoLA'14**, the 6th Int. Symposium on On Leveraging Applications of Formal Methods, Verification and Validation, *Corfu*, Greece.
- 2014 **HSB'14**, the 3rd Int. Workshop on Hybrid Systems and Biology, *Vienna*, Austria.
- 2014 **RV'14**, the 14th Inter. Conference on Runtime Verification, *Toronto*, Canada.
- 2014 **SPIN'14**, the 21th International SPIN Symposium on Model Checking of Software, *San Jose (CA)*, USA.
- 2014 **QAPL'14**, the 12th International Work. on Quantit. Aspects of Progr. Lang. and Systems, *Grenoble*, France.
- 2013 **SPIN'13**, the 20th International SPIN Symposium on Model Checking of Software, *Stony Brook (NY)*, USA.
- 2013 **HAS'13**, the 3rd Int. Workshop on Hybrid Autonomous Systems, *Rome*, Italy.
- 2013 **QAPL'13**, the 11th International Workshop on Quantitative Aspects of Programming. Languages and Systems, *Rome*, Italy.
- 2013 **HSB'13**, the 2nd International Workshop on Hybrid Systems and Biology, *Taormina*, Italy.
- 2012 **HSB'12**, the 1st International Workshop on Hybrid Systems and Biology, *Newcastle*, UK.
- 2011 **HSCC'11**, the 14th International Conference on Hybrid Systems: Comput. and Control, *Chicago*, USA.
- 2008 **FBTC'08**, the 2nd International Workshop: From Biology to Concurrency and back, *Reykjavik*, Iceland.

[Journal Editor](#)

- 2018 **Guest Editor**, for the Special issue of *IEEE/ACM Transactions on Computational Biology and Bioinformatics*.
- 2017 **Guest Editor**, for the Special issue of *Int. Journal on Formal Methods in System Design on "Runtime Verification"*.

- 2015 **Guest Editor**, for the Special issue of *Int. Journal on Software Tools for Techn. Transfer on "Model Checking of Software"*.
- 2014 **Guest Editor**, for the Special issue of *Information and Computation on "Hybrid Systems and Biology"*.

Teaching

Courses held at Vienna University of Technology

- 2017 **Operative Systems**, (182.711, 2 ECTS/CFU - Winter Semester (**Main responsibility**)), Bachelor Program in Medical Informatics, Bachelor Program in Software & Information Engineering, Bachelor Program in Computer Engineering, Bachelor Program in Computer Technology, Bachelor Program in Telecommunications, ~ 450 students.
- 2017 **Internet of Things**, (182.753, 6 ECTS/CFU - Winter Semester (**Main responsibility**)), Master of Computer Engineering, ~ 15 students.
- 2016 **Operative Systems**, (182.711, 2 ECTS/CFU - Winter Semester (together with Peter Pushner)), Bachelor Program in Medical Informatics, Bachelor Program in Software & Information Engineering, Bachelor Program in Computer Engineering, Bachelor Program in Computer Technology, Bachelor Program in Telecommunications, ~ 450 students.
- 2016 **Runtime Verification**, (182.741, 3 ECTS/CFU - Summer Semester (together with Dejan Nickovick)), Master Program in Software Engineering, Master Program in Computer Engineering.
- 2012-2016 **GPU Computing and Architectures**, (182.731, 6 ECTS/CFU - Summer Semester), Master Program in Visual Computing, Master Program in Software Engineering & Internet Computing, Master Program in Computer Engineering.
- 2012-2016 **Networked Embedded Systems**, (182.725, 6 ECTS/CFU - Winter Semester), Master Program in Computer Engineering.
- 2012-2014 **Embedded Systems Engineering**, (182.110, 3 ECTS/CFU - Winter Semester), Master Program in Computer Engineering.

Course held during the period spent in US

- 2011 **Lab Course Parallel programming in CUDA**, NSF-CMACS Workshop, Lehman College, CUNY, NY.

Courses held at University of Camerino

- 2009-2010 **Distributed Calculus and Coordination (Project DCC)**, (2 ECTS/CFU), Master Program in Computer Science.
- 2006-2010 **Laboratorio di algoritmi e strutture dati**, (6 ECTS/CFU), Bachelor in Computer Science.
- 2005-2006 **Introduction to Computer Science I**, (5 ECTS/CFU), Bachelor in Biotechnology.

Supervision

Supervision of Post Doc

- 2017-2018 **Laura Nenzi**, Project Assistant in RiSE/SHiNE project, Topic: Robust System Design, she is currently Assistant Professor at University of Trieste, Italy.

2016-2017 **Mohamed Amin Ben Sassi**, *Project Assistant in RiSE/SHiNE project*, Topic: System Design, Stability Analysis of dynamical and Hybrid systems, he is currently Assistant Professor at SMU - South Mediterranean University, Tunisia.

Supervision of PhD Students

- 2018-? **Lilly Maria Treml**, *PhD student in the Doctoral College of Resilient Embedded Systems (Advisor: Ezio Bartocci)*, Topic: Simulation of Cyber-Physical Systems using dataflow based computing architectures.
- 2018-? **Ana Oliveira da Costa**, *PhD student in the Doctoral College of Logical Methods in Computer Science (Advisor: Ezio Bartocci)*, Topic: Security-aware design for Cyber-Physical Systems.
- 2018-? **Emily Neufeld**, *PhD student in the Doctoral College of Resilient Embedded Systems (Advisor: Ezio Bartocci, co-advisor: Agata Ciabattoni)*, Topic: Ethical Reasoning for Autonomous Cyber-Physical Systems.
- 2018-? **Miroslav Stankovic**, *PhD student in the Doctoral College of Logical Methods in Computer Science (Advisor: Laura Kovacs, co-advisor: Ezio Bartocci)*, Topic: Automatic Invariant Generation for Probabilistic Programs.
- 2016-? **Manjunath Niveditha**, *PhD student funded by the Austrian Institute of Technology (Advisor: Ezio Bartocci, co-advisor: Dejan Nickovic)*, Topic: Fault-based Analysis and Explanation of Cyber-Physical Systems design.
- 2017-? **Denise Ratasich**, *Project assistant in IoT4CPS Project (Advisor: Radu Grosu, co-advisor: Ezio Bartocci)*, Topic: Self-healing and self-adaptation for Cyber-Physical Systems.
- 2015-? **Anna Lukina**, *PhD student in the Doctoral College of Logical Methods in Computer Science (Advisor: Radu Grosu, co-advisors: Ezio Bartocci, Josef Widder)*, Topic: Adaptive Optimization Framework for Verification and Control of Cyber-Physical Systems.
- 2015-2018 **Harald Beck**, *PhD student in the Doctoral College of Logical Methods in Computer Science (Advisor: Thomas Eiter, co-advisor: Stefan Woltran, Ezio Bartocci)*, Title of the PhD thesis: Expressive Rule-based Stream Reasoning, (Defense in Dec. 2018).
- 2014-2017 **Konstantin Selyunin**, *Project Assistant in HARMONIA project (Advisor: Radu Grosu, co-advisor: Ezio Bartocci)*, Title of the PhD thesis: Neural Models for Monitoring and Control with Applications in Automotive Domain, (Defense in Nov. 2017).

Supervision of Master Students

- 2018 **Lilly Maria Treml**, *Topic: Emulation/Simulation of Cardiac Models using FPGA.*
- 2017 **Bernhard Wimmer**, *Topic: Motion planning for a six-legged robot.*
- 2015 **Csaba Vaczula**, *Topic: The Hobel algorithm - SAT solving with GPU beyond DPLL.*

Supervision of Bachelor Students

- 2018 **Thomas Hartberger**, *Topic: Algorithm Implementation in HSL or HDL.*
- 2014 **Florian Zaruba**, *Topic: Monitoring ECG on a smart-phone.*

Invited Talks

- Nov. 11, **Invited Tutorial at RV 2018: 18th International Conference on Runtime Verification**, Limassol, Cyprus.
Title: *Monitoring, Learning and Control of Cyber-Physical Systems with STL*

- Sept. 25, 2018 **Invited Talk at 12th Alpine Verification Meeting (AVM 2018)**, Wagrain, Austria.
Title: *Parameter-Independent Strategies for pMDPs via POMDPs*
- May. 16, 2018 **Invited Talk at Gran Sasso Science Institute**, L'Aquila, Italy.
Title: *Analysis and Design of Cyber-Physical Systems*
- Feb. 2, 2018 **Invited Talk at Vienna Cyber Security 2018**, Vienna, Austria.
Title: *Safe and Trustworthy Cyber-Physical Systems*
- Oct. 16, 2017 **Invited Talk at FRIDA 2017: the 4th Workshop on Formal Reasoning in Distributed Algorithms**, Vienna, Austria.
Title: *Monitoring Mobile and Spatially Distributed Cyber-Physical Systems*
- Sept. 19, 2017 **Invited Talk at Cybervalley Symposium**, Stuttgart, Germany.
Title: *Rigorous Systems Engineering of Cyber-Physical Systems*
- Apr. 26, 2017 **Invited Talk at University of Trento**, Trento, Italy.
Title: *Analysis and Design of Cyber-Physical Systems*
- Feb. 8, 2017 **Invited Talk at University of Florence**, Florence, Italy.
Title: *Analysis and Design of Cyber-Physical Systems*
- Feb. 28, 2017 **Invited Talk at Politecnica delle Marche**, Ancona, Italy.
Title: *Analysis and Design of Cyber-Physical Systems*
- Dec. 13, 2016 **Invited Colloquium at University of Newcastle**, Newcastle upon Tyne, UK.
Title: *Analysis and Design of Cyber-Physical Systems*
- Aug. 10, 2016 **Invited Talk at TU Dresden**, Dresden, Germany.
Title: *Analysis and Design of Cyber-Physical Systems*
- Jun. 23, 2016 **Invited Speaker at SFM-16, the 16th International School on Formal Methods for the Design of Computer, Communication and Software Systems: Quantitative Evaluation of Collective Adaptive Systems**, Bertinoro, Italy.
Title: *Spatial Logic and Spatial Model Checking*
- Oct. 24, 2015 **Invited Speaker at MEMICS 2015: the 10th Doctoral Workshop on Mathematical and Engineering Methods in Computer Science**, Telc, Czech Republic.
Title: *Formal Methods for Monitoring and Synthesis of Spatio-Temporal Properties*
- Feb. 16-20, 2015 **Invited Lectures at University of Tübingen**, Tübingen, Germany.
Title: *Lectures on GPU Computing and Architecture*
- Feb. 11, 2015 **Invited Talk at University of Oxford**, Oxford, UK.
Title: *SpaTeL: A Novel Spatio-Temporal Logic and its Applications to Networked Systems*
- Dec. 9, 2014 **Invited Talk at University of Milano Bicocca**, Milano, Italy.
Title: *Executable Heart: Computational Models and Methods for Detecting Emergent Behaviours in Cardiac Dynamics*
- Jul. 8, 2014 **Invited Focus Talk Speaker at 11th Summer School on Modelling and Verification of Parallel Processes (MOVEP'14)**, Nantes, France.
Title: *Runtime Verification*
- Apr. 21-25, 2014 **Invited Talk at Dagstuhl Seminar 14171 on Evaluating Software Verification Systems: Benchmarks and Competitions**, Dagstuhl, Germany.
Title: *Competition on Software Runtime Verification*

- Jun. 26, 2014 **Keynote Speaker at 11th International Meeting on Computational Intelligence Methods for Bioinformatics and Biostatistics (CIBB 2014)**, Cambridge, UK.
Title: *Executable Heart*
- Jul. 27-30, 2013 **Invited Lectures at the Systems Biology Summer School (SBSS), held at the Chateau of Nove Hradky**, South Bohemia, Czech Republic.
Title: *A Computational Modeling perspective of Systems Biology*
- 28 April-3 May, 2013 **Invited Talk at Dagstuhl Seminar 1318, VaToMAS - Verification and Testing of Multi-Agent Systems**, South Bohemia, Czech Republic.
Title: *On Decentralized Runtime Verification Techniques*
- 18 Feb., 2013 **Invited Talk at University of Oxford, UK.**
Title: *Computational Models and Methods for Cardiac Dynamics*
- 6 Feb., 2013 **Invited Talk at University of Cambridge, UK.**
Title: *Adaptive Runtime Verification*
- 24 Nov, 2012 **Invited Talk at the 4th Convegno in Breaking News in Interventistica Cardiovascolare**, Milano, Italy.
Title: *Virtual Models of Cardiac Arrhythmias*
- 13 Nov., 2012 **Invited Talk at Masaryk University, Brno**, Czech Republic.
Title: *Adaptive Runtime Verification*
- 14 Sep., 2012 **Invited Talk at Workshop of the Second Summer School of Biology**, Udine, Italy.
Title: *Executable Heart*
- 19 June, 2011 **Invited Talk at IMT Institute for Advanced Studies, Lucca**, Italy.
Title: *Model Repair for Probabilistic Systems*
- 24 June, 2011 **Invited Seminar for Students and Doctoral Candidates**, Univ. of Camerino, Italy.
Title: *From Cardiac Cells to Genetics Regulatory Networks*
- 22 June, 2011 **Invited Seminar for Students and Doctoral Candidates**, Univ. of Camerino, Italy.
Title: *Model Repair for Probabilistic Systems*
- 13-21 Jan, 2011 **2011 NSF-CMACS Workshop on Atrial Fibrillation**, Lehman College, USA.
Title: *Implementing Cardiac Cell's Model using CUDA parallel programming*
- 14 Dec, 2011 **Invited Seminar**, Aristotle University Thessaloniki, Greece.
Title: *Model Checking complex systems: detecting atrial fibrillation*

Research Impact

Bibliometrics (105 research items)

25 internationally peer reviewed journal papers

45 internationally peer reviewed conference papers (4xCav (A* Conference), 4xHSCC (A-Conference), 2xATVA (A Conference), 2xTACAS (A Conference), 2xCDC (A Conference), 1xEMSOFT (A Conference), 1xDATE, 4xQEST, 6xRV (Best paper award), 3xMEMOCODE, 5xCMSB, 1xFORMATS, 1xIFAC, etc.)

12 internationally peer reviewed workshop papers

10 invited papers

1 book

2 book chapters

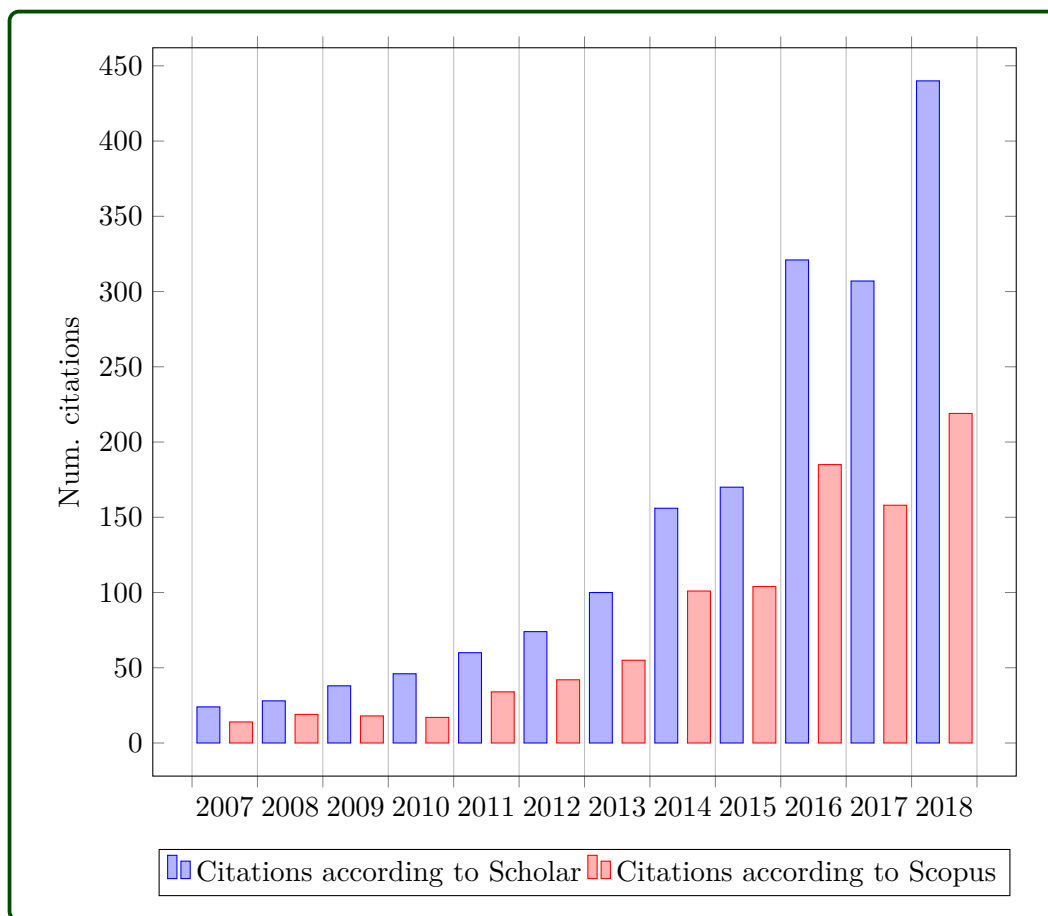
10 edited proceedings or journal special issues

According to Google Scholar, as of December 9th, 2018:

- my papers have received **1818 overall citations** (1497 since 2013);
- I have an **h-index=26** (23 since 2013)

According to Scopus, as of December 9th, 2018:

- my papers have received **986 overall citations**
- I have an **h-index=19**



List of Publications

Edited Book

- [1] **E. Bartocci**, Y. Falcone, Editors. Lectures on Runtime Verification - Introductory and Advanced Topics, vol. 10475, pp. V-VI, 2018; Springer, DOI: 10.1007/978-3-319-75632-5

Edited Journal Issues and Proceedings

- [2] **E. Bartocci**, M. Leucker, Special Issue on Medical Cyber Physical Systems workshop (MedicalCPS'16). In ACM SIGBED Review, Volume 14, Number 2, March 2017;

- [3] **E. Bartocci**, R. Majumdar, Introduction to the Special Issue on Runtime Verification. In *International Journal of Formal Methods in System Design*, Volume 51, Issue 1, pp 1-4, 2017; DOI: 10.1007/s10703-017-0287-6
- [4] **E. Bartocci**, P. Lió, N. Paoletti, *Preface (CMSB)*. In *Proc. of CMSB 2016: the 14th International Conference on Computational Methods in Systems Biology*, Cambridge, UK, vol. 9859, pp. V-VI, 2016; DOI: 10.1007/978-3-319-45177-0
- [5] **E. Bartocci**, C. R. Ramakrishnan, Preface of the Special Issue on Model Checking of Software - Selected papers of the 20th Intern. SPIN Symposium on Model Checking of Software. In *Software Tools for Technology Transfer (STTT)*, vol. 4, pp. 1-3, 2016; DOI: 10.1007/978-3-642-39176-7
- [6] **E. Bartocci**, R. Majumdar, *Preface (RV)*. In *Proc. of RV 2015: the 15th International Conference on Runtime Verification*, Vienna, Austria, vol. 9333, pp. V-VI, 2015; DOI: 10.1007/978-3-319-23820-3
- [7] **E. Bartocci**, L. Bortolussi, S. A. Smolka, *Preface*, Special Issue of Information and Computation on Hybrid Systems and Biology, vol. 236, pp 1 (2014); DOI: 10.1016/j.ic.2014.01.008
- [8] **E. Bartocci**, C. R. Ramakrishnan, Editors, *Model Checking Software - 20th International Symposium, SPIN 2013*, Stony Brook, NY, USA, July 8-9, 2013. Proceedings. LNCS 7976, Springer 2013, ISBN 978-3-642-39175-0; DOI: 10.1007/978-3-642-39176-7
- [9] **E. Bartocci**, L. Bortolussi, Editors. Proceedings of the First International Workshop on Hybrid Systems and Biology, HSB 2012, EPTCS 92 (2012); DOI: 10.4204/EPTCS.92
- [10] **E. Bartocci**, P. Lió, N. Paoletti, 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*, Volume 15, Issue 4, DOI: 10.1109/TCBB.2018.2816979

Book Chapters

- [11] **E. Bartocci**, J. Deshmukh, A. Donzé, G. Fainekos, O. Maler, D. Nickovic, S. Sankaranarayanan, *Specification-based Monitoring of Cyber-Physical Systems: A Survey on Theory, Tools and Applications*, *Lectures on Runtime Verification*, vol. 10475, pp. 135-175, 2018; Springer DOI: 10.1007/978-3-319-75632-5_5
- [12] **E. Bartocci**, Y. Falcone, A. Francalanza, G. Reger, *An Introduction to Runtime Verification*, *Handbook of Runtime Verification - Introductory and Advanced Topics*, vol. 10475, pp. 1-33, 2018; Springer, DOI: 10.1007/978-3-319-75632-5_1

Journal Papers

- [13] H. Abbas, A. Rodionova, K. Mamouras, **E. Bartocci**, S. A. Smolka, R. Grosu, *Quantitative Regular Expressions for Arrhythmia Detection*, *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2019, **to appear**
- [14] S. Jaksic, **E. Bartocci**, R. Grosu, D. Nickovic, *An Algebraic Framework for Runtime Verification*, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (IEEE TCAD)*, 2018, vol. 37(11), pp. 2233-2243, DOI: 10.1109/TCAD.2018.2858460, **Accepted at EMSOFT Conference, Ranked A according to portal CORE**
- [15] S. Jaksic, **E. Bartocci**, R. Grosu, D. Nickovic, *Quantitative Monitoring of STL with Edit Distance*, *Journal on Formal Methods in System Design*, vol. 53(1), pp. 83-112, Springer, 2018, DOI: 10.1007/s10703-018-0319-x

- [16] **E. Bartocci**, E. Aydin Gol, I. Haghghi, C. Belta, *A Formal Methods Approach to Pattern Recognition and Synthesis in Reaction Diffusion Networks*, IEEE Transactions on Control of Network Systems, vol. 5(1) pp. 308-320, IEEE, 2018, DOI: 10.1109/TCNS.2016.2609138
- [17] A. Gurung, R. Ray, **E. Bartocci**, S. Bogomolov, R. Grosu, *Parallel Reachability Analysis for Hybrid Systems Using XSpeed*, International Journal of Software Tools for Technology Transfer, pp. 1-23, 2018, Springer, DOI: 10.1007/s10009-018-0485-6
- [18] **E. Bartocci**, L. Bortolussi, T. Bradzil, D. Milios, G. Sanguinetti, *Policy learning for time-bounded reachability in Continuous-Time Markov Decision Processes via doubly-stochastic gradient descent*, International Journal of Performance Evaluation, (ISI Impact Factor 1.613), vol. 116, pp. 84-100, 2017. DOI: 10.1016/j.peva.2017.08.007
- [19] **E. Bartocci**, Y. Falcone, B. Bonakdarpour, C. Colombo, N. Decker, F. Klaedtke, K. Havelund, Y. Joshi, R. Milewicz, G. Reger, G. Rosu, J. Signoles, D. Thoma, E. Zalinescu, Y. Zhang, *First International Competition on Runtime Verification - Rules, Benchmarks, Tools and Final Results of CRV 2014*, International Journal of Software Tools for Technology Transfer, (In Press); DOI: 10.1007/s10009-017-0454-5
- [20] **E. Bartocci**, P. Lió, *Computational modeling, formal analysis and tools for systems biology*, PLOS Computational Biology, 12(1) (2016), (ISI Impact Factor 4.6), DOI: 10.1371/journal.pcbi.1004591
- [21] **E. Bartocci**, L. Bortolussi, L. Nenzi, G. Sanguinetti, *System Design of Stochastic Models using Robustness of Temporal Properties*, Theoretical Computer Science, vol. 587, pp. 3-25 (2015), (ISI Impact Factor 0.516), DOI: 10.1016/j.tcs.2015.02.046
- [22] A. Islam, A. Murthy, **E. Bartocci**, E. Cherry, F. H. Fenton, J. Glimm, S. A. Smolka, R. Grosu, *Model-Order Reduction of Ion Channel Dynamics Using Approximate Bisimulation*, Theoretical Computer Science, vol. 599, pp. 34-46 (2015), (ISI Impact Factor 0.516), DOI: 10.1016/j.tcs.2014.03.018
- [23] A. Murphy, **E. Bartocci**, F. Fenton, J. Glimm, R. A. Gray, E. M. Cherry, S. Smolka, R. Grosu, *Curvature Analysis of Cardiac Excitation Wavefronts*, IEEE/ACM Transactions on Computational Biology and Bioinformatics vol. 10, no. 2, pp. 323-336 (2013), (ISI Impact Factor 1.532), DOI: 10.1109/TCBB.2012.125
- [24] **E. Bartocci**, Pietro Lió, E. Merelli, N. Paoletti, *Multiple verification in complex biological systems: the bone remodelling case study*, Trans. on Comput. Syst. Biology XIV, LNBI 7625, pp. 53-76. Springer, Heidelberg (2012) DOI: 10.1007/978-3-642-35524-0_3
- [25] **E. Bartocci**, D. Cacciagrano, M. R. Di Berardini, E. Merelli, L. Vito, *UBILab: a web-based tool for ubiquitous in-silico experiments*, Journal of Integrative Bioinformatics 9(1), 192 (2012) DOI: 10.2390/biecoll-jib-2012-192
- [26] **E. Bartocci**, R. Singh, F. von Stein, A. Amedome, Alan-Joseph Caceres, J. Castillo, E. Closser, G. Deards, A. Goltsev, R. Sta. Ines, C. Isbilir, J. Marc, D. Moore, D. Pardi, S. Sadhu, S. Sanchez, P. Sharma, A. Singh, J. Rogers, A. Wolinetz, T. Grosso-Applewhite, K. Zhao, A. Filipinski, R. Gilmour Jr, R. Grosu, J. Glimm, S. A. Smolka, E. Cherry, E. Clarke, N. Griffeth, and F. Fenton, *Teaching cardiac electrophysiology modeling to undergraduate students; using Java Applets and GPU programs to study arrhythmias and spiral wave dynamics*, Journal of Adv. in Physiology Education 35(4): 427-437 (2011), (ISI Impact Factor 1.237) DOI: 10.1152/advan.00034.2011

- [27] R. Alfieri, **E. Bartocci**, E. Merelli, L. Milanese, *Modeling the cell cycle: From deterministic models to hybrid systems*, Biosystems 105(1): 34-40 (2011), (ISI Impact Factor 1.472) DOI: 10.1016/j.biosystems.2011.03.002
- [28] **E. Bartocci**, F. Corradini, M. R. Di Berardini, E. Merelli, L. Tesei, *Shape Calculus. A Spatial Mobile Calculus for 3D Shapes*, In Scien. Annals of Computer Science, Vol. 20: pages 1-31 (2010)
- [29] **E. Bartocci**, D. Cacciagrano, M. R. Di Berardini, E. Merelli, L. Tesei, *Timed Operational Semantics and Well-Formedness of Shape Calculus*, In Scien. Annals of Computer Science, Vol. 20: pages 33-52 (2010)
- [30] **E. Bartocci**, F. Corradini, E. Merelli, L. Tesei, *Detecting synchronisation of biological oscillators by model checking*, In Theor. Computer Science, 411(20): 1999-2018 (2010), (ISI Impact Factor 0.516)
- [31] R. Grosu, S. A. Smolka, F. Corradini, E. Entcheva, A. Wasilewska and **E. Bartocci**, *Learning and Detecting Emergent Behavior in Networks of Cardiac Myocytes*, In "Research Highlights" of Communication of ACM, (selected as the paper with the highest score of the HSCC conference) 52(3): 97-105 (2009), (ISI Impact Factor 2.863) DOI: 10.1145/1467247.1467271
- [32] **E. Bartocci**, F. Corradini, M. R. Di Berardini, E. Entcheva, S. A. Smolka, R. Grosu, *Modeling and Simulation a Cardiac Tissue using Hybrid I/O Automata*, In Theoretical Computer Science, 410(33-34): 3149-3165 (2009), (ISI Impact Factor 0.516) DOI: 10.1016/j.tcs.2009.02.042
- [33] **E. Bartocci**, F. Corradini, E. Entcheva, R. Grosu, S. A. Smolka, *CellExcite: an efficient simulation environment for excitable cells*, BMC Bioinformatics 9(Suppl 2):S3 (2008), (ISI Impact Factor 2.672) DOI: 10.1186/1471-2105-9-S2-S3
- [34] **E. Bartocci**, F. Corradini, E. Merelli, L. Scortichini, *BioWMS: a web based Workflow Management System for Bioinformatics*, BMC Bioinformatics 8(Suppl 1):S2 (2007), (ISI Impact Factor 2.672) DOI: 10.1186/1471-2105-8-S1-S2
- [35] P. Romano, **E. Bartocci**, E. Merelli, G. Bertolini, F. De Paoli, D. Marra, G. Mauri, E. Merelli, L. Milanese, *Biowep: a workflow enactment portal for bioinformatics applications*, BMC Bioinformatics 8(Suppl 1):S19 (2007), (ISI Impact Factor 2.672) DOI: 10.1186/1471-2105-8-S1-S19
- [36] **E. Bartocci**, D. Cacciagrano, N. Cannata, F. Corradini, E. Merelli, L. Milanese, P. Romano, *An Agent-based Multilayer Architecture for Bioinformatics Grids*, IEEE Transactions on Nanobioscience 6(2):142-148 (2007), (ISI Impact Factor 1.768) DOI: 10.1109/TNB.2007.897492
- [37] G. Fischer, S. M. Ibrahim, G. A. Brockmann, J. Pahnke, **E. Bartocci**, Hans-Jürgen Thiesen, P. Serrano-Fernández, S. Möller, *Expressionview: visualization of quantitative trait loci and gene-expression data in Ensembl*, Genome Biology 4(2):R77 (2007), (ISI Impact Factor 10.455) DOI: 10.1186/gb-2003-4-11-r77

Peer-Reviewed Conference Papers

- [38] S. Silvetti, L. Nenzi, **E. Bartocci**, L. Bortolussi, *Signal Convolution Logic*, In Proc. of ATVA 2018: the 16th International Symposium on Automated Technology for Verification and Analysis, pp. 267–283, Springer, LNCS, vol. 11138, 2018, DOI: 10.1007/978-3-030-01090-4, **Ranked A Conference according to portal CORE**

- [39] L. Nenzi, S. Silveti, **E. Bartocci**, L. Bortolussi, *A Robust Genetic Algorithm for Learning Signal Temporal Logic Requirements from Data*, In Proc. of QEST 2018: the 15th International Conference on Quantitative Evaluation of SysTems, Springer, pp. 323–338, Springer, LNCS, vol. 11138, 2018, DOI: 10.1007/978-3-319-99154-2_20
- [40] S. Arming, **E. Bartocci**, K. Chatterjje, J.-P. Katoen, A. Sokolova, *Parameter-Independent pMDPs via POMDPs*, In Proc. of QEST 2018: the 15th International Conference on Quantitative Evaluation of SysTems, pp. 53–70, Springer, LNCS, vol. 11138, 2018, DOI: 10.1007/978-3-319-99154-2_4
- [41] **E. Bartocci**, R. Bloem, D. Nickovick, F. Roeck, *A Counting Semantics for Monitoring LTL Specifications over Finite Traces*, In Proc. of CAV 2018: the 30th International Conference on Computer-Aided Verification, vol. 10981, pp. 547–564, 2018, DOI: 10.1007/978-3-319-96145-3_29, **Ranked A* Conference according to portal CORE**
- [42] H. Kong, **E. Bartocci**, T. A. Henzinger *Reachable Set Over-approximation for Non-linear Systems Using Piecewise Barrier Tubes*, In Proc. of CAV 2018: the 30th International Conference on Computer-Aided Verification, vol. 10981, pp. 449–467, 2018, DOI: 10.1007/978-3-319-96145-3_24, **Ranked A* Conference according to portal CORE**
- [43] C. Fan, Y. Meng, J. Maier, **E. Bartocci**, S. Mitra, U. Schmid, *A technique for verifying nonlinear analog and mixed circuits with inputs*, Proc. of ADHS 2018 - IFAC Conference on Analysis and Design of Hybrid Systems, pp. 241–246, vol. 51(16), IFAC-PapersOnLine, 2018, DOI: 10.1016/j.ifacol.2018.08.041,
- [44] **E. Bartocci**, T. Ferrère, N. Manjunath, D. Ničković, *Localizing Faults in Simulink/S-tateflow Models with STL*, In Proc. of HSCC 2018: the 21st ACM International Conference on Hybrid Systems: Computation and Control, pp. 197–206, ACM
- [45] F. Shmarov, N. Paoletti, **E. Bartocci**, S. Lin, S. A. Smolka and P. Zuliani, *SMT-based Synthesis of Safe and Robust PID Controllers for Stochastic Hybrid Systems*, In Proc. of HVC 2017: the 13th Haifa Verification Conference, Haifa, Springer, Springer, LNCS 10629, pp. 131–146, DOI: 10.1007/978-3-319-70389-3
- [46] **E. Bartocci**, L. Bortolussi, M. Loreti, L. Nenzi, *Monitoring Mobile and Spatially Distributed Cyber-Physical Systems*, MEMOCODE 2017: The 15th ACM-IEEE International Conference on Formal Methods and Models for System Design, pp. 146–155, ACM, DOI: 10.1145/3127041.3127050
- [47] H. Abbas, A. Rodionova, **E. Bartocci**, S. Smolka, R. Grosu, *Quantitative Regular Expressions for Arrhythmia Detection Algorithms*, In Proc. of CMSB 2017: the 15th Conference on Computational Methods in Systems Biology, Springer, LNCS 10545, pp. 23–39, DOI: 10.1007/978-3-319-67471-1_2
- [48] M. Baldi, **E. Bartocci**, F. Chiaraluce, A. Cucchiarelli, L. Senigagliaesi, L. Spalazzi, F. Spegni, *A Probabilistic Small Model Theorem to Assess Confidentiality of Dispersed Cloud Storage*, In Proc. of QEST 2017: the 14th International Conference on Quantitative Evaluation of SysTems, Springer, LNCS 10503, pp. 123–139, DOI: 10.1007/978-3-319-66335-7_8
- [49] K. Selyunin, S. Jaksic, T. Nguyen, **E. Bartocci**, D. Nickovic, R. Grosu, *Runtime Monitoring with Recovery of the SENT Communication Protocol*, In Proc. of CAV 2017: the 29th International Conference in Computer Aided Verification, LNCS 10426, pp. 336–355, **Ranked A* Conference according to portal CORE**, DOI: 10.1007/978-3-319-63387-9

- [50] K. Selyunin, R. M. Hasani, D. Ratasich, **E. Bartocci**, R. Grosu, *Computing with Biophysical and Hardware-efficient Neural Models*, In Proc. of IWANN 2017: 14th International Work-Conference on Artificial Neural Networks, Springer, LNCS 10305, pp. 535–547, DOI: 10.1007/978-3-319-59153-7
- [51] M. A. Ben Sassi, **M. Bartocci**, S. Sankaranarayanan, *A Linear Programming-based iterative approach to Stabilizing Polynomial Dynamics*, In Proc. of IFAC 2017: the 20th World Congress of the International Federation of Automatic Control (In press)
- [52] A. Lukina, L. Esterle, C. Hirsch, **E. Bartocci**, J. Yang, A. Tiwari, S. A. Smolka, R. Grosu, *ARES: Adaptive Receding-Horizon Synthesis of Optimal Plans*, In Proc. of TACAS 2017: the 23rd International Conference on Tools and Algorithms for the Construction and Analysis of Systems, Springer, LNCS 10206, pp. 286–302, 2017, **Ranked A according to portal CORE** , DOI: 10.1007/978-3-662-54580-5
- [53] A. Gurung, A. Deka, **E. Bartocci**, S. Bogomolov, R. Grosu, R. Ray, *Parallel Reachability Analysis for Hybrid Systems*, Proc. of MEMOCODE 2016: The 14th ACM-IEEE International Conference on Formal Methods and Models for System Design, pp. 12–22, IEEE, 2016, DOI: 10.1109/MEMCOD.2016.7797741
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