

Ezio Bartocci

Curriculum Vitae

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Personal Information

Citizenship Italian

Education

- 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

- 2017 **Research visit (one month) at Università Polltecnica delle Marche**, (*with Prof. Luca Spalazzi*), Ancona, Italy.
- 2015 **Research visit (two weeks) at Minatec**, (*with Prof. Ylies 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. S. A. Smolka, Prof. R. Grosu, Prof. E. Entcheva*), NY, USA.
- 2007 **Research visit (three months) at Department of Computer Science, Stony Brook University**, (*with Prof. S. A. Smolka, Prof. R. Grosu, Prof. E. Entcheva*), NY, USA.
- 2006 **Research visit (three months) at Department of Computer Science, Stony Brook University**, (*with Prof. S. A. Smolka, Prof. R. Grosu, Prof. E. 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*, (I am currently the youngest member).
- 2013 **Finalist for the Distinguished Young Investigator Award of TU Wien, Austria.**

2011 **Best Paper Award at RV2011: the 2nd International Conference on Runtime Verification**, San Fransisco, USA.

Current Projects and Grants funded

- 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 to my task)**, *Funded by Austrian FWF, PIs: E. Bartocci, A. Biere, R. Bloem, C. Krishnendu, U. Egly, R. Grosu, T. Henzinger, C. Kirsch, L. Kovacs, U. Schmid, M. Seidl, A. Sokolova, 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.cost.eu/COST_Actions/ict/Actions/IC1405?management
- 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.eu/COST_Actions/ict/Actions/IC1402?management, <https://www.cost-arvi.eu/>
- 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_cpp/
- 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/>

Projects as External Collaborator

- 2015-2020 **CyberCardia: Compositional, Approximate and Quantitative Reasoning for Medical Cyber Physical Systems**, *Funded by American National Science Foundation.*
<http://cyberheart.cs.stonybrook.edu/people/collaborators>

Past Projects and Grants

- 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: I co-lead the task of the Atrial Fibrillation Challenge).
<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)*, My role: I lead the project.
- 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.

Member of Steering Committees

- 2012–now **HSB, International Workshop on Hybrid Systems and Biology**.
 2012–now **CRV, International Competition on Runtime Verification**.

Award Committees

- 2014–2015 **Vienna Center for Logic and Algorithms International Student Awards**.

PhD Committee

- 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

- 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

- 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 Accommodation Chair and Web and Social Media Chair of CPS Week, Cyber-Physical Systems Week 2016, 11th-14th April 2016, 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

- 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 **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

- 2017 **Guest Editor**, for the Special issue of *IEEE/ACM Transactions on Computational Biology and Bioinformatics*.
- 2016 **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

- 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.
- 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), Mas-
ter 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

2016-2017 **Mohamed Amin Ben Sassi**, Project Assistant in RiSE/SHiNE project, Topic:
System Design, Stability Analysis of dynamical and Hybrid systems..

Supervision of PhD Students

2016-? **Manjunath Niveditha**, PhD student (co-supervised with Dejan Nickovick), Topic:
Runtime Monitoring and Diagnostic for Cyber-Physical Model-in-the-Loop.

2015-? **Anna Lukina**, PhD student in the Doctoral College Logical Methods in Computer
Science (co-supervised with Radu Grosu), Topic: Statistical Model Checking, Stochastic
Modelling, Analysis and Control of Cyber-Physical and Biological Systems, Machine
Learning, Risk Analysis.

2015-? **Alena Rodionova**, PhD student in the Doctoral College Logical Methods in Computer
Science since February 2015 (co-supervised with Radu Grosu), Topic: Specification
Languages, Digital Signal Processing, Computational models in Systems Biology.

2014-? **Konstantin Selyunin**, Project Assistant in HARMONIA project (co-supervised
with Radu Grosu), Topic: Neuromorphic computing.

2014-? **Guodong Wang**, PhD student in the Doctoral College in Cyber-Physical Production
Systems (co-supervised with Radu Grosu), Topic: Cyber-Physical Production Systems.

Supervision of Master Students

2017 **Bernhard Wimmer**, Topic: Optimization Techniques for Robot Locomotion.

2015 **Csaba Vaczula**, Topic: The Hobel algorithm - SAT solving with GPU beyond DPLL.

Supervision of Bachelor Students

2014 **Florian Zaruba**, Topic: Monitoring ECG on a smart-phone.

Invited Talks

Dec. 13, **Invited Colloquium at University of Newcastle**, Newcastle upon Tyne, UK.

2016 Title: *Analysis and Design of Cyber-Physical Systems*

Aug. 10, **Invited Talk at TU Dresden**, Dresden, Germany.

2016 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 Hrady**, 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*

List of Publications

Edited Journal Issues and Proceedings

- [1] **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
- [2] **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
- [3] **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
- [4] **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
- [5] **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
- [6] **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

Journal Papers

- [7] **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*, submitted to the International Journal of Software Tools for Technology Transfer.
- [8] **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, (In Press); DOI: 10.1109/TCNS.2016.2609138
- [9] **E. Bartocci**, P. Lió, *Computational modeling, formal analysis and tools for systems biology*, PLOS Computational Biology, 12(1) (2016), (ISI Impact Factor 4.6)

- [10] **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)
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