

CURRICULUM VITAE

SURNAME AND NAME	DI CARLO STEFANO
Home Address	
Phone number	
Fax number	
E-mail address	
Nationality	Italian
Birth date	

Italian National Scientific Qualifications awarded for Full Professor positions (“Abilitazioni Scientifiche Nazionali di I fascia”)

Academic Recruitment Field (“Settore Concorsuale”)
09/H1 Sistemi di Elaborazione delle Informazioni — valid from 26/07/2018 till 26/07/2024 (art. 16, comma 1, Legge 240/10)

Academic Position

Qualification/Title	Associate Professor — Professore Associato (L.240)
University	Politecnico di Torino
Department	Control and Computer Engineering Department (DAUIN)
Academic Recruitment Field	09/H1 Sistemi di Elaborazione delle Informazioni
Academic Discipline	ING-INF/05 Sistemi di Elaborazione delle Informazioni

Working experience

Dates	01/11/2014 — today
Name and address of the Employer	Politecnico di Torino
Position held	Associate Professor (L.240) at the Control and Computer Engineering Department (DAUIN) of Politecnico di Torino, SSD ING-INF/05
Main activities/responsibilities	<p>I have been coordinating a research team funded thanks to different research grants.</p> <p>Research topics — main research topics: computer architecture (digital system testing, memory testing, fault tolerant systems, cross-layer reliability, hardware security, emerging computing paradigms), secondary research topics: bioinformatics and computational biology (biological data analysis and integration, modeling, and simulation of biological systems).</p> <p>A detailed description of all activities and responsibilities is reported in the remaining parts of the curriculum.</p>

Dates	16/01/2011 — 31/10/2014
Name and address of the Employer	Politecnico di Torino
Position held	Assistant Professor with tenure (Ricercatore Confermato a Tempo Indeterminato) at the Department of Control and Computer Engineering (DAUIN) of Politecnico di Torino, SSD ING-INF/05
Main activities/responsibilities	<p>Research activity in the field of computer architecture and computational biology.</p> <p>Teaching activities in different Engineering Courses.</p> <p>Service in several committees of the Department of Control and Computer Engineering (DAUIN) of Politecnico di Torino.</p>

Dates	16/01/2008 — 31/10/2011
Name and address of the Employer	Politecnico di Torino
Position held	Assistant Professor (Ricercatore a Tempo Indeterminato) at the Department of Control and Computer Engineering (DAUIN) of Politecnico di Torino, SSD ING-INF/05
Main activities/responsibilities	<p>Research activity in the field of computer architecture and computational biology.</p> <p>Teaching activities in different Engineering Courses.</p> <p>Service in several committees of the Department of Control and Computer Engineering (DAUIN) of Politecnico di Torino.</p>

Dates	15/06/2007 — 15/01/2008
Name and address of the Employer	Politecnico di Torino
Position held	Postdoc. (Assegnista di Ricerca) at the Department of Control and Computer Engineering (DAUIN) of Politecnico di Torino, SSD ING-INF/05. Research project: “ <i>RE-TRUST: Remote EnTrusting by RUN-time Software auThentication</i> ”
Main activities/responsibilities	<p>Research activity in the field of computer architecture.</p> <p>Teaching activities in different Engineering Courses.</p>

Dates	01/06/2006 — 31/05/2007
Name and address of the Employer	Politecnico di Torino
Position held	Postdoc. (Assegnista di Ricerca) at the Department of Control and Computer Engineering (DAUIN) of Politecnico di Torino, SSD ING-INF/05. Research project: <i>"COMMUTA: Componenti hardware/software mutanti per sistemi distribuiti dinamicamente riconfigurabili"</i>
Main activities/responsibilities	Research activity in the field of computer architecture. Teaching activities in different Engineering Courses.

Dates	15/04/2005 — 14/04/2006
Name and address of the Employer	Politecnico di Torino
Position held	Postdoc. (Assegnista di Ricerca) at the Department of Control and Computer Engineering (DAUIN) of Politecnico di Torino, SSD ING-INF/05. Research project: <i>"Test D.O.C.: Quality and Reliability of complex system-on-chip"</i> .
Main activities/responsibilities	Research activity in the field of computer architecture. Teaching activities in different Engineering Courses.

Dates	15/01/2004 — 14/01/2005
Name and address of the Employer	Politecnico di Torino
Position held	Postdoc. (Assegnista di Ricerca) at the Department of Control and Computer Engineering (DAUIN) of Politecnico di Torino, SSD ING-INF/05. Research project: <i>"Centro di Eccellenza per le Radio Comunicazioni Multimediali (CERCOM)"</i> .
Main activities/responsibilities	Research activity in the field of computer architecture. Teaching activities in different Engineering Courses.

Dates	15/01/2003 — 14/01/2004
Name and address of the Employer	Politecnico di Torino
Position held	Postdoc. (Assegnista di Ricerca) at the Department of Control and Computer Engineering (DAUIN) of Politecnico di Torino, SSD ING-INF/05. Research project: <i>"Centro di Eccellenza per le Radio Comunicazioni Multimediali (CERCOM)"</i> .
Main activities/responsibilities	Research activity in the field of computer architecture. Teaching activities in different Engineering Courses.

Dates	14/02/2002 — oggi
Name and address of the Employer	Molesystems s.n.c. di Alfredo Benso, Stefano Di Carlo e Giorgio Di Natale Molesystems s.n.c. is an SME that delivers web-based services for scientific editorial management.
Position held	CEO
Main activities/responsibilities	N/A

Education and Training

Date	2003
Institution which issued the degree	Politecnico di Torino
Type of Degree awarded (only bachelor's degree, Master of Science's Degree, PhD)	Ph.D. in Computer Engineering

Date	1999
Institution which issued the degree	Politecnico di Torino
Type of Degree awarded (only bachelor's degree, Master of Science's Degree, PhD)	Master (Laurea vecchio ordinamento pre DM 509/99) in "Ingegneria Informatica" with final score 110/110

1 Scientific Activity

1.1 List of most important publications

1. Savino, A.; Vallero, A.; Di Carlo, S.; **"ReDO: Cross-Layer Multi-Objective Design-Exploration Framework for Efficient Soft Error Resilient Systems"**, IEEE TRANSACTIONS ON COMPUTERS, (2018) Vol.67 Issue 10, ISSN: 0018-9340, pp. 1462 - 1477, DOI: 10.1109/TC.2018.2818735
Indexes: **SJR — 0.943** **Q1** (Computer Science) **IF — 3.131**
Citations: **Scopus — 16** **WOS — 14** **GScholar — 20**
2. Savino, A.; Di Carlo, S.; Politano, G.; Benso, A.; Di Natale, G.; Bosio, A.; **"Statistical Reliability Estimation of Microprocessor-Based Systems"**, IEEE TRANSACTIONS ON COMPUTERS, (2012), Vol.61, pp.1521-1534, ISSN: 0018-9340, DOI: 10.1109/TC.2011.188
Indexes: **SJR — 0.571** **Q1** (Computer Science) **IF — 1.379**
Citations: **Scopus — 33** **WOS — 28** **GScholar — 43**
3. Di Carlo, S.; Prinetto, P.; Savino, A.; **"Software-Based Self-Test of Set-Associative Cache Memories"** IEEE TRANSACTIONS ON COMPUTERS, (2011) Vol.60, pp.1030-1044, ISSN: 0018-9340, DOI: 10.1109/TC.2010.166
Indexes: **SJR — 0.653** **Q1** (Computer Science) **IF — 1.103**
Citations: **Scopus — 38** **WOS — 27** **GScholar — 54**
4. Bardini, Roberta; Benso, Alfredo; Politano, Gianfranco; Di Carlo; **"Nets-within-nets for modeling emergent patterns in ontogenetic processes"**, COMPUTATIONAL AND STRUCTURAL BIOTECHNOLOGY JOURNAL, (2021), In Press, ISSN: 2001-0370, pp. 1-40, DOI: [10.1016/j.csbj.2021.10.008](https://doi.org/10.1016/j.csbj.2021.10.008)
Indexes¹: **SJR — 1.908** **Q1** (Computer Science) **IF — 7.271**
Citations: **Scopus — 0** **WOS — 0** **GScholar — 0**
5. Di Carlo, Stefano; Condia, Josie E. Rodriguez; Sonza Reorda, Matteo; **"An on-line testing technique for the scheduler memory of a GPGPU"**, IEEE Access, (2020), Vol. 8, ISSN: 2169-3536, pp. 1-16893, DOI: [10.1109/ACCESS.2020.2968139](https://doi.org/10.1109/ACCESS.2020.2968139)
Indexes: **SJR — 0.587** **Q1** (Computer Science) **IF — 3.367**
Citations: **Scopus — 4** **WOS — 3** **GScholar — 7**
6. Vallero, Alessandro; Savino, Alessandro; Chatzidimitriou, Athanasios; Kaliorakis, Manolis; Kooli, Maha; Riera Villanueva, Marc; Anglada, Marti; Di Natale, Giorgio; Bosio, Alberto; Canal, Ramon; Gizopoulos, Dimitris; Mariani, Riccardo; Di Carlo, Stefano **"SyRA: Early System Reliability Analysis for Cross-layer Soft Errors Resilience in Memory Arrays of Microprocessor Systems"**, IEEE Transactions on Computers, (2019), Vol. 68, ISSN: 0018-9340, pp. 765-783, DOI: [10.1109/TC.2018.2887225](https://doi.org/10.1109/TC.2018.2887225)
Indexes: **SJR — 0.943** **Q1** (Computer Science) **IF — 2.711**
Citations: **Scopus — 14** **WOS — 10** **GScholar — 16**
7. Politano, Gianfranco Michele Maria; Di Carlo, Stefano; Benso, Alfredo; **"One DB to rule them all - the RING: a Regulatory INteraction Graph combining TFs, genes/proteins, SNPs, diseases and drugs"**, Database : the journal of biological databases and curation, (2019), Vol. 2019, ISSN: 1758-0463, pp. 1-14, DOI: [10.1093/database/baz108](https://doi.org/10.1093/database/baz108)
Indexes: **SJR — 2.248** **Q1** (Computer Science) **IF — 2.593**
Citations: **Scopus — 2** **WOS — 1** **GScholar — 4**
8. Scionti, Alberto; Mazumdar, Somnath; Di Carlo, Stefano; Hamdioui, Said; **"SIERRA—Simulation environment for memory redundancy algorithms"**, Simulation Modelling Practice and Theory, (2016), Vol. 69, ISSN: 1569-190X, pp. 14-30, DOI: [10.1016/j.simpat.2016.08.008](https://doi.org/10.1016/j.simpat.2016.08.008)
Indexes: **SJR — 0.585** **Q1** (Computer Science) **IF — 1.954**
Citations: **Scopus — 1** **WOS — 1** **GScholar — 2**
9. Politano, Gianfranco; Orso, Francesca; Raimo, Monica; Benso, Alfredo; Savino, Alessandro; Taverna, Daniela; Di Carlo, Stefano; **"CyTRANSFINDER: A Cytoscape 3.3 plugin for three-component (TF, gene, miRNA) signal transduction pathway construction"**, BMC Bioinformatics, (2016), Vol. 17, ISSN: 1471-2105, pp. 1-17, DOI: [10.1186/s12859-016-0964-2](https://doi.org/10.1186/s12859-016-0964-2)
Indexes: **SJR — 1.581** **Q1** (Computer Science) **IF — 2.448**
Citations: **Scopus — 8** **WOS — 8** **GScholar — 10**

¹ Since indexes for 2021 are still not available I reported here the indexes of 2020, the last available indexes.

10. Zuolo, Lorenzo; Zambelli, Cristian; Micheloni, Rino; Indaco, Marco; Di Carlo, Stefano; Prinetto, Paolo Ernesto; Bertozzi, Davide; Olivo, Piero; "SSDEXplorer: A Virtual Platform for Performance/Reliability-Oriented Fine-Grained Design Space Exploration of Solid State Drives", *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, (2015), Vol. 34, ISSN: 0278-0070, pp. 1627-1638, DOI: [10.1109/TCAD.2015.2422834](https://doi.org/10.1109/TCAD.2015.2422834)
 Indexes: SJR — 0.582 Q1 (Computer Science) IF — 1.181
 Citations: Scopus — 17 WOS — 13 GScholar — 22
11. Basile, C.; Di Carlo, S.; Scionti, A.; "FPGA based remote code integrity verification of programs in distributed embedded systems", *IEEE Transactions on Systems, Man and Cybernetics Part C: Applications and Reviews*, (2012), Vol. 42, ISSN: 1094-6977, pp. 187-200, DOI: [10.1109/TSMCC.2011.2106493](https://doi.org/10.1109/TSMCC.2011.2106493)
 Indexes²: SJR — 1.137 Q1 (Computer Science) IF — 2.548
 Citations: Scopus — 14 WOS — 7 GScholar — 26
12. Benso A.; Bosio A.; Di Carlo S.; Di Natale G.; Prinetto P.; "March Test Generation Revealed", *IEEE Transactions on Computers*, (2008), Vol. 57, ISSN: 0018-9340, pp. 1704-1713, DOI: [10.1109/TC.2008.105](https://doi.org/10.1109/TC.2008.105)
 Indexes: SJR — 0.859 Q1 (Computer Science) IF — 2.611
 Citations: Scopus — 14 WOS — 14 GScholar — 24
13. Benso A.; Di Carlo S.; Prinetto P.; Zorian Y.; "A Hierarchical Infrastructure for SOC Test Management", *IEEE Design and Test of Computers*, (2003), Vol. 20, ISSN: 0740-7475, pp. 32-39, DOI: [10.1109/MDT.2003.1214350](https://doi.org/10.1109/MDT.2003.1214350)
 Indexes³: SJR — 1.065 Q1 (Computer Science) IF — 1.423
 Citations: Scopus — 9 WOS — 7 GScholar — 18
14. Benso, Alfredo; Di Carlo, Stefano; Di Natale, Giorgio; Lobetti Bodoni, M.; Prinetto, Paolo Ernesto; "Programmable built-in self-testing of embedded RAM clusters in system-on-chip architectures", *IEEE Communications Magazine*, (2003), Vol. 41, ISSN: 0163-6804, pp. 90-97, DOI: [10.1109/MCOM.2003.1232242](https://doi.org/10.1109/MCOM.2003.1232242)
 Indexes: SJR — 3.223 Q1 (Computer Science) IF — 2.406
 Citations: Scopus — 16 WOS — 13 GScholar — 31
15. Benso A.; Di Carlo S.; Di Natale G.; Prinetto P.; "Online self-repair of FIR filters", *IEEE Design and Test of Computers*, (2003), Vol. 20, ISSN: 0740-7475, pp. 50-57, DOI: [10.1109/MDT.2003.1198686](https://doi.org/10.1109/MDT.2003.1198686)
 Indexes⁴: SJR — 1.065 Q1 (Computer Science) IF — 1.423
 Citations: Scopus — 11 WOS — 12 GScholar — 21
16. Carelli, Alberto; Vallero, Alessandro; Di Carlo, Stefano; "Performance monitor counters: Interplay between safety and security in complex cyber-physical systems", *IEEE Transactions on Device and Materials Reliability*, (2019), Vol. 19, ISSN: 1530-4388, pp. 73-82, DOI: [10.1109/TDMR.2019.2898882](https://doi.org/10.1109/TDMR.2019.2898882)
 Citations: Scopus - 2 WOS - XX Scholar — 5
 Indexes: SJR — 1.065 Q2 (Electrical and Electronic Engineering) IF — 1.407
 Citations: Scopus — 7 WOS — 5 GScholar — 3
17. Di Carlo, Stefano; Gambardella, Giulio; Prinetto, Paolo Ernesto; Rolfo, Daniele; Trotta, Pascal; "SA-FEMIP: A Self-Adaptive Features Extractor and Matcher IP-Core Based on Partially Reconfigurable FPGAs for Space Applications", *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, (2015), Vol. 23, ISSN: 1063-8210, pp. 2198-2208, DOI: [10.1109/TVLSI.2014.2357181](https://doi.org/10.1109/TVLSI.2014.2357181)
 Indexes: SJR — 0.592 Q2 (Computer Science) IF — 1.245
 Citations: Scopus — 8 WOS — 5 GScholar — 9

² Starting from 2012 this Journal was renamed IEEE Transactions on Human-Machine Systems. Statistics on Scimago are associated to this new journal even for the years before 2012.

³ Starting from 2012 this Journal was renamed IEEE Design and Test. Statistics on Scimago are associated to this new journal even for the years before 2012.

⁴ Starting from 2012 this Journal was renamed IEEE Design and Test. Statistics on Scimago are associated to this new journal even for the years before 2012.

18. Benso A.; Bosio A.; Di Carlo S.; Prinetto P.; "Are IEEE 1500 compliant cores really compliant to the standard?", *IEEE Design and Test of Computers*, (2009), Vol. 26, ISSN: 0740-7475, pp. 16-24, DOI: [10.1109/MDT.2009.46](https://doi.org/10.1109/MDT.2009.46)
Indexes⁵: SJR — 0.502 Q2 (Computer Science) **IF — 1.798**
Citations: Scopus — 2 WOS — 1 GScholar — 2
19. Di Carlo, S.; Falasconi, M.; Sanchez, E.; Scionti, A.; Squillero, G.; Tonda, A.; "Increasing pattern recognition accuracy for chemical sensing by evolutionary based drift compensation", *Pattern Recognition Letters*, (2011), Vol. 32, ISSN: 0167-8655, pp. 1594-1603, DOI: [10.1016/j.patrec.2011.05.019](https://doi.org/10.1016/j.patrec.2011.05.019)
Indexes: SJR — 0.662 Q2 (Computer Science) **IF — 1.304**
Citations: Scopus — 34 WOS — 34 GScholar — 52
20. Benso A.; Di Carlo S.; Prinetto P.; Zorian Y.; "IEEE Standard 1500 Compliance Verification for Embedded Cores", *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, (2008), Vol. 16, ISSN: 1063-8210, pp. 397-407, DOI: [10.1109/TVLSI.2008.917412](https://doi.org/10.1109/TVLSI.2008.917412)
Indexes: SJR — 0.636 Q2 (Computer Science) **IF — 1.373**
Citations: Scopus — 17 WOS — 9 GScholar — 45

1.2 Complete list of all publications

The full list of publications is available in the IRIS institutional repository of Politecnico di Torino (<https://iris.polito.it/cris/rp/rp05463#.YWfMBdlBxcc>).

I have been continuously publishing over my entire career as depicted in Figure 1. The publication rate has significantly increased since 2008 when I started building my own research team with a peak in 2014 when I was in the middle of the EU Clereco Project that was an invaluable opportunity to build a strong research network. I also focused on keeping a good balance between conference publications that are the fastest dissemination way in the computer architecture community and strong journal publications that could archive mature works.

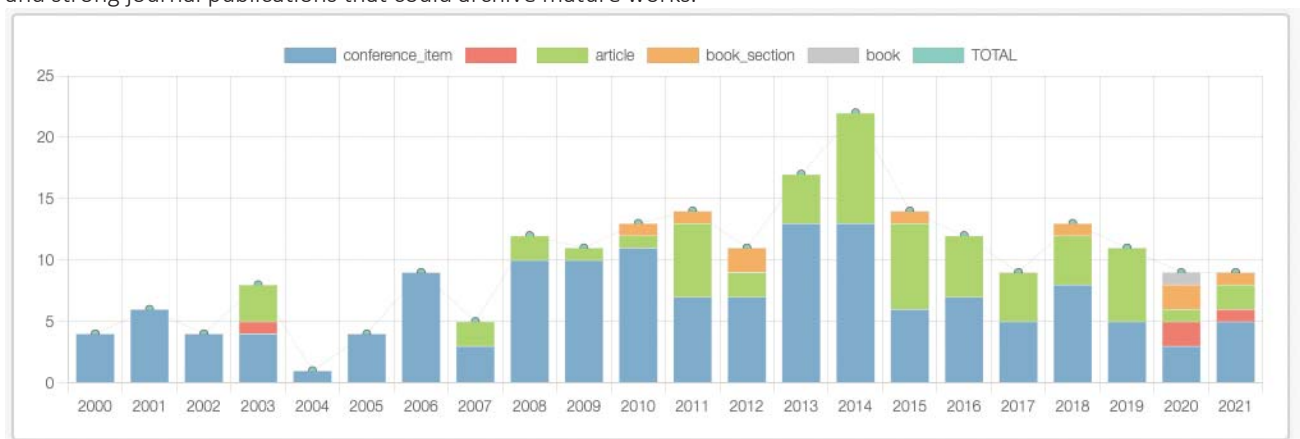


Figure 1 — Temporal distribution of the publications (the red bars includes thesis, white papers and other types of publications not belonging to the other categories).

When considering journal publications, I always did an effort to privilege quality over quantity. Figure 2 shows the classification of all journals in which I have been publishing since the beginning of my career. According to data available in SCIMAGO SJR, about 58% of my journal articles are published in Q1 journals, and the percentage grows to 89% jointly considering Q1 and Q2 journals.

⁵ Starting from 2012 this Journal was renamed IEEE Design and Test. Statistics on Scimago are associated to this new journal even for the years before 2012.



Figure 2 — Journal publications classification using data from SCIMAGO SJR

This is also confirmed when looking at Figure 3 that shows statistics about papers published in the top 10% and 1% of the related subject areas in the period 2011-2020.

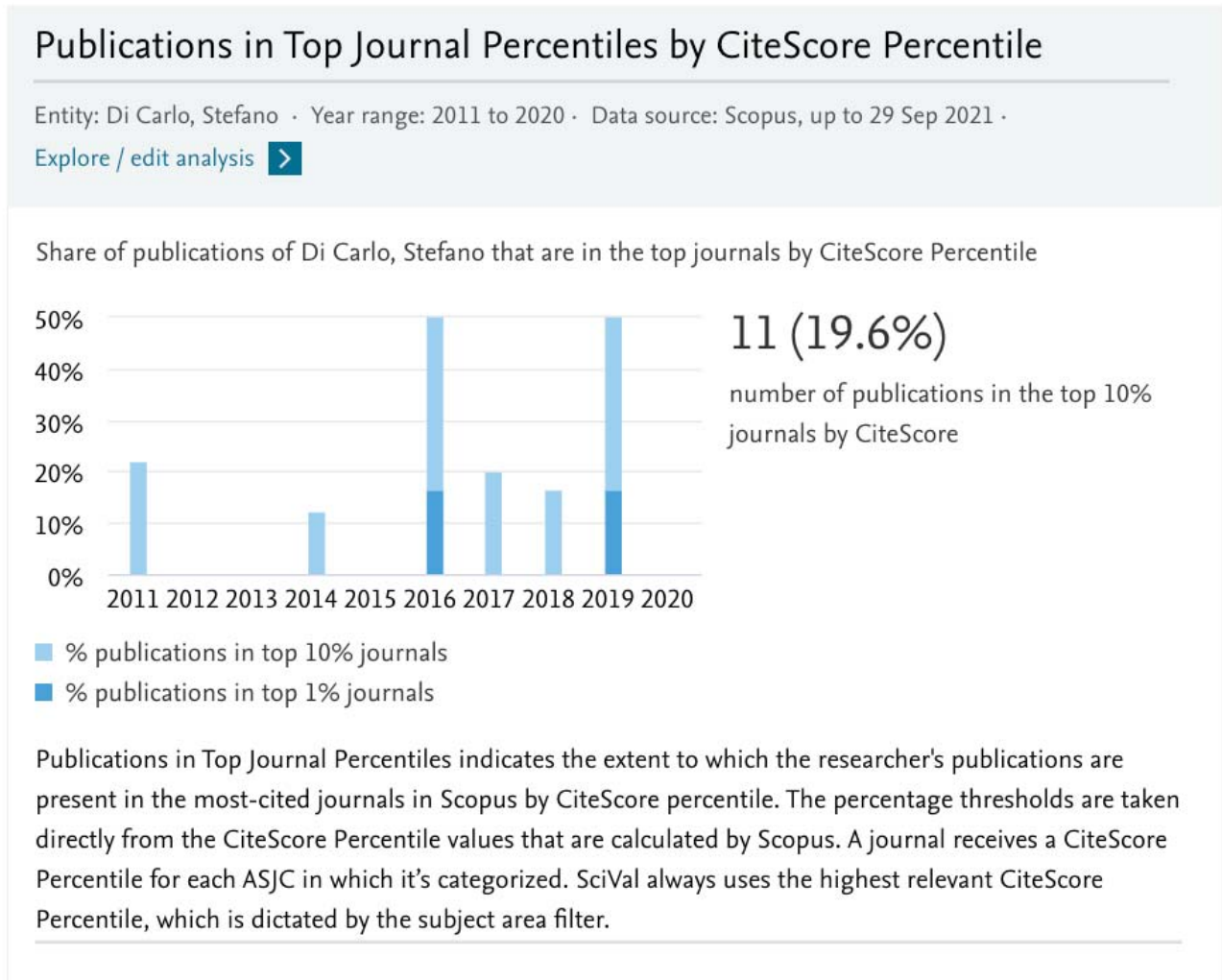


Figure 3 — Publications in to 10% and 1% journals from SciVal in the period 2011-2020

Finally, to give an idea of the topics covered by all publications produced in my career, Figure 4 shows a Tag Cloud generated by using the keywords associated to all papers stored in the IRIS institutional repository of Politecnico di Torino.

Working with M.S. and B.S. students is a strong priority in my research team. Over the year I supervised more than 70 students that developed their final thesis project with me and my collaborators.

International relationship and networking are a key factor today to perform cutting edge research. The complexity of the problems we are facing to bring innovation is so high that is often impossible to work on challenging problems by remaining isolated in a local team. Collaborations with other research groups spread all over the world and cross-fertilization between groups from different communities is a key element of my career and is part of the way I manage my research team. I already highlighted external collaborations related to the 20 publications presented in this document. Moreover, to give an idea of the importance of this factor, Figure 5 shows that more than 50% of publications available now in Scopus include authors coming from different research groups.

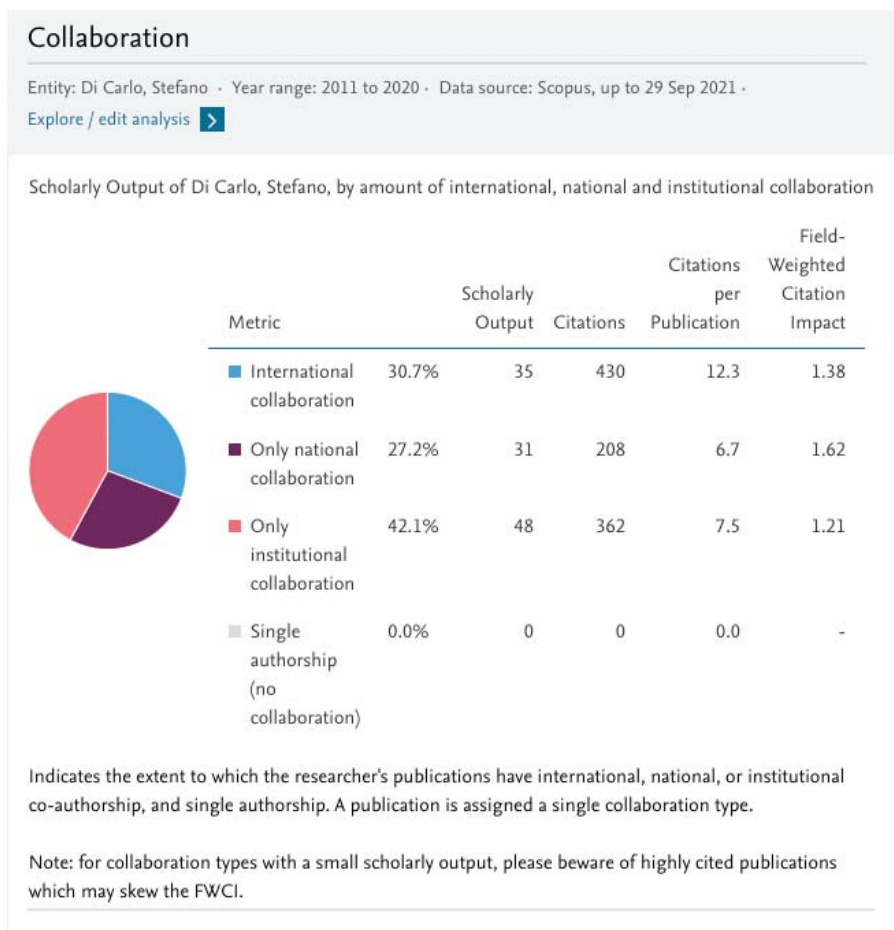


Figure 5 — International collaborations based on publications extracted using SciVal

Following is a list of specific long-term international collaborations that were important during my career:

- Dr. Yervant Zorian (Synopsys, USA): research on distributed Built-In Self-Test.
- Prof. Said Hamdioui (TU Delft, The Netherland): research on memory testing.
- Prof. Dimitris Gizopoulos (University of Athens, Greece): research on cross-layer reliability, Ph.D. exchanges and EU projects.
- Prof. Ramon Canal (Universitat Politècnica de Catalunya, Spain): research on cross-layer reliability, EU projects and recently co-supervision of a Ph.D. student.
- Dr. Riccardo Mariani (NVIDIA, USA): research on functional safety, industrial grants, and EU projects.
- Prof. Alberto Bosio (École Centrale de Lyon, France): research on reliability and approximate computing, EU projects.
- Dr. Giorgio Di Natale (TIMA Laboratory, France): research on reliability and testing and EU Projects.
- Prof. Luca Daniel (MIT): research on synthetic biology.

Supervised Ph.D. Students

Since 2009, when I became assistant professor, I directly supervised (or I am currently supervising) 7 Ph.D. students and contributed to the supervision of other 11 students. Most students were enrolled in the Ph.D. Course in Computer and

Control Engineering at Politecnico di Torino. Starting from 2021, I obtained a Ph.D. position in the new *National Ph.D. in Artificial Intelligence*, a national initiative to support research in the field of Artificial intelligence.

The full list of Ph.D. students for which I have been the official supervisor is:

1. **Alberto Scionti** enrolled in 2008 and graduated in 2011. Thesis on *“Defect oriented memory test and repair at the nanometer design scale”*.
2. **Alessandro Vallero** enrolled in 2014 and graduated in 2017. Thesis on *“Cross layer reliability estimation for digital systems”*.
3. **Alberto Carelli** enrolled in 2017 and graduated in 2020. Thesis on *“Securing Critical Infrastructures”*.
4. **Franco Oberti** enrolled in 2020 for an industrial Ph.D. in collaboration with Punch Torino s.p.a. Research topic: *“Hardware security of embedded automotive systems”*.
5. **Lorenzo Martini** enrolled in 2021. Research topic: *“Single-cell multi-omics for understanding cellular heterogeneity”*.
6. **Alessio Carpegna** was selected to start his Ph.D. on Nov. 2021 in the framework of the new *National Ph.D. in Artificial Intelligence*. Research topic: *“Artificial resilience to support intelligent safety-critical systems”*.
7. **Cristiano Pegoraro Chenet** was selected to start his Ph.D. on Nov. 2021 in the framework of an international scholarship funded by Politecnico di Torino to promote collaboration with the Universitat Politècnica de Catalunya. Research topic: *“Hardware-Based Neuromorphic Resilience to Faults and Attacks”*.

I also contributed to supervise the following Ph.D. students:

- **Gabriele Tiotto** enrolled in 2009 (advisor: P. Prinetto) and graduated in 2011. Thesis on *“Automatic translation into LIS (Italian Sign Language)”*.
- **Michele Fabiano** enrolled in 2010 (advisor: P. Prinetto) and graduated in 2014. Thesis on *“Flash memory for Space Applications: Testing and Reliability”*.
- **Nadereh Hatami** enrolled in 2010 (advisors: P. Prinetto and Hans-Joachim Wunderlich – University of Stuttgart) and graduated in 2012. Thesis on *“Developing high-level methods to insert synthesizable test infrastructure at system level”*.
- **Marco Indaco** enrolled in 2011 (advisor: P. Prinetto) and graduated in 2014. Thesis on *“Service-Oriented Non-Volatile Memories”*.
- **Giulio Gambardella** enrolled in 2012 (advisor: P. Prinetto) and graduated in 2015. Thesis on *“Dynamic Partial Reconfiguration for Dependable Systems”*.
- **Daniele Rolfo** enrolled in 2012 (advisor: P. Prinetto) and graduated in 2015. Thesis on *“High-performance hardware accelerators for image processing”*.
- **Pascal Trotta** enrolled in 2013 (advisor: P. Prinetto) and graduated in 2016. Thesis on *“Enhancing Real-time Embedded Image Processing Robustness on Reconfigurable Devices for Critical Applications”*.
- **Hafeez Ur Rehman** enrolled in 2011 (advisor: Alfredo Benso) and graduated in 2014. Thesis on *“Integration and analysis of heterogeneous biological data”*.
- **Alessandro Vasciaveo** enrolled in 2013 (advisor: Alfredo Benso) and graduated in 2016. Thesis on *“Computational models and algorithms to solve large-scale problems in Network Biology”*.
- **Francesco Rossi** enrolled in 2015 (advisor: Alfredo Benso) and graduated in 2018. Thesis on *“Computer-aided technologies for food risk assessment”*.
- **Roberta Bardini** enrolled in 2016 (advisor: P. Alfredo Benso) and graduated in 2019. Thesis on *“A diversity-aware computational framework for systems biology”*.

Supervised post-doc and research fellows

A subset of Ph.D. students continued to work in my research team after graduation, with research fellow grants (Assegno di Ricerca) funded thanks to my research grants:

- **Alessandro Savino**, in years 2014, 2015, 2016, 2017, 2018 (partially), now assistant professor (RTD-B) at Politecnico di Torino
- **Gianfranco Politano**, in years 2013, 2014, 2015, 2016, 2017, now assistant professor RTD-B at Politecnico di Torino
- **Roberta Bardini** in 2020, 2021 we are now working on a spin-off project based on the outcome of the research activities.
- **Alberto Carelli** in 2020

I also supervised a group of M.S. postgraduate students hired in the framework of specific research projects and contracts (assegista di ricerca o titolare di borsa di ricerca):

- **Andrea Romanelli** in years 2018, 2019, 2020
- **Stefano Sclaverano** in year 2018, 2019, 2020

- Giannantoni Leonardo in 2020, 2021

2.2 Scientific responsibility (Principal investigator) of Italian and International research projects, awarded through a peer-review process.

Coordination of entire international peer reviewed research projects

- (2018 – 2020) **Hybrid Discrete/Continuous Models for Synthetic Biological Systems** a project funded by Compagnia di San Paolo and Massachusetts Institute of Technology (MIT) under the call MITOR supporting research collaborations and exchanges between MIT and Politecnico di Torino.

The project aims at creating a modeling strategy to describe and simulate Synthetic Biological Systems, by combining the performance of discrete event simulation, the domain of expertise of my team with the precision of continuous mathematical models, the domain of expertise of the team from prof. Luca Daniel from MIT.

- (2013 – 2017) **CLERECO: Cross Layer Early Reliability Evaluation for the Computing cOntinuum** (GA 611404) a Collaborative Project including 12 partners funded by the European Commission under the call FP7-ICT-2013-10 (<https://cordis.europa.eu/project/rcn/109949/factsheet/en>).

The project aims at developing solutions for fast and precise early cross-layer reliability analysis to be applied to a large spectrum of computing technologies. In this project I coordinated my research team focused on the application of Bayesian models to combine information from different layers of the target system and estimate reliability metrics.

Specific responsibilities as a partner or local coordinator in international peer reviewed research projects

- (2020 – 2024) **APROPOS: Approximate Computing for Power and Energy Optimisation** — (GA 956090) a MSCA-ITN including 14 partners funded by the European Commission under the call H2020-EU.1.3.1. (<https://cordis.europa.eu/project/id/956090>). Role: **Local Coordinator** for partner Politecnico di Torino. The project is coordinated by Tampere University in Finland.

The project aims at training young researchers in the domain of Approximate Computing and Energy Optimization of computing systems. The role of my research team is to investigate design space exploration techniques to optimize where and how applications can be approximated while meeting the required constraints.

- (2006 – 2009) **RE-TRUST: Remote entrusting by run-time software authentication** — (GA 021186) a STREP - Specific Targeted Research Project including 5 partners funded by the European Commission under the call FP6-IST (<https://cordis.europa.eu/project/id/021186>). Role: **WP Leader** for WP2: “Software-Related TR Method”. Project coordinated by University of Trento in Italy.

The project aims at developing the concept of Remote Entrusting, a novel paradigm with the specific objective of ensuring that code running on an untrusted machine, is being executed in a trustworthy manner. The work package I led focused on the development of pure software techniques to address the problem.

- (2006 – 2009) **EuNICE-TEST: European Network for Initial and Continuing Education in VLSI/SOC TESTING using remote ATE facilities** — (GA IST-2000-30163) an ACM - Preparatory, accompanying and support measures project including 7 partners funded by the European Commission under the call FP5-IST (<https://cordis.europa.eu/project/id/IST-2000-30163>). Role: **WP Leader** for WP2: “Training implementation Polito”. Project coordinated by CNRS, Montpellier, France.

The project addresses the shortage in microelectronics engineers with skills in testing of mixed-signal circuits for multimedia/telecom market. The project aimed at providing test-training facilities at a European scale in an education context. The work package I led focused on the implementation of the remote training infrastructure at Politecnico di Torino.

Member of the research team of international peer reviewed research projects

- (2019 – 2021) **ARROWHEAD: Arrowhead Tools for Engineering of Digitalisation Solutions** — (GA 826452) an ECSEL Innovation Action including 80 partners funded by the European Commission under the call H2020-EU.2.1.1.7. (<https://cordis.europa.eu/project/id/826452>). Project coordinated by Lulea Tekniska Universitet (Sweden).
- (2018 – 2019) **MANUELA: Additive Manufacturing using Metal Pilot Line** — (GA 820774) an IA (Innovation action) including 20 partners funded by the European Commission under the call H2020-NMBP-FOF-2018 (<https://cordis.europa.eu/project/rcn/218238/factsheet/en>). Project coordinated by Chalmers Tekniska Hoegskola AB, Sweden.

- (2018 – 2021) **RURITAGE: Additive Manufacturing using Metal Pilot Line** — (GA 776465) an IA (Innovation action) including 39 partners funded by the European Commission under the call H2020-SC5-2017-TwoStage (<https://cordis.europa.eu/project/rcn/216073/factsheet/en>). Project coordinate by University of Bologna, Italy.
- (2017 – 2018) **Lab4MEMS II: Micro-Optical MEMS, micro-mirrors and pico-projectors** — (GA 621176) a Joint Technology Initiatives Collaborative Project (ENIAC) including 20 partners funded by the European Commission under the call ENIAC-2013-2 (<https://cordis.europa.eu/project/rcn/201976/factsheet/it>). Project coordinated by STMICROELECTRONICS SRL, Italy.
- (2016 – 2018) **F.I.S.HUB - Fish Identification Software Hub** — a project funded by the FP7 Foodintegrity project (GA 613688 – FP7/2007-2013) (<https://cordis.europa.eu/project/id/613688>). Project coordinated by Istituto Zooprofilattico Sperimentale del Piemonte, Italy.
- (2016-2017) **FLEXMETER: Flexible Smart Metering for Multiple Energy Vectors with Active Prosumers** — (GA 646568) an IA (Innovation action) including 12 partners funded by the European Commission under the call H2020-LCE-2014-3 (<https://cordis.europa.eu/project/rcn/194457/factsheet/en>). Project coordinated by Politecnico di Torino, Italy.
- (2016 – 2018) **Food Integrity**— (GA 100230) a CP-IP (Large-scale integrating project) including 63 partners funded by the European Commission under the call FP7-KBBE-2013-7-single-stage (<https://cordis.europa.eu/project/rcn/110951/factsheet/en>). Project coordinated by Fera Science Limited, United Kingdom
- (2015) **DENECOR: Devices for Neurocontrol and Neurorehabilitation** — (GA 324257) a Joint Technology Initiatives Collaborative Project (ENIAC) including 22 partners funded by the European Commission under the call ENIAC-2012-1 (<https://cordis.europa.eu/project/rcn/201966/factsheet/en>). Project coordinated by PHILIPS Medical Systems Netherland BV, Netherlands.
- (2014 – 2015) **DEMANES: Design, Monitoring and Operation of Adaptive Networked Embedded Systems** — (GA 295372) a Joint Technology Initiatives - Collaborative Project (ARTEMIS) including 26 partners funded by the European Commission under the call ARTEMIS-2011-1 (<https://cordis.europa.eu/project/rcn/105895/factsheet/it>). Project coordinated by ITA-Suomen Yliopisto, Finland.
- (2014) **ERG: Energy for a Green Society: from sustainable harvesting to smart distribution equipment, materials, design solutions and their applications Systems** — (GA 270722) a Joint Technology Initiatives - Collaborative Project (ENIAC) including 27 partners funded by the European Commission under the call ENIAC-2010-1 (<https://cordis.europa.eu/project/rcn/201952/factsheet/en>). Project coordinated by Acondicionamiento Tarrasense Asociacion, Spain.
- (2013) **MOTORBRAIN: Nanoelectronics for Electric Vehicle Intelligent Failsafe Drive Train** — (GA 270693) a Joint Technology Initiatives - Collaborative Project (ENIAC) including 30 partners funded by the European Commission under the call ENIAC-2010-1 (<https://cordis.europa.eu/project/rcn/201949/factsheet/en>). Project coordinated by Infineon Technologies AG, Germany.
- (2012 – 2013) **SMECY: Smart Multicore Embedded Systems** — (GA 100230) a Joint Technology Initiatives - Collaborative Project (ARTEMIS) including 28 partners funded by the European Commission under the call ARTEMIS-JU 2009 (<https://artemis-ia.eu/project/25-smecy.html>). Coordinated by Commissariat à l'énergie Atomique, France.
- (2010 – 2012) **WAX/WEBINOS: Secure Web OS Application Delivery Environment** — (GA 257103) a Collaborative project including 23 partners funded by the European Commission under the call FP7-ICT-2009-5 (<https://cordis.europa.eu/project/rcn/95793/factsheet/en>). Coordinated by Fraunhofer Gesellschaft zur Foerderung der Angewandten Forschung e.v., Germany.
- (2010) **POLLUX: Process Oriented Electrical Control Units for Electrical Vehicles Developed on a multi-system real-time embedded platform** — (GA 100205) a Joint Technology Initiatives - Collaborative Project (ARTEMIS) including 35 partners funded by the European Commission under the call ARTEMIS-JU 2009 (<https://cordis.europa.eu/project/rcn/95793/factsheet/en>). Coordinated by Fraunhofer Gesellschaft zur Foerderung der Angewandten Forschung e.v., Germany.

Coordination of entire national peer reviewed research projects

- (2021) **Cultura Regenerating Systems (Cultūrā)**, a Proof-of-Concept project funded by Ministero dello Sviluppo Economico (MISE) under the call POC-OFF 2020.

The project aims at developing a proof of concept of a software framework able to generate optimized protocols for bio fabrication of complex biological artifacts such as cell aggregates, tissues, and organs. This project is a continuation of a set of activities in this field and aims at moving the proposed technology from TRL3 to TRL5.

- (2020) **Hybrid Discrete/Continuous Models for Synthetic Biological Systems** a project funded by Links foundation under the call PoC Instrument 2020.

The project aims at developing a proof of concept of a software framework able to generate optimized protocols for bio fabrication of complex biological artifacts such as cell aggregates, tissues, and organs. The final goal is to move from TRL1 to TRL3 the idea behind a set of patents filed in my research team between 2019 and 2020. The project will exploit design space exploration algorithms coupled with multi-level and multi-scale simulation technologies.

Specific responsibility as a partner or local coordinator in national peer reviewed research projects

- (2013 – 2016) **MIND: Ingegnerizzazione di Modelli d'organo di interesse fisiologico e patologico per l'Indagine di Disturbi legati all'invecchiamento**, a project funded by Ministero dell'Istruzione, dell'Università e della Ricerca scientifica (MIUR) under the call PRIN 2010 (Progetti di rilevante interesse nazionale). Role: **Local Coordinator** for DAUIN unit of Politecnico di Torino. Project coordinated by Politecnico di Torino with the unit of the DIMEAS department.

The project aims at developing in-vitro dynamic models of organs using bioengineering techniques with the purpose of providing a new instrument to study pathologies connected to ageing mechanisms. In particular, the unit of the Department of Control and Computer Engineering of Politecnico di Torino that I led focused on the development of in-silico models to support the prototyping of the in-vitro systems.

- (2015 – 2016) **SALVEREMO: Sistema Automatico di Localizzazione e avVistamento Escursionisti in aree Remote MOntane** a project funded by Regione Piemonte and European Commission under the call "Poli innovazione fondi PAR-FSC 2007-2013". Role: **WP Leader** for "WP2: ground station". Project coordinated by Bea s.r.l.

The project aims at developing an innovative system to search and rescue people lost in harsh mountain environments based on drones equipped with antennas able to localize mobile terminals (GSM and UMTS) and the use of audio/video sensors. The WP2 that I led focused on developing the ground station used to control the flying drones.

- (2008 – 2011) **COMMUTA: Mutant hardware/software components for dynamically reconfigurable distributed systems**, a project funded by Ministero dell'Istruzione, dell'Università e della Ricerca scientifica (MIUR) under the call PRIN 2005 (Progetti di rilevante interesse nazionale). Role: **WP Leader** for "WP2: Realizzazione del prototipo". Project coordinated by Politecnico di Torino.

The project aims at developing a new computing model joining software mobility concepts with reconfigurable hardware techniques to gain advantages in terms of performance and reliability. The work package I led aimed at the development of a prototype of the distributed architecture providing hardware and software reconfiguration capabilities.

- (2001 – 2006) **TestDOC: Quality and Reliability of System-on-chip**, a project funded by Istituto Superiore Mario Boella. Role: **WP Leader** for "WP1: advanced BIST techniques for complex System-on-Chip". Project coordinated by Politecnico di Torino.

This project addresses the problem of defining new techniques to improve the quality and dependability of complex digital systems a.k.a. System-on-Chip (SoCs). The work package I led aims at dealing with three different issues in Built-In Self-Test for SoCs: test access mechanisms, low power design, and test or programmable devices.

Member of the research team of national peer reviewed research projects

- (2009 – 20011) **Defect Based Testing and Diagnosis of SRAM Memories**, a project funded by the Ministry of Foreign Affairs of Italy (MAECI) under the call "Azioni integrate Italia Spagna" to support the exchange of researchers between Politecnico di Torino and Universitat Politècnica de Catalunya (Spain).
- (2008 – 2011) **ATLAS: Automatic Translation Into Sign Language**, a project funded by Regione Piemonte under the call "Bando Converging Technologies". Project led by Politecnico di Torino.
- (2006 – 2007) **Combining Fault Tolerance and Offline Test Strategies for Nanoscaled Electronics**, a project funded by German Academic Exchange Service (DAAD) under the call "Programma Vigoni" to support the exchange of researchers between Politecnico di Torino and University of Stuttgart (Spain).
- (2004 – 2006) **Design and Testing of Digital Systems on-chip**, a project funded by the Ministry of Foreign Affairs of Italy (MAECI) under the call "Protocollo bilaterale di cooperazione scientifica e tecnologica tra Italia e Slovacchia", to support the exchange of researchers between Politecnico di Torino and University of Bratislava (Slovakia).

- (2003 – 2004) **CERCOM: Centro di Eccellenza per le Radio Comunicazioni Multimediali**, a project funded by Ministero dell'Istruzione, dell'Università e della Ricerca (MIUR) under the call "Progetti di Ricerca su Fondi Strutturali e Nazionali". Project coordinated by the Department of Electronics and Telecommunications (DET) or Politecnico di Torino.
- (2003 – 2004) **Implementing System Fault Tolerance by HW/SW Codesign**, a project funded by German Academic Exchange Service (DAAD) under the call "Programma Vigoni" to support the exchange of researchers between Politecnico di Torino and the University of Stuttgart (Germany).
- (2001) **Metodologie di Software Fault-Tolerance per Applicazioni Spaziali**, a project funded by Politecnico di Torino under the call "Giovani ricercatori" and coordinated by Prof. Alfredo Benso from the Department of Control and Computer Engineering.
- (2000 – 2001) **Built-In Self-Test and Verification of FPGA Based Digital Circuits**, a project funded by the Ministry of Foreign Affairs of Italy (MAECI) under the call "Azioni integrate Italia Spagna" to support the exchange of researchers between Politecnico di Torino and Universitat Politècnica de Catalunya (Spain).
- (2000) **Sviluppo di un Ambiente per l'Analisi Statistica dell'Affidabilità di un Software**, a project funded by Politecnico di Torino under the call "Giovani ricercatori" and coordinated by Prof. Alfredo Benso from the Department of Control and Computer Engineering.
- (2000) **Sviluppo di un sistema di elaborazione ad alta affidabilità per applicazioni spaziali basato su componenti COTS e sua validazione tramite Fault Injection** a project funded by Agenzia Spaziale Italiana and coordinated by Politecnico di Torino.

2.3 Scientific responsibility of Italian and International research projects, ruled through partnership agreements with companies and/or public/private bodies which are leaders in their own sector.

- (01/11/2020 – 31/10/2020) Research agreement for an Industrial Ph.D. with Punch Torino on "Cybersecurity applied to embedded control systems".
- (01/01/2019 – 31/12/2019) Research contract with Intel Italy S.p.a. on "Interplay of functional safety and security in CPS and IoT".
- (15/6/2018 - 30/01/2021) Research contract with Rete Ferroviaria Italiana S.p.a. "Procedure di collaudo funzionale da eseguire a run-time su processori ARM®, Intel e relative periferiche".
- (15/6/2018 – 14/6/2020) Research contract with Rete Ferroviaria Italiana S.p.a. S.O. "Procedure di collaudo funzionale da eseguire a run-time su processori ARM®, Intel e relative periferiche".

2.4 Outcomes obtained in the application and in the enhancement of research by technology transfer activity, in particular.

Establishment of partnerships

- (19/10/2020) Signature as a Ph.D. advisor for an agreement with Punch Torino s.p.a. for an Industrial Ph.D. on "*Hardware security of embedded automotive systems*".
- (19/10/2020) Signature as **scientific coordinator** of a **framework research agreement** between Rete Ferroviaria Italiana S.p.a. (RFI) and the Department of Control and Computer Engineering of Politecnico di Torino to carry out research in the field of embedded systems for railways applications (DAC.0053.2020). With this type of agreement, RFI has identified a set of research groups in major Italian Universities to get support in its R&D activities. The full program at the Italian level has a budget of 5 million euros. The agreement ends after 5 years or when the available budget at the Italian level is exhausted.
- (17/12/2017) Signature as **scientific coordinator** of a **framework research agreement** between Rete Ferroviaria Italiana S.p.a. (RFI) and the Department of Control and Computer Engineering of Politecnico di Torino to carry out research in the field of embedded systems for railways applications (DAC.0167.2017). With this type of agreement, RFI has identified a set of research groups in major Italian Universities to get support in its R&D activities. The full program at the Italian level has a budget of 5 million euros. The agreement ends after 5 years or when the available budget at the Italian level is exhausted. This second condition has been reached at the end of 2020.

Patents

- (13/7/2021) **Italian patent n. 1020190000009969**: Bardini Roberta, Stefano Di Carlo, Alfredo Benso, Gianfranco Politano, "Metodo di simulazione via computer dell'ontogenesi di un sistema biologico e, opzionalmente, di generazione di un protocollo di coltura".

The claims of the patent describe a computer-based system able to simulate the ontogenesis of a biological system that could be exploited for the generation of culture protocols.

Patents applications

- (24/6/2020) **International Patent Application n. PCT/IB2020/055990**: Bardini Roberta, Stefano Di Carlo, Alfredo Benso, Gianfranco Politano, “Computer Implemented Method for Generating a Culture Protocol for Bio-Manufacturing”.

The claims of the patent describe a computer-based system able to simulate the ontogenesis of a biological system that could be exploited for the generation of culture protocols.

- (13/7/2020) **Italian patent application n. 102020000016987**: Bardini Roberta, Stefano Di Carlo, Alfredo Benso, Gianfranco Politano, “Metodo computerizzato per generare protocolli di coltura per bio-manufacturing”.

The claims of the patent describe a computer-based method for the generation of culture protocols for the bio-manufacturing of biological artifacts.

Responsibility in terms of creation of start-ups and spin-offs

- (2020) Founder with Dr. Roberta Bardini of the “cultūrā regenerating systems” project for the exploitation of the patent applications in the field of regenerative medicine (<https://www.cultura-biotech.com/>). The project is now undergoing a prototyping phase expected to end in April 2022. Based on the outcome of this phase we will start the procedure to be recognized as a Spin-Off of Politecnico di Torino.
- (2000 – today) In 2002 I founded together with two partners a start-up named Molesystems s.n.c. (VAT-ID IT 08390790015) aiming at delivering innovative services for scientific publication management. Today Molesystems s.n.c. is an established SME providing services for major IEEE Conferences and Journals in the Medical Domain.

3 National and international reputation and professional activity for the scientific community

3.1 Participation in the Editorial Board of Journals with international reputation (in the role of Associate Editor or equivalent), participation in the Editorial Board of book series, encyclopedias, and essays of recognized prestige.

- (2019 – 2022) **Member of the Steering Committee** of the **IEEE Transactions on Very Large-Scale Integration (VLSI) Systems** ISSN: 1063-8210. After the first term of two years starting in 2019, the position was renewed for a second term till the end of 2022.

The journal, created in 1993 attracts research in the area of design and realization of microelectronic systems using VLSI/ULSI technologies that require close collaboration among scientists and engineers in the fields of systems architecture, logic and circuit design, chips and wafer fabrication, packaging, testing, and systems applications. (<https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=92>)

- (2018 – Today) **Member of the Editorial Board as Associate Editor** of the **Journal of Electronic Testing, Theory and Applications** edited by Springer, ISSN: 0923-8174.

The journal, created in 1997 is the only journal specifically dedicated to electronic testing. It is an international forum disseminating the latest research results and applications in the field (<https://www.springer.com/journal/10836>)

- (2018 – 2020) **Member of the Editorial Board as Associate Editor** of the **Letters of the Computer Society**, edited by the IEEE Computer Society, ISSN: 2573-9689.

IEEE Letters of the Computer Society (LOCS) is a rigorously peer-reviewed forum for the rapid publication of brief articles describing high-impact results in all areas of interest to the IEEE Computer Society (<https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=8012254>).

- (2019) **Member of the Editorial Board as Guest Editor** for a Special Issue on “Emerging trends and computing paradigms for testing, reliability, and security in future VLSI systems” for the IEEE Transactions on Emerging Topics in Computing, edited by the IEEE Computer Society, ISSN: 2168-6750 (<https://www.computer.org/digital-library/journals/ec/call-for-papers-special-section-on-emerging-trends-and-computing-paradigms-for-testing-reliability-and-security-in-future-vlsi-systems>).

- (2020) **Member of the Editorial Board as Guest Editor** for a Special Issue on “Selected Papers from the IEEE VLSI Test Symposium” for the IEEE Design and Test Magazine, edited by the IEEE Computer Society, ISSN: 0740-7475 (<https://ieeexplore.ieee.org/document/9185923>).

- Reviewer for several international journals:

- ACM Transactions on Design Automation of Electronic Systems - Association for Computing Machinery (ACM)- ISSN:10844309
- ACM Journal on Emerging Computing Technologies - Association for Computing Machinery (ACM) – ISSN 15504832
- ACM Transactions on Architecture and Code Optimization - Association for Computing Machinery (ACM) - ISSN Technologies - Association for Computing Machinery (ACM) - ISSN 15504832
- ACM Transactions on Embedded Computing Systems - Association for Computing Machinery (ACM) - ISSN 15583465
- BMC Bioinformatics - BioMed Central Ltd. - ISSN:14712105
- BMC Systems Biology - BioMed Central Ltd. - ISSN:17520509
- Computational Biology and Chemistry - Elsevier Ltd - ISSN:14769271
- Design Automation for Embedded Systems - Springer Netherlands - ISSN:09295585
- IEEE Access - Institute of Electrical and Electronics Engineers Inc. - ISSN:21693536
- IEEE Embedded Systems Letters - Institute of Electrical and Electronics Engineers Inc.
- IEEE Software - IEEE Computer Society - ISSN:07407459
- IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems - Institute of Electrical and Electronics Engineers Inc. - ISSN:02780070
- IEEE Transactions on Computers - IEEE Computer Society - ISSN:00189340
- IEEE Transactions on Cybernetics - Institute of Electrical and Electronics Engineers Inc.- ISSN:21682267
- IEEE Transactions on Device and Materials Reliability - Institute of Electrical and Electronics Engineers Inc. - ISSN:15304388
- IEEE Transactions on Emerging Topics in Computing - IEEE Computer Society - ISSN:21686750
- IEEE Transactions on Reliability - Institute of Electrical and Electronics Engineers Inc. - ISSN:00189529
- IEEE Transactions on Systems, Man, and Cybernetics: Systems - Institute of Electrical and Electronics Engineers Inc.- ISSN:21682216
- IEEE Transactions on Very Large-Scale Integration (VLSI) Systems - Institute of Electrical and Electronics Engineers Inc. - ISSN:10638210
- IET Computers and Digital Techniques - Institution of Engineering and Technology - ISSN:17518601
- Integration, the VLSI Journal - Elsevier - ISSN:01679260
- Journal of Circuits, Systems and Computers - World Scientific Publishing Co. Pte Ltd - ISSN:02181266
- Journal of Electronic Testing: Theory and Applications (JETTA) - Springer Netherlands - ISSN:09238174
- Journal of Low Power Electronics - American Scientific Publishers - ISSN:15462005
- Journal of Parallel and Distributed Computing - Academic Press Inc. - ISSN:10960848
- Methods - Academic Press Inc. - ISSN:10462023
- Microelectronics Reliability - Elsevier Ltd - ISSN:00262714
- Microprocessors and Microsystems - Elsevier - ISSN:01419331
- Molecular Cancer - BioMed Central Ltd. - ISSN:14764598
- Reliability Engineering and System Safety - Elsevier Ltd - ISSN:09518320
- Simulation Modelling Practice and Theory - Elsevier - ISSN:1569190X
- Transactions on Embedded Computing Systems - Association for Computing Machinery (ACM) - ISSN:15399087

3.2 Offices in the Governing bodies of national and international scientific societies.

- (2019 – 2020) **Chair of the IEEE Computer Society History Committee.** The History Committee assists IEEE Computer Society, IEEE, national and international organizations to preserve and document the history of computing, with particular attention to the history of the IEEE Computer Society.
- (2019 – today) **Chair of the Technical Activities Group of the IEEE Computer Society Test Technology Technical Council (TTTC).** The role of the chair is to support and coordinate organizers of events or other technical activities that are technically sponsored by the IEEE TTTC.
- (2017 – today) **Member of the ACM** Association for Computing Machinery.
- (2013 – today) **Member of HiPEAC**, a European network of over 2,000 world-class computing systems researchers, industry representatives, and students in the field of High-Performance Computing.
- (2008 – 2018) **Chair of the Electronic Broadcasting System Group of the IEEE Computer Society Test Technology Technical Council.** The role of the chair is to coordinate the communication and media strategy of the technical council.
- (2006 – today) **Member of the IEEE** Computer Society.

- (2005 – 2009) **Member of the working group of the IEEE computer society for the development of the Conference Information Management System (CIMA)**. The system managed the financial review process of all IEEE CS-sponsored conferences from 2005 till 2009.
- (2003 – 2011) **Member of the working group for the development and management of the IEEE Computer Society Technical Committee Archive (TECA)**. The system was designed and used to manage the affiliation of all IEEE CS members to the different technical committees until its replacement in 2012 with the new system denoted SAMIEEE.
- (2003 – today) **Member of the IEEE** (Senior Member since 2003).
- (2002 – 2003) **Chair of the Electronic Submission Group of the IEEE Computer Society Test Technology Technical Council**. The group worked for two years to identify the best technologies to handle the electronic submission and peer review of TTTC sponsored conferences.

3.3 Prizes and awards awarded scientific activity and project activity.

Awards related to the publication activity

- (2018) **Best Keynote Speaker Award** at the IEEE East-West Design & Test Symposium (EWDTS 2018), Kazan, Russia
- (2014) **Best Paper Award** at the International Conference on Bioinformatics Models, Methods and Algorithms (BIOINFORMATICS/BIOSTEC 2014) for the presentation of the paper *“A Computational Study to Identify TP53 and SREBF2 as Regulation Mediators of miR-214 in Melanoma Progression”*.
- (2013) **Best Paper Award** at the 16th IEEE International Symposium on Design & Diagnostics of Electronic Circuits & Systems (DDECS 2013) for the presentation of the paper *“On the On-line Functional Test of the Reorder Buffer Memory in Superscalar Processors”*.
- (2012) **Best Paper Award** at the IEEE International Conference on Automation, Quality & Testing, Robotics (AQTR 2012) for the presentation of the paper *“Using gnome wide data for protein function prediction by exploiting gene ontology relationships”*.
- (2010) **Best Paper Award** at the IEEE International Conference on Automation, Quality & Testing, Robotics (AQTR 2010) for the presentation of the paper *“GPU acceleration for statistical gene classification”*.

Awards related to my involvement and services in the IEEE scientific community

- (2020) **IEEE Computer Society Test Technology Technical Council Outstanding Service Award** in recognition of the work done to virtualize the ITC Test Week 2020 Tutorials & Workshop Program
- (2011) Nominated **Senior Member** of the IEEE
- (2010) **IEEE Computer Society Meritorious Service Award** in recognition of more than 8 years of significant services for TTTC Electronic Media IEEE Computer Society
- (2006) Nominated **IEEE Computer Society Golden Core Member**, a status given to individuals that distinguished in their services within the IEEE Computer Society community.
- (2005) **IEEE Computer Society Outstanding Contribution Award** for developing the TECA database for TC membership management

3.4 Participation in international conferences, as a distinguished invited speaker.

- (2020) **Invited tutorial** on *“Cross-Layer Soft-Error Resilience Analysis of Computing Systems”* at the 50th IEEE/IFIP Int. Conference on Dependable Systems and Networks, June 2020, Valencia (Spain).
- (2020) **Invited tutorial** on *“Design, Verification, Test and In-Field Implications of Approximate Computing Systems”* at the 25th IEEE European Test Symposium 2020, May 2020, Tallin (Estonia).
- (2019) **Invited talk** on *“Bayesian models for early cross-layer reliability analysis and design space exploration”* for a special session focusing on *“Cost-Effective Resilience: Advanced Cross-Layer Analysis and Optimization Techniques”* organized at the 25th IEEE International Symposium on On-Line Testing and Robust System Design, July 2019, Rhodes (Greece).
- (2019) **Invited tutorial** on *“Alternatives to Fault Injection for Early Safety/Security Evaluations”* at the 24th IEEE European Test Symposium 2020, May 2019, Baden Baden (Germany).
- (2019) **Keynote speaker** at the IEEE East-West Design&Test Symposium organized in Kazan (Russia) in September 2018 with a talk on *“Cross-Layer reliability: a reality or a promise never coming true?”*
- (2015) **Invited talk** at the HiPEAC Computing System Week organized in May 2015 in Oslo (Norway) to present results from the CLERECO European Project.
- (2014) **Panelist** at the International Workshop on Dependable GPU Computing organized together with the DATE conference in March 2014 in Dresden (Germany) where six experts from industry and academia have been invited to discuss the questions: Faults in CPUs and GPUs: Same or Different Problems? Same or Different Solutions?

3.5 Participation in the scientific/organizing committees of International Conferences

I consider the involvement at different levels in the international scientific community one of the most important activities a researcher must pursue in its career. It gives significant opportunities to discuss with other researchers, create networks, disseminate, and give visibility and prestige to the work done and to the hosting institution where the work is carried out. I therefore invested significant energy in this specific activity.

Service as general chair of international conferences, workshops, and symposia

- (2022) IEEE VLSI Test Symposium 2022, 25-27 April 2022, San Diego (USA - CA) - https://tttc-vts.org/public_html/new/2022/organizing-committee/
- (2021) IEEE VLSI Test Symposium 2021, 25-28 April 2021, San Diego (Virtual) (USA - CA) - https://tttc-vts.org/public_html/new/2021/organizing-committee/
- (2021) The 17th IEEE Workshop on Silicon Errors in Logic – System Effects 2021, 21-22 April 2021, Los Angeles (Virtual) (USA - CA)
- (2021) 27th IEEE International Symposium on On-Line Testing and Robust System Design 2020, 28-30 June 2021, (Virtual) - <https://orion.polito.it/iolts/committee/>
- (2020) 26th IEEE International Symposium on On-Line Testing and Robust System Design 2020, 13-15 July 2020, Napoli (Virtual) (Italy) - <http://tima.univ-grenoble-alpes.fr/conferences/iolts/iolts20/#sec-organizaton>
- (2016) Workshop on Early Reliability Modeling for Aging and Variability in Silicon Systems 2016, 14-18 March, 2016, Dresden (Co-located with DATE 2016) (Germany) - <http://ermavss.iroctech.com/index.php/organizing-committee/>
- (2010) International Conference on Advances in System Testing and Validation Lifecycle 2010, 22-27 August 2010, Nice (France) - <https://www.iaria.org/conferences2010/ComVALID10.html>
- (2009) 1st International Workshop on Reliability and Aging in Forthcoming Electronic Systems 2009, 28-29 May 2009, Cluj-Napoca (Romania) - http://www.clereco.eu/workshops/ets15/dsa/1st_International_Workshop_on_Reliability_and_Aging_in_Forthcoming_Electronic_Systems.html

Service as program chair of international conferences, workshops, and symposia

- (2020) IEEE VLSI Test Symposium 2020, 6-8 April 2020, San Diego (Virtual) (USA - CA) - https://tttc-vts.org/public_html/new/2020/organizing-committee/index.html
- (2020) The 16th IEEE Workshop on Silicon Errors in Logic – System Effects 2019, 19-20 February 2020, Stanford (USA - CA) - <http://www.selse.org/index.php/2020-archive/2020-committee/>
- (2019) IEEE VLSI Test Symposium 2019, 23-25 April 2019, Monterey (USA - CA) - http://tttc-vts.org/public_html/new/2019/organizing-committee/
- (2018) Workshop on Challenges and Opportunities in Large-Scale Network Analysis in Systems Biology 2018, 3-6 December 2018, Madrid (Spain) - <https://www.sysbio.polito.it/colnasb/#sec-organizaton>
- (2009) International Workshop on Remote Entrusting 2009, 30 September - 1 October 2009, Riva del Garda (Italy) - http://re-trust.dit.unitn.it/2009_workshop/2009-chairs.html
- (2008) International Workshop on Remote Entrusting 2008, 15-16 October 2008, Trento (Italy) - <http://re-trust.dit.unitn.it/2008-chairs.html>

Service as vice program chair of international conferences, workshops, and symposia

- (2019) 25th IEEE International Symposium on On-Line Testing and Robust System Design 2019, 1-3 July 2019, Rhodes (Greece) - <http://tima.univ-grenoble-alpes.fr/conferences/iolts/iolts19/committees.php>
- (2018) 24th IEEE International Symposium on On-Line Testing and Robust System Design 2018, 2-4 July 2018, Platja d'Aro, Costa Brava (Spain) - <http://tima.univ-grenoble-alpes.fr/conferences/iolts/iolts18/committees.php>
- (2018) IEEE VLSI Test Symposium 2018, 22-25 April 2018, San Francisco (USA - CA) - http://tttc-vts.org/public_html/new/2018/committees/
- (2017) 23rd IEEE International Symposium on On-Line Testing and Robust System Design 2017, 3 July - 5 March 2017, Thessaloniki (Greece) - <http://tima.univ-grenoble-alpes.fr/conferences/iolts/iolts17/committees.php>

Service as topic chair of international conferences, workshops, and symposia

- (2022) IEEE European Test Symposium 2021, 23-27 May 2021 Barcelona (Spain) - https://ets2022.upc.edu/en/committee/copy_of_steering-comitee

- (2022) Design Automation and Test in Europe 2022, 14-23 March 2022, Antwerp (Belgium) - <https://www.date-conference.com/tpc>
- (2021) IEEE European Test Symposium 2021, 24-28 May 2021 Virtual (Belgium) - <https://ets2021.eu/program-committee/>
- (2021) Design Automation and Test in Europe 2021, 1-5 February 2021, Virtual
- (2020) Design Automation and Test in Europe 2020, 9-13 March 2020, Grenoble (Virtual) (France) - <https://past.date-conference.com/date20/group/tpc/members>

Member of the organizing committee member of international conferences, workshops, and symposia

In all conferences, the members of the organizing committee are also part of the technical program committee.

- (2021) 54rd IEEE/ACM International Symposium on Microarchitecture, 18-22 October 2021, Athens (Virtual) (Greece) **Global Activities Co-Chair** - <https://www.microarch.org/micro54/committees/org.php>
- (2021) IEEE European Test Symposium 2021, 24-28 May 2021, Virtual (Belgium) **Virtual Conference Chair** - <https://ets2021.eu/organizing-committee/>
- (2020) 53rd IEEE/ACM International Symposium on Microarchitecture, 17-21 October, 2020, Athens (Virtual) (Greece) **Global Online Activities Co-Chair** - <https://www.microarch.org/micro53/committees/org.php>
- (2020) IEEE European Symposium on Security and Privacy 2020, 7-11 September 2020, Genova (Virtual) (Italy) **Finance Chair** - <https://www.ieee-security.org/TC/EuroSP2020/committee-organizing.html>
- (2020) IEEE European Test Symposium 2020, 25 May - 1 June 2020, Tallin (Virtual) (Estonia) **Publicity Chair** - <https://ets2020.ttu.ee/index.php?page=8>
- (2019) 37th IEEE International Conference on Computer Design, 17-20 November 2019, Abu Dhabi (United Arab Emirates (U.A.E.)) **Publicity Chair** - https://www.iccd-conf.com/2019/Organizing_Committee.html
- (2019) IEEE European Test Symposium 2019, 27-31 May 2019, Baden Baden (Germany) **Publicity chair** - <https://www.testgroup.polito.it/ets19/organizing-committee/>
- (2018) IEEE European Test Symposium 2018, 28 May - 1 June, 2018, Bremen (Germany) **Web and Electronic Media Chairs** - <http://www.informatik.uni-bremen.de/ets18/committees.php>
- (2018) The 14th IEEE Workshop on Silicon Errors in Logic – System Effects 2018, 3-4 April 2018, Boston (USA - MA) **Publicity Chair** - <http://www.selse.org/index.php/previous-workshops/2018-archive/committee-2018/>
- (2018) The 15th IEEE Workshop on Silicon Errors in Logic – System Effects 2019, 27-28 March 2018, Stanford (USA - CA) **Publicity Chair** - http://www.selse.org/index.php/2019-archive/2019_committee/
- (2017) IEEE European Test Symposium 2017, 22-26 May 2017, Limassol (Cyprus) **Web and Electronic Media Chairs** - <http://www.ets17.org.cy/home/committees/organizing-committee.html>
- (2017) IEEE VLSI Test Symposium 2017, 9-12 April 2017, Las Vegas (USA - NV) **Electronic Media Chair** - http://www.tttc-vts.org/public_html/new/2017/index.html@p=2.html
- (2016) IEEE VLSI Test Symposium 2016, 25-27 April 2016, Las Vegas (USA - NV) **Electronic Media Chair** - http://www.tttc-vts.org/public_html/new/2016/index.html@p=2.html
- (2015) IEEE International Symposium on Embedded Multicore/Many-core Systems-on-Chip 2015, 23-25 September 2015, Turin (ITALY) **Registration Chair** - https://mcsoc-forum.org/2015/?page_id=6
- (2015) IEEE European Test Symposium 2015, 25-29 May 2015, Cluj-Napoca (Romania) **Web Chair** - <http://www.ets15.ro/committees.html>
- (2015) IEEE VLSI Test Symposium 2015, 27-29 April 2015, Napa (USA - CA) **Web Chair** - http://tttc-vts.org/public_html/new/2015/index.html@p=2.html
- (2014) International Workshop on Energy Systems Reliability and Resiliency 2014, 23-24 October 2014, Seattle (in conjunction with ITC / Test Week 2014) (USA - WA) **Publicity Chair** - https://orion.polito.it/esr2.tttc-events.org/index.html@page_id=11.html
- (2014) IEEE European Test Symposium 2014, 26-30 May 2014, Paderborn (Germany) **Publicity Chair** - <http://www.ets14.de/pages/generalinfo/committees.php>
- (2014) IEEE VLSI Test Symposium 2014, 13-17 April 2014, Napa (USA - CA) **Publicity Committee Member** - http://www.tttc-vts.org/public_html/new/2014/committees.php
- (2013) IEEE VLSI Test Symposium 2013, 29 April - 1 May 2013, Berkeley (USA - CA) **Publicity Committee Member** - http://www.tttc-vts.org/public_html/new/2013/committees.php
- (2012) IEEE European Test Symposium 2012, 28 May - 1 June 2012, Annecy (France) **Publicity Chair** - http://www.ieee-ets.org/past_events/ets12/committees.php
- (2012) IEEE VLSI Test Symposium 2012, 23-26 April 2012, Hyatt Maui (USA - Hawaii) **Publicity Committee Member** - http://www.tttc-vts.org/public_html/new/2012/committees.php
- (2011) IEEE VLSI Test Symposium 2011, 1-5 May 2011, Dana Point (USA - CA) **Publicity Committee Member** - http://www.tttc-vts.org/public_html/new/2011/committees.php

- (2010) IEEE VLSI Test Symposium 2010, 19-22 April 2010, Santa Cruz (USA - CA) **Publicity Committee Member**
- http://www.tttc-vts.org/public_html/new/2010/committees.php
- (2009) IEEE VLSI Test Symposium 2009, 3-6 May 2009, Santa Cruz (USA - CA) **Publicity Committee Member**
- http://www.tttc-vts.org/public_html/new/2009/committees.php
- (2008) IEEE VLSI Test Symposium 2008, 27 April - 1 May 2008, San Diego (USA - CA) **Publicity Committee Member**
- http://www.tttc-vts.org/public_html/new/2008/committees.php

Member of the program committee of international conferences

- (2021) International Symposium on VLSI 2021, 19-22 April 2021, Hsinchu (Taiwan)
- <https://expo.itri.org.tw/2021VLSIDAT/PageDetail/3657>
- (2020) ACM Great Lakes Symposium on VLSI 2020, 8-11 September 2020, Beijing (Virtual) (China)
- <https://www.glsvlsi.org/tpc.html>
- (2020) International Symposium on VLSI 2020, 10-13 August 2020, Hsinchu (Taiwan)
- <https://expo.itri.org.tw/2020VLSIDAT/PageDetail/1610>
- (2020) Fifth Workshop on Approximate Computing 2020, 19 July 2020, San Francisco (Virtual) (USA - CA)
- <http://perso.ec-lyon.fr/alberto.bosio/AxC20/#committee>
- (2020) 11th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems, 1-3 July 2020, Caparica (Portugal) - <http://www.uninova.pt/doceis/doceis20/programCommittee.html>
- (2019) The Eleventh International Conference on Advances in System Testing and Validation Lifecycle 2019, 24-28 September 2019, Valencia (Spain) - <https://www.iaia.org/conferences2019/ComVALID19.html>
- (2019) IEEE Computer Society Annual Symposium on VLSI 2019, 15-17 July 2019, Miami (USA - FL)
- <http://www.eng.ucy.ac.cy/theocharides/isvlsi19/committee.html>
- (2019) ACM Great Lakes Symposium on VLSI 2019, 9-11 May 2019, Washington, D.C. (USA)
- <https://www.glsvlsi.org/archive/glsvlsi19/tpc.html>
- (2019) 10th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems 2019, 8-10 May 2019, Caparica (Portugal) - <http://www.uninova.pt/doceis/doceis19/programCommittee.html>
- (2019) International Symposium on VLSI Design, Automation and Test 2109, 22-25 April 2019, Hsinchu (Taiwan)
- <http://expo.itri.org.tw/2019VLSIDAT/PageDetail/1521>
- (2019) Fourth Workshop on Approximate Computing 2019, 29th March 2019, Firenze (Italy)
- <http://embedded.unina.it/AxC19/committee/>
- (2019) Design, Automation and Test in Europe 2019, 25-29 March 2019, Firenze (Italy) - <https://past.date-conference.com/date19/group/tpc/members>
- (2018) The Tenth International Conference on Advances in System Testing and Validation 2018, 14-18 October 2018, Nice (France) - <https://www.iaia.org/conferences2018/ComVALID18.html>
- (2018) IEEE Computer Society Annual Symposium on VLSI 2018, 9-11 June 2018, Hong Kong SAR (China)
- http://www.eng.ucy.ac.cy/theocharides/isvlsi18/about_tpc.html
- (2018) Third Workshop on Approximate Computing 2018, 31 May - 1 June 2018, Bremen (Germany)
- <http://www.lirmm.fr/axc18/#committee>
- (2018) ACM Great Lakes Symposium on VLSI 2018, 23-25 May 2018, Chicago (USA - IL)
- <https://www.glsvlsi.org/archive/glsvlsi18/tpc.html>
- (2018) 9th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems 2018, 2-4 May 2018, Lisbon (Portugal) - <http://www.uninova.pt/doceis/doceis18/doceis/pages/program-committee-members.html>
- (2018) Design, Automation and Test in Europe 2018, 19-23 March 2018, Dresden (Germany) - <https://past.date-conference.com/date18/group/tpc/members>
- (2017) IFIP/IEEE International Conference on Very Large Scale Integration 2017, 23-25 October 2017, Abu Dhabi (UAE) - <http://vlsisoc2017.ozyegin.edu.tr/program-committee/>
- (2017) 8th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems 2017, 3-5 May 2017, Lisbon (Portugal) - <http://www.uninova.pt/doceis/doceis17/doceis/pages/program-committee-members.html>
- (2017) The 13th IEEE Workshop on Silicon Errors in Logic – System Effects 2017, 21-22 March 2017, Boston (USA - MA) - <http://www.selse.org/index.php/previous-workshops/2018-archive/committee-2017/>
- (2017) 3rd Workshop On Approximate Computing 2017, 25 January 2017, Stockholm (Sweden) - <https://wapco.e-ce.uth.gr>
- (2016) The Eighth International Conference on Advances in System Testing and Validation Lifecycle 2016, 21-25 November 2016, Rome (Italy) - <https://www.iaia.org/conferences2016/ComVALID16.html>
- (2016) IFIP/IEEE International Conference on Very Large Scale Integration 2017, 26-28 September 2016, Tallin (Estonia) - <http://ati.ttu.ee/vlsi-soc2016/index.php?page=58>

- (2016) 22nd IEEE International Symposium on On-Line Testing and Robust System Design 2016, 4-6 July 2016, Sant Feliu de Guixols (Spain) - <http://tima.univ-grenoble-alpes.fr/conferences/iolts/iolts16/committees.php>
- (2016) IEEE European Test Symposium 2016, 23-27 May 2016, Amsterdam (The Netherlands) - <http://www.ets16.nl/committees/program-committee/>
- (2016) 7th Advanced Doctoral Conference on Computing, Electrical and Industrial Systems 2016, 11-13 April, 2016 Lisbon (Portugal) - <http://www.uninova.pt/doceis/doceis16/doceis/pages/program-committee-members.html>
- (2016) The 12th IEEE Workshop on Silicon Errors in Logic - System Effects 2016, 29-30 March 2016, Austin (USA - TX) - <http://www.selse.org/index.php/previous-workshops/2016-archive/2016-committee/>
- (2016) 2nd Workshop On Approximate Computing 2016, 20 January 2016, Prague (Czech Republic) - <https://wapco.e-ce.uth.gr/2016/index.html>
- (2015) The Seventh International Conference on Advances in System Testing and Validation Lifecycle 2015, 15-20 November 2015, Barcelona (Spain) - <https://www.iaia.org/conferences2015/ComVALID15.html>
- (2015) 21st IEEE International On-Line Testing Symposium 2015, 6-8 July 2015, Halkidiki (Greece) - <http://tima.univ-grenoble-alpes.fr/conferences/iolts/iolts15/committees.php>
- (2015) The 11th IEEE Workshop on Silicon Errors in Logic - System Effects 2015, 30 March - 1 April 2015, Austin (USA - TX) - <http://www.selse.org/index.php/previous-workshops/2017-archive-2/2015-committee/>
- (2014) The Sixth International Conference on Advances in System Testing and Validation Lifecycle 2014, 12-16 October 2014, Nice (France) - <https://www.iaia.org/conferences2014/ComVALID14.html>
- (2014) 19th IEEE International On-Line Testing Symposium 2014, 7-9 July 2014, Platja d'Aro (Spain) - <http://tima.univ-grenoble-alpes.fr/conferences/iolts/iolts14/committees.php>
- (2013) The Fifth International Conference on Advances in System Testing and Validation Lifecycle The Fifth International Conference on Advances in System Testing and Validation Lifecycle 2013, 27 October - 1 November, 2013, Venice (Italy) - <https://www.iaia.org/conferences2013/ComVALID13.html>
- (2013) 18th IEEE International On-Line Testing Symposium 2013, 8-10 July 2013, Crete (Greece) - <http://tima.univ-grenoble-alpes.fr/conferences/iolts/iolts13/committees.php>
- (2013) IEEE European Test Symposium 2013, 27-31 May 2013, Avignon (France) - http://www.ieee-ets.org/past_events/ets13/commitee.php
- (2012) The Fourth International Conference on Advances in System Testing and Validation Lifecycle 2012, 18-23 November 2012, Lisbon (Portugal) - <https://www.iaia.org/conferences2012/ComVALID12.html>
- (2012) IEEE International Conference on Computer-Aided Design 2012, 30 September - 3 October 2012, Montreal (Canada - Quebec) - http://www.iccd-conf.com/2012/Program_Committee.html
- (2011) The Third International Conference on Advances in System Testing and Validation Lifecycle 2011, 23-29 October 2011, Barcelona (Spain) - <https://www.iaia.org/conferences2011/ComVALID11.html>
- (2011) IEEE International Conference on Computer-Aided Design 2011, 9-12 October 2011, University of Massachusetts, Amherst (USA - MA) - http://www.iccd-conf.com/2011/Program_Committee.html
- (2011) The 21st International Conference on Field-Programmable Logic and Applications 2011, 5-7 September 2011, Crete (Greece)
- (2011) IEEE European Test Symposium 2011, 23-27 May 2011, Trondheim (Norway) - http://www.ieee-ets.org/past_events/ets11/pc.shtml
- (2009) The First International Conference on Advances in System Testing and Validation Lifecycle 2009, 20-25 September 2009, Porto (Portugal) - <https://www.iaia.org/conferences2009/ComVALID09.html>

3.6 Management and organisation of exhibitions, compositions, drawings, design, hand-crated items, prototypes, artwork and their projects, databases and software, thematic maps.

- (2007 – today) **Member of the working group for the management of the Ph.D. Man system.** The system manages the review and quality assessment of the career of all Ph.D. students enrolled in the Ph.D. in Computer and Control Engineering at Politecnico di Torino, Italy.
- (2005 – 2009) **Member of the working group of the IEEE computer society for the management of the Conference Information Management System (CIMA).** The system managed the financial review process of all IEEE CS-sponsored conferences from 2005 till 2009.
- (2003 – 2011) **Member of the working group for the management of the IEEE Computer Society Technical Committee Archive (TECA).** The system was designed and used to manage the affiliation of all IEEE CS members to the different technical committees until its replacement in 2012 with the new system denoted SAMIEE.

4 Institutional offices and roles in Italian and foreign Universities and/or public and private institutions

4.1 Institutional offices in teaching and research structures of Italian and Foreign Universities.

Participation to Ph.D. Academic Boards

Participation to the Academic Board of the Ph.D. Council (Collegio Docenti del Dottorato di Ricerca) in Computer and Control Engineering starting from 2016. The participation to the board has been formally renewed (with a quality-driven selection process) every year.

Within the Academic Board, I chair one of the subcommittees responsible for the yearly evaluation of the Ph.D. students required for their admission to the next year.

Participation to Ph.D. and Evaluation Juries

- **Member of the Jury** at the Université de Montpellier (France) for the Ph.D. thesis defense of Mr. Aymen Touati, supervised by Prof. Alberto Bosio and Prof. Patrick Girard, on the topic "Improving Functional and Structural Test solutions for Integrated Circuits" (2016).
- **Member of the Jury** at Universitat Politècnica de Catalunya (Spain) for the Ph.D. thesis defense of Mr. Manish Rana, supervised by Prof. Ramon Canal and Dr. Esteve Anat Bertran, on the topic "Statistical Analysis and Design of Subthreshold Operation Memories" (2016).
- **Member of the Jury** at Politecnico di Torino (Italy) for the Ph.D. thesis defense of Mr. Amirhosein Toosi, supervised by Prof. Andrea Bottino, on the topic "Feature Fusion for Fingerprint Liveness Detection" (2018).
- **Member of the Jury** at National and Kapodistrian University of Athens (Greece) for the Ph.D. thesis defense of Mr. Athanasios Chatzidimitriou supervised by Prof. Dimitris Gizopoulos, on the topic "Anatomy of Microarchitecture-level Reliability Assessment for Modern Processors" (2019).
- **Member of the Jury** at Mälardalen University (Sweden) for the Ph.D. thesis defense of Mr. Jakob Danielsson supervised by Prof. Tiberiu Seceleanu, on the topic "Characterisation of Shared Resource Contention in Multi-core Systems" (2019).
- **Member of the Jury** at Politecnico di Torino (Italy) for the Ph.D. thesis defense of Ms. Sarah Azimi, supervised by Prof. Luca Sterpone, on the topic "Member of the Jury at Politecnico di Torino (Italy) for the Ph.D. thesis defense of Mr. Amirhosein Toosi, supervised by Prof. Andrea Bottino, on the topic "Feature Fusion for Fingerprint Liveness Detection" (2019).
- **President of the Jury** at Politecnico di Torino (Italy) for the Ph.D. thesis defense of Mr. Davide Piumatti, supervised by Prof. Matteo Sonza Reorda, on the topic "Reliability in Power Electronics and Power Systems" (2021).
- **President of the Jury** at Politecnico di Torino (Italy) for the Ph.D. thesis defense of Mr. Josie Esteban Rodriguez Condia, supervised by Prof. Matteo Sonza Reorda, on the topic "New Techniques for On-line Testing and Fault Mitigation in GPUs" (2021).
- **Member of the jury** of the Habilitation à diriger des recherches of Dr. Alberto Tonda (2021)

4.2 Management roles in Universities, as part of Faculty duties.

- (2020) Appointed by the **Head of the Control and Computer Engineering Department** of Politecnico di Torino (Italy) to **represent** the Department in the framework of the "**Digital Revolution Platform**" project. The project aims at collecting and disseminating a detailed map of technical competencies of the Departments of Control and Computer Engineering and Electronics Engineering at Politecnico di Torino, with the final goal of fostering technology transfer activities.
- (2019) **Member of the project "DAUIN dipartimento di eccellenza"** at the Department of Control and Computer Engineering of Politecnico di Torino (Italy). The project aims at creating strategic actions to improve the quality of the scientific production of the Department.
- (2019 – 2020) **Member of the committee for the development of the Strategic Plan** of the Department of Control and Computer Engineering of Politecnico di Torino, Italy.
- (2018 – 2020) **Coordinator of the Strategic Research Area "Cyber-Physical Systems"** defined by the Department of Control and Computer Engineering of Politecnico di Torino (Italy) to foster research activities and collaboration in selected strategic topics.
- (2017 – 2018) Member of a team appointed by the head of the Doctoral School of Politecnico di Torino for the development of a new review system for the Ph.D. theses meeting the new requirements introduced by "Ministerlo dell'Università e della Ricerca".

- (2016 – Today) **Member of the “Commissione Informatizzazione”** of the Department of Control and Computer Engineering of Politecnico di Torino (Italy). The committee supports the Director in developing an information system to support research and management activities for the department, as well as to collect structured data used for monitoring and evaluation purposes by the other committees of the Department.
- (2016 – 2017) Member of a committee nominated to evaluate antiplagiarism software and technologies to control the quality of all master and Ph.D. theses developed at Politecnico di Torino (Italy).
- (2016) **Member of the committee appointed by the Head of the Department of Control and Computer Engineering** of Politecnico di Torino (Italy) to coordinate the periodic evaluation of the Department by **“Commissione di Esperti per la Valutazione (CEV)”**, a national committee that periodically assesses the quality of all Italian Universities.
- (2016) **Member of the committee appointed by the Head of the Master in Industrial Production Engineering** of Politecnico di Torino (Italy) to coordinate the periodic evaluation of master by **“Commissione di Esperti per la Valutazione (CEV)”**, a national committee that periodically assesses the quality of all Italian Universities.
- (2015 – Today) **Member of the “Commissione SUA-RD”** of the Department of Control and Computer Engineering of Politecnico di Torino (Italy). The committee supports the Director in the quality assessment activities required by “Ministero dell’Università e della Ricerca” to assess and rank the research quality of all Italian Universities.
- (2013 – 2017) **Member of the “Commissione Immagine”** of the “Collegio di Ingegneria Informatica, del Cinema e Meccatronica” of Politecnico di Torino (Italy). The committee has the role of coordinating the communication strategy to advertise the B.S. and M.S. courses of Computer Engineering, Cinema Engineering and Mechatronic Engineering.
- (2012 – Today) **Member of the “Commissione Ricerca e Produttività”** of the Department of Control and Computer Engineering of Politecnico di Torino (Italy). The committee supports the Director in defining the department strategies, and in the related quality control monitoring. In particular, it defines a set of measures and indicators to evaluate the results attained by the department staff and faculty members.

4.3 Offices in the Governing bodies, Board of Governors, Scientific Advisory Boards of public and private institutions.

- (2020-2021) **Member of the panel of reviewers** for the German Deutsche Forschungsgemeinschaft (DFG).
- (2015) **Reviewer for the program “Giovani ricercatori Rita Levi Montalcini”** of Ministero dell’Istruzione Università e Ricerca.
- (2014) **Member of the panel of reviewers** for the European Commission call H2020-FETOPEN-2014-RIA of the Horizon 2020 programme.
- (2011) **Member of the panel of reviewers** for the European Commission call FP7-ICT-2011-C Future Emerging Technologies of the 7th framework programme.