

Pomante Luigi

Curriculum Vitae (last update March 2025)

Table of Contents

Curriculum Vitae (last update March 2025).....	1
General information.....	2
Education and qualifications	2
Professional positions	2
Teaching activities.....	3
Organizational activities	3
Scientific activities	4
Publications	10
Awards	21

GENERAL INFORMATION

Date of birth	October 1 st , 1972
Place of birth	Giulianova (Italy)
Nationality	Italian
Contacts	luigi@pomante.net
Website	www.pomante.net

EDUCATION AND QUALIFICATIONS

2002 (AY 2000/2001)

Research Doctorate Degree (i.e., Italian Ph.D.) in Computer Science Engineering

- Politecnico di Milano

Thesis: "System-Level Co-Design of Heterogeneous Multiprocessor Embedded Systems"

Supervisor: Prof. Donatella Sciuto

1999 (AY 1998/1999)

2nd Level University Master degree in Information Technology

- ICT Center of Excellence For Research, Innovation, Education and industrial Labs partnership – CEFRIEL (Area Electronic Design Automation, EDA) - Politecnico di Milano

Thesis (Italian): "Co-Simulazione HW/SW a livello di sistema" ("System-Level HW/SW Co-Simulation")

Supervisor: Prof. Fabio Salice

1998 (AY 1996/1997)

"Laurea" degree (i.e. MSc+BSc degree) in Computer Science Engineering

- Politecnico di Milano

Thesis (Italian): "La qualità dei dispositivi con proprietà di autodiagnosi: una metodologia di valutazione innovativa" ("Quality of Totally Self-Checking devices: an innovative evaluation methodology")

Tutor: Prof. Donatella Sciuto

1991 (AY 1990/1991)

High school degree "Industrial Computer Science Technician"

- I.T.I.S. "G. e M. Montani", Fermo (AP), ITALY

PROFESSIONAL POSITIONS

since November 2008

Assistant Professor

- Università degli Studi dell'Aquila (ITALY)
 - o Center of Excellence DEWS
 - Design Methodologies for Embedded controllers, Wireless interconnect and System-on-chip
 - o Computer Science Engineering and Mathematics Department (DISIM)

since 1999

R&D Consultant

- 2006- 2013: WEST Aquila S.r.l.
 - o Wireless Embedded Systems Technologies(SME) c/o Università degli Studi dell'Aquila
- 2006-2008: Center of Excellence DEWS
- 2005-2006: Department of Electrical and Information Engineering
 - o University of L'Aquila – Faculty of Engineering
- 1999-2005: CEFRIEL

TEACHING ACTIVITIES

ACADEMIC 2019

University of L'Aquila

“Electronic System-Level HW/S Co-Design”

Course in the context of the “PhD Program in ICT” (delivered in English language)

since 2008

University of L'Aquila

“Embedded Systems” course (delivered in English language since 2014)

since 2005

University of L'Aquila

Lectures on “Wireless Sensor Networks” in several courses

2003-2005

Politecnico di Milano

“Computer Science” course

“Industrial Computer Science” course

CEFRIEL AND OTHER BACHELOR LEVEL COURSES

1999-2005

Lectures on VLSI Design: Introduction to SystemC

Lectures on UNIX

Lectures on Computer Architectures and Operating Systems

INDUSTRY

2002-2014

Lectures on Advanced Computer Architectures and Operating Systems concepts

Lectures on UNIX/Linux

Lectures on EDP

Lectures on CAD

Lectures on Operating Systems

Lectures on Computer Architectures and Operating Systems

Lectures on C/C++

SUPERVISOR

since 1999

(Co)Supervisor and tutor for several Master Thesis

- *Politecnico di Milano, CEFRIEL, University of L'Aquila*

ORGANIZATIONAL ACTIVITIES

INSTITUTIONAL ROLES

since 2024

“Gruppo Assicurazione Qualità per il CDL Ing delle Telecomunicazioni” - Member

Università degli Studi dell'Aquila

Member of “Collegio per il Dottorato di Ricerca in *Information and Communication Technology (ICT)* del DISIM”

Università degli Studi dell'Aquila

since 2023

“Commissione Orari del DISIM” - Member

Università degli Studi dell’Aquila

since 2019

“Consiglio Direttivo” of Center of Excellence DEWS - Member

Università degli Studi dell’Aquila

2012-2014

“Commissione e del Collegio per il Dottorato di Ricerca in *Information and Communication Technology (ICT)*” of DISIM - Member

Università degli Studi dell’Aquila

since 2012

“Consiglio di Area Didattica” of DISIM - Member

Università degli Studi dell’Aquila

SCIENTIFIC ACTIVITIES

SCIENTIFIC RESEARCH

(Co) Author of near 200 scientific publications (33 in peer-reviewed international journals) in the following research areas (they are explicitly reported below the more relevant publications for each research area while the full list is shown in the *Publications* section):

Electronic Design Automation

In particular:

Electronic System-Level HW/SW Co-Design of Heterogeneous Parallel Dedicated/Embedded Systems

System-Level Synthesis, Design Space Exploration, and HW/SW Co-Simulation targeting several NF requirements: Performance, Real-Time, Reliability, Mixed-Criticality, Monitorability

[BK.1][JR.10][JR.12][JR.18][JR.23][IC.71][JR.4][JR.8][JR.9][JR.1][IC.73][JR.15][JR.27][IC.69][JR.19][IC.84][JR.17][JR.21][JR.6].

Object-oriented System-Level Specifications

[BK.2][IC.14][IC.15]

SW power consumption estimation and optimization

[IC.3][JR.5]

Quality of Totally Self-Checking devices

[JR.3]

System-Level Concurrent Error Detection

[JR.2][IC.16][IC.17].

Networked Embedded Systems

In particular:

HW/SW Technologies for (Networked) Embedded Systems

Wireless Sensor Networks

Middleware, Localization/Tracking, Security, Support to new arts, EDA tools for WSN
[BK.3][JR.7][JR.20][JR.24][BK.4][BK.5][BK.6][BK.9][JR.11][JR.14][JR.25][BK.7][BK.8]

SCIENTIFIC ASSIGNMENTS

2024

Commissione di dottorato per il corso di dottorato “Scienza e Tecnologie per l’Ingegneria Elettronica e delle Telecomunicazioni”, Ciclo XXXVI, CV Elettromagnetismo, Elettronica, Telecomunicazioni, Università degli Studi di Genova - Member

since 2023

External scientific reviewer for the EU research project HORIZON-CL4-2021-HUMAN-01-01 REXASI-PRO

2022

Embedded Systems DEWS Laboratory – Scientific Responsible

2020

External scientific reviewer for PhD Thesis: Dottorato di Ricerca in Ingegneria dell’Informazione (Politecnico di Milano)

2019

External scientific reviewer for PhD Thesis “DOCTORAL PROGRAM: Programa de Doctorado en Automática, Robótica e Informática Industrial” (Universitá Politecnica di Valencia)

since 2016

National Laboratory *Embedded Systems & Smart Manufacturing* (CINI)

Responsible of the node at Università degli Studi dell’Aquila

HiPEAC Member (*HiPEAC: European Network on High Performance and Embedded Architecture and Compilation*)

DEWS scientific delegate in the context of the ECSEL Italia Mirror Group (*ECSEL-JU: Electronic Components and Systems for European Leadership Joint Undertaking*).

DEWS scientific delegate in the context of the *Heterogeneous System Architecture Foundation*

2016-2019

European Research Project TULIPP: Advisory Board Member

(Towards Ubiquitous Low-Power Image Processing Platforms, <http://tulipp.eu/>)

since 2015

DEWS scientific delegate in the context of the European association INSIDE (ex ARTEMIS-IA: *Advanced Research & Technology for EMbedded Intelligence and Systems Industry Association*).

since 2009

Team Leader: responsible of National and International scientific activities of “*Electronic Design Automation & Embedded System Development*” research group in the context of the research line “*M3: Design Methodologies for Embedded Systems*” at Center of Excellence DEWS.

Università degli Studi dell’Aquila

Scientific responsible of several research grants and Phd students

Università degli Studi dell’Aquila

RESEARCH PERIODS IN FOREIGN INSTITUTIONS

2025

Visiting (to be carried out) of 1 month at UC Berkeley for collaboration with Prof. E. A. Lee funded in the framework of the European project DISCOVER-US.

2016-2017

Secondment for 2 periods of 3 months each per year at Iquadrat Informatica S.L. in Barcelona in the context of the activities of the European research project H2020-MSCA-RISE-2014 CASPER (645393).

2022

Secondment for 3 months at the FOG in Athens in the context of the activities of the European research project H2020-MSCA-RISE-2019 OPTIMIST (872866).

ACTIVITIES AS REVIEWERS

since 2020

Reviewers and contributors for the Electronic Components and Systems - Strategic Research & Innovation Agenda (ECS-SRIA), AENEAS/INSIDE/EPOSS Industry Associations.

dal 1999

Reviewer of articles for various international journals and conferences in the sector.

EDITORIAL BOARD ACTIVITIES

2022

Guest Editor for the Special Issue "Application of Wireless Sensor Networks in Artistic Fields" on MDPI Sensors journal.

since 2021

Editorial Board Member for MDPI Applied Sciences journal.

2020

Guest Editor for the Special Issue "New Trends in Real-Time Embedded Systems" on MDPI Applied Sciences journal.

since 2019

Editorial Board Member for Springer Wireless Networks (WINE) journal.

Editorial Board Member - International Journal of Sensors, Remedy Publications

2018

Guest Editor for the Special Issue "Electronic System-Level Co-Design of Power-Aware Embedded Systems" sul Journal of Low Power Electronics and Applications.

PROGRAM COMMITTEE

2023

Embedded Systems Track Chair

- The IEEE International Conference on Artificial Intelligence & Green Energy (IEEE ICAIGE23)

since 2019

Scientific Committee Member

- Mediterranean Conference on Embedded Computing (MECO) - EUROMICRO/IEEE Workshop on Embedded and Cyber-Physical Systems (ECYPS)

since 2008

Technical Committee Member

- Workshop on Parallel Programming and Run-Time Management Techniques for Many-core Architectures & Workshop on Design Tools and Architectures for Multi-Core Embedded Computing Platforms) (PARMA/DITAM 2019-2025)
- International Conference on Computer Applications & Information Security (ICCAIS 2021)

- *Euromicro Conference on Digital System Design (DSD) 2020*
- *8th International Conference on Cyber-Physical Systems and Internet-of-Things (2020)*
- *STAF'19 (Software Technologies: Applications and Foundations) Research Project Showcase (2019)*
- *GOODTECHS - "WhELP: Well-being for fragile people: methods and instruments for increasing, preserving and measuring frail people well-being!" (2019)*
- *Int. Conf. on Computer Engineering and Information System (CEIS 2016)*
- *International Conference on Digital Telecommunications (ICDT 2012-2016)*
- *International Conference on Networking and Services (ICNS 2015-2016)*
- *International Conference on Integrated and Sustainable Transportation (INTGAST'2015)*
- *Intern. Conference Mathematics and Computers in Sciences and Industry (MCSI 2014)*
- *Workshop on Mobile Development Lifecycle (MobileDeLi 2015)*
- *International Conference on Internet of Vehicles (IOV 2014)*
- *Workshop on Architecting Mobile-enabled Systems (AMeS 2014)*
- *Int. Workshop on Engineering Energy Efficient Wireless Sensor Networks (EEWSN 2014)*
- *IEEE Consumer Communications and Networking Conference (CCNC 2011-2014)*

ORGANIZATIONAL COMMITTEE

since 2020

Special Session Co-Organizer

- *Special session on Hardware and System Architectures for Smart Farming (HASF) at Euromicro Conference on Digital System Design (DSD)*

2018

Session Chair

- *The 8th Mediterranean Conference on Embedded Computing (MECO 2018) - The 7th EUROMICRO/IEEE Workshop on Embedded and Cyber-Physical Systems (ECYPS2018).*

2017

Special Session Organizer/Chair

- *Special session on “User-Centric Communications and Content Delivery” at Workshop on Computer-Aided Modeling Analysis and Design of Communication Links and Networks (CAMAD 2017).*

2015

Session Chair

- *International Symposium on Signals Circuits and Systems (ISSCS 2015).*

SCIENTIFIC RESEARCH PROJECTS

From 2009 I have personally contributed to the proposals writing (and to the management of related issues on behalf of University of L'Aquila) for more than 80 European and national research proposals. For the following ones, that have been funded (for a total funding of near 3M €, I have been the person in charge of scientific and/or technical and some administrative issues:

European Research Projects

ERC-2009-StG 240555 VISION (closed)

Video-oriented UWB-based Intelligent Ubiquitous Sensing

For this project I have been also WP co-leader

ARTEMIS-JU ASP 2010-269362 PRESTO (closed)

ImProvements of industrial Real Time Embedded SysTems develOpment process

For this project I have been also the coordinator of the national cluster, WP leader and deliverables responsible

ARTEMIS-JU ASP 2011-295371 CRAFTERS (closed)

ConstRaint and Application-driven Framework for Tailoring Embedded RT Systems

For this project I have been also the coordinator of the national cluster, task leader and deliverables responsible

ARTEMIS-JU AIPP 2013-621429 EMC² (closed)

Embedded Multi-Core systems for Mixed Criticality applications in dynamic and changeable real-time environments

H2020-MSCA-RISE-2014 – CASPER (closed)

User-centric MW Architecture for Advanced Service Provisioning in Future Networks

For this project I have been also deliverables responsible

ECSEL-JU RIA-2015 – SAFECOP (closed)

Safe Cooperating Cyber-Physical Systems using Wireless Communication

For this project I have been also the coordinator of the national cluster and WP leader

ECSEL-JU RIA-2016 – MEGAM@RT2 (closed)

MegaModelling at Runtime - scalable model-based framework for continuous development and runtime validation of complex systems

For this project I have been also the coordinator of the national cluster

ECSEL-JU RIA-2016 – AQUAS (closed)

Aggregated Quality Assurance for Systems

ECSEL-JU RIA-2017 – AFARCLOUD (closed)

Aggregate Farming in the Cloud

ECSEL-JU RIA-2017 – FITOPTIVIS (closed)

From the cloud to the edge - smart IntegrAtion and OPTimization Technologies for highly efficient Image and VIdeo processing Systems

H2020-MSCA-RISE-2019 – OPTIMIST (closed)

OPTIMised video content delivery chains leveraging data analysis over joint multiI-accessS edge computing and 5G radio network infraStrutures

ECSEL-JU RIA-2019 - FRACTAL (closed)

A Cognitive Fractal and Secure EDGE based on an unique Open-Safe-Reliable-Low Power Hardware Platform Node

ECSEL-JU IA-2019 - IREL 4.0 (closed)

Intelligent Reliability 4.0

ECSEL-JU RIA-2020 – AIDOART (closed)

AI-augmented automation for efficient DevOps, a model-based framework for continuous development At RunTime in cyber-physical systems

For this project I have been also the coordinator of the national cluster

KDT JU-RIA 2023 - RESILIENT TRUST (running)

National Research Projects

Riditt 2009 – SMILING (closed)

Smart in Home Living

For this project he has been also the coordinator of the Abruzzo regional cluster

From 1999 I have been a collaborator for the research in the following European research projects:

IST Project N. 1999-11476 – ODETTE (CEFRIEL-Politecnico di Milano)
Object-oriented co-design and functional test techniques

IST Project N. 2000-30125 – POET (CEFRIEL-Politecnico di Milano)
Power Optimisation for Embedded SysTems

IST Project N. 2004-511368 – HYCON (Università degli Studi dell'Aquila-DEWS)
Hybrid Control: Taming Heterogeneity and Complexity of Networked Embedded Systems

FP7-ICT-2009-5/N.257462 - HYCON2 (Università degli Studi dell'Aquila-DEWS)
Highly-complex and networked control systems

ECSEL-JU RIA-2018 – COMP4DRONES (closed)
Framework of key enabling technologies for safe and autonomous drones' applications

INDUSTRIAL RESEARCH AND INNOVATION PROJECTS

From 2002 I have collaborated to (and sometimes also managed) more than 10 national industrial R&D projects with CEFRIEL and DEWS. In particular, on behalf of DEWS, I have personally arranged 10 third party contracts with Italian industrial subjects (for a funding of near 500 K€) and he has been also the person in charge of scientific, technical and some administrative issues for such contracts.

SEMINARS (INVITED/SELECTED TALKS/TUTORIALS)

(*) Personally presented

2021

HiPEAC Conference 2021

Tutorial - HEPSYCODE: HW/SW Co-Design of Heterogeneous Parallel Dedicated Systems ()*

2020

HiPEAC Conference 2020

Tutorial - HEPSYCODE: HW/SW Co-Design of Heterogeneous Parallel Dedicated Systems ()*

DATE Conference 2020

Tutorial - HEPSYCODE: HW/SW Co-Design of Heterogeneous Parallel Dedicated Systems (accepted but cancelled due to COVID-19 issues)

2019

Computing Frontiers Conference (CF '19)

Invited paper - The FitOptiVis ECSEL project: highly efficient distributed embedded image/video processing in cyber-physical systems.

HiPEAC Conference 2019

Tutorial - HEPSYCODE: HW/SW Co-Design of Heterogeneous Parallel Dedicated Systems

CPS&IoT Summer School

Tutorial - Design space exploration for hypervisor-based mixed-criticality systems

2018

HiPEAC CSW 2018 - (MegaM@Rt2) Design and runtime tools for embedded systems

Talk - Introduction to HEPSYCODE: a System-Level Methodology for HW/SW Co-Design of Heterogeneous Parallel Dedicated Systems ()*

Talk - Introduction to AIPHS: Adaptive Profiling Hardware Sub-system ()*

SMART CITY LOOKS LIKE Summer School 2018

Talk - Wireless Sensor Networks Technologies for Smart Cities ()*

HiPEAC Conference 2018

Tutorial - HEPSYCODE: HW/SW Co-Design of Heterogeneous Parallel Dedicated Systems ()*

2016

1st Italian Workshop on Embedded Systems (IWES 2016)

Talk - A System-Level Methodology for HW/SW Co-Design of Heterogeneous Parallel Dedicated Systems ()*

HIPEAC Conference 2016

Talk - Analysis of paravirtualization tools supporting isolation in multicore, mixed-criticality aerospace systems

2015

HIPEAC Computer Systems Week 2015 – Thematic Session Security Intelligence

Talk - “WINSOME: A platform for the provision of secure monitoring services over WSN”

2014

Autumn School “Engineering Resilient Cyber Physical Systems” Workshop SERENE 2014 (Software Engineering for Resilient Systems)

Talk - “System-Level Concurrent Error Detection”

2013

Integrated Technologies and Services for Sustainable Growth - European Economic Interest Grouping (EEIG) - Ecosystem for Sustainable Growth Services Workshop 2013 (ESGS13)”

“Wireless Sensor Networks Applications to Support Sustainable Growth Services”

International Wireless Communications & Mobile Computing Conference (IWCMC 2013)

Invited Paper - “WINSOME: A Middleware Platform for the Provision of Secure Monitoring Services over Wireless Sensor Networks”.

2010

3rd Workshop on Mapping of Applications to MPSoCs by The ArtistDesign European Network of Excellence

Talk - “System-Level Design Space Exploration for HMPSOC” ()*

PUBLICATIONS

INTERNATIONAL BOOKS

- [BK.1] L. Pomante. “Electronic System-Level HW/SW Co-Design of Heterogeneous Multi-Processor Embedded Systems”. River Publishers series in Circuits and Systems, 2016. ISBN: 9788793379381, eBook ISBN: 9788793379374.

INTERNATIONAL BOOK CHAPTERS

- [BK.2] Con W. Fornaciari, M. Bombana. “SystemC-Plus Complex Data Type for Telecom Applications”, *System Specification and Design Languages (best of FDL'02)*, CHDL Series, Kluwer, 2003, pp. 219-229.

- [BK.3] Con R. Alesii, G. Gargano, F. Graziosi, C. Rinaldi. "WSN-based Audio Surveillance Systems", *SPRINGER VERLAG Book - Springer Verlag Lecture Notes Series*, 2009.
- [BK.4] Con S. Tennina, F. Graziosi, M. Di Renzo, R. Alesii, F. Santucci. "Integrated GPS-denied Localization, Tracking and Automatic Personal Identification". *20th Tyrrhenian International Workshop on Digital Communications, Springer Book Series*, 2010.
- [BK.5] Con Stefano Tennina, Francesco Tarquini, Roberto Alesii, Fabio Graziosi, Fortunato Santucci and Marco Di Renzo. "Automatic Personal Identification System for Security in Critical Services: Two Case Studies based on a Wireless Biometric Badge". InTech, *Recent Application in Biometrics*, 2011, ISBN 978-953-307-488-7.
- [BK.6] Con Marco Pugliese, Fortunato Santucci. "Secure Platform over Wireless Sensor Networks". InTech, *Applied Cryptography and Network Security*, 2012, ISBN 978-953-51-0218-2.
- [BK.7] Con Claudia Rinaldi, Fabio Graziosi, Francesco Tarquini. "RF Sounding: Generating Sounds from Radio Frequencies". InTech, *Management of Technological Innovation in Developing and Developed Countries*, 2012, ISBN 978-953-51-0365-3.
- [BK.8] Con C. Rinaldi, M. Santic, F. Graziosi. "Exploiting Latest Technologies for RF Sounding's Evolution". Springer Berlin Heidelberg, *Book Section 2013 Arts and Technology, Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering*, 2013, pp. 33 – 40, vol. 116.
- [BK.9] Con M. Pugliese, S. Marchesani, F. Santucci. "Definition and Development of a Topology-based Cryptographic Scheme for Wireless Sensor Networks". *Sensor Systems and Software - Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering*, 2013.
- [BK.10] Con S. Marchesani, S. Pace, A. Di Marco, L. Berardinelli. "Modeling and Timing Simulation of Agilla Agents for WSN applications in Executable UML". *Computer Performance Engineering, Lecture Notes in Computer Science*, Volume 8168, 2013, pp 300-311.
- [BK.11] Con C. Rinaldi, F. Battisti, M. Carli. "Design of a non-intrusive augmented trumpet". Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, Volume 145, 2015. Arts and Technology Fourth International Conference, ArtsIT 2014, Revised Selected Papers. Editors: Anthony Lewis Brooks, Elif Ayiter, Onur Yazicigil.

INTERNATIONAL JOURNALS

- [JR.1] Fornaciari, W., Pomante L., Salice, F., Sciuto, D. HW/SW co-simulation for fast design-space exploration of multiprocessor embedded systems. *Canadian Journal of Electrical and Computer Engineering*. Volume 26, Issue 3-4, July 2001, Pages 135-140.
- [JR.2] Bolchini, C., Pomante, L., Salice, F., Sciuto, D. Reliability properties assessment at system level: A co-design framework. *Journal of Electronic Testing: Theory and Applications (JETTA)*. Volume 18, Issue 3, June 2002, Pages 351-356.
- [JR.3] C. Bolchini, L. Pomante, F. Salice and D. Sciuto, "The design of reliable devices for mission-critical applications," in *IEEE Transactions on Instrumentation and Measurement*, vol. 52, no. 6, pp. 1703-1712, Dec. 2003.
- [JR.4] C. Brandoles, W. Fornaciari, L. Pomante, F. Salice and D. Sciuto, "Affinity-driven system design exploration for heterogeneous multiprocessor SoC," in *IEEE Transactions on Computers*, vol. 55, no. 5, pp. 508-519, May 2006.
- [JR.5] Brandoles, C. Fornaciari, W. Salice, F. Pomante, L. Zafalon, R. Energy aware scheduling of processes at OS level. *WSEAS Transactions on Circuits and Systems*, Volume 5, Issue 12, December 2006, Pages 1811-1818.
- [JR.6] P. Di Felice, L. Pomante. A System-Level HW/SW Co-Design Methodology for Ad-Hoc Implementation of DBMS Operators. *WSEAS TRANSACTIONS on COMPUTER RESEARCH*, Issue 2, Volume 2, February 2007.
- [JR.7] P. Di Felice, M. Ianni, L. Pomante. Design and evaluation of a spatial extension of TinyDB for wireless sensor networks. *International Journal of Computers and Their Applications (IJCA)*, ISCA, September 2010.
- [JR.8] Pomante L. System-Level Design Space Exploration for Heterogeneous Parallel Dedicated Systems", *Journal of Electronic Systems*, 2013, Vol. 3, Iss. 2 (DLINE Journals in Science, Engineering, Technology and Management).

- [JR.9] L. Pomante, "HW/SW co-design of dedicated heterogeneous parallel systems: an extended design space exploration approach," in IET Computers & Digital Techniques, vol. 7, no. 6, pp. 246-254, November 2013.
- [JR.10] L. Pomante, P. Serri. "SystemC-based HW/SW Co-Design of Heterogeneous Multiprocessor Dedicated Systems". International Journal of Information Systems, Journal ISSN Online: 2356-5896, Vol. 1, July 2014.
- [JR.11] S. Marchesani, L. Pomante, M. Pugliese, F. Santucci. "A Middleware Approach for IEEE 802.15.4 Wireless Sensor Networks Security". EAI Endorsed Transactions on Ubiquitous Environments, July 2015.
- [JR.12] M. Faccio, F. Federici, S. Ferri, V. Muttillo, L. Pomante, C. Tieri, G. Valente. "A design methodology for soft-core platforms on FPGA with SMP Linux, OpenMP support, and distributed hardware profiling system". Eurasip Journal on Embedded Systems, Volume 2016, Issue 1, 1 January 2017, Article number 15.
- [JR.13] A.A.V.V. The MegaM@Rt2 ECSEL Project: MegaModelling at Runtime - Scalable Model-based Framework for Continuous Development and Runtime Validation of Complex Systems. Microprocessors and Microsystems, Elsevier, Volume 61, September 2018, Pages 86-95.
- [JR.14] Balador, A.; Kouba, A.; Cassioli, D.; Foukalas, F.; Severino, R.; Stepanova, D.; Agosta, G.; Xie, J.; Pomante, L.; Mongelli, M.; Pierini, P.; Petersen, S.; Sukuvaara, T. Wireless Communication Technologies for Safe Cooperative Cyber Physical Systems. Sensors 2018, 18, 4075.
- [JR.15] Giacomo Valente, Vittoriano Muttillo, Mirco Muttillo, Gianluca Barile, Alfiero Leoni, Walter Tiberti, Luigi Pomante. SPOF - Slave Powerlink on FPGA for smart Sensors and Actuators interfacing for Industry 4.0 applications. MDPI Energies. Special Issue "Energy Efficient Systems, Sensors, and Smart Management Approaches for Industry 4.0", 2019.
- [JR.16] Luigi Pomante, Vittoriano Muttillo, Bohuslav Křena, Tomáš Vojnar, Filip Veljković, Pacôme Magnin, Martin Matschnig, Bernhard Fischer, Jabier Martinez, Thomas Gruber. The AQUAS ECSEL Project - Aggregated Quality Assurance for Systems: Co-Engineering Inside and Across the Product Life Cycle. Microprocessors and Microsystems, Volume 69, 2019, Pages 54-67.
- [JR.17] G. Valente, P. Giammatteo, V. Muttillo, L. Pomante, T. Di Mascio. A lightweight, hardware-based support for isolation in mixed-criticality Network-on-Chip architectures. Advances in Science, Technology and Engineering Systems Journal, Special Issue on Advancement in Engineering and Computer Science, 2019.
- [JR.18] Luigi Pomante, Vittoriano Muttillo, Marco Santic, Paolo Serri, SystemC-based electronic system-level design space exploration environment for dedicated heterogeneous multiprocessor systems, Microprocessors and Microsystems, Volume 72, 2020, 102898, ISSN 0141-9331, <https://doi.org/10.1016/j.micpro.2019.102898>.
- [JR.19] V. Muttillo, L. Tiberi, L. Pomante, P. Serri. "Benchmarking Analysis and Characterization of Hypervisors for Space Multi-core Systems". AIAA Journal, (2019).
- [JR.20] M. Santic, L. Pomante, C. Rinaldi. A lightweight localization approach for WSNs: performance analysis and validation. IET Wireless Sensor Systems, 2019.
- [JR.21] G. Valente, T. Di Mascio, G. D'Andrea and L. Pomante, "Dynamic Partial Reconfiguration Profitability for Real-Time Systems," in IEEE Embedded Systems Letters, 2020.
- [JR.22] Eirini Lioutou, Dimitris Tsolkas, Giorgos Kalpaktoglou, Stefano Tennina, Luigi Pomante, Nikos Passas. The CASPER user-centric approach for advanced service provisioning in mobile networks, Microprocessors and Microsystems, Volume 77, 2020.
- [JR.23] V. Muttillo, P. Giammatteo, V. Stoico, L. Pomante. An Early-Stage Statement-Level Metric for Energy Characterization of Embedded Processors. Microprocessors and Microsystems, 2020.
- [JR.24] AA.VV. Aggregate Farming in the Cloud: the AFarCloud ECSEL Project. Microprocessors and Microsystems, 2020.
- [JR.25] W. Tiberti, F. Caruso, L. Pomante, M. Pugliese, M. Santic, F. Santucci. Development of an extended Topology-based Lightweight Cryptographic Scheme for IEEE 802.15.4 Wireless Sensor Networks. International Journal of Distributed Sensor Networks, SAGE 2020.
- [JR.26] Tiberti, W., Cassioli, D., Di Marco, A., Pomante, L., Santic, M. A model-based approach for adaptable middleware evolution in WSN platforms (2021) Journal of Sensor and Actuator Networks, 10 (1), art. no. 20.

- [JR.27] Valente G., Fanni T., Sau C., Di Mascio T., Pomante L., Palumbo F. A Composable Monitoring System for Heterogeneous Embedded Platforms. *ACM Transactions on Embedded Computing Systems* Volume 20, Issue 5July 2021 Article number 42.
- [JR.28] Sau, C., Rinaldi, C., Pomante, L., Palumbo, F., Valente, G., Fanni, T., Martinez, M., van der Linden, F., Basten, T., Geilen, M., Peeren, G., Kadlec, J., Jääskeläinen, P., Bulej, L., Barranco, F., Saarinen, J., Säntti, T., Zedda, M.K., Sanchez, V., Nikkhah, S.T., Goswami, D., Amat, G., Maršík, L., van Helvoort, M., Medina, L., Al-Ars, Z. & de Beer, A. 2021, "Design and management of image processing pipelines within CPS: Acquired experience towards the end of the FitOptiVis ECSEL Project", *Microprocessors and Microsystems*, vol. 87.
- [JR.29] J. M. Aceituno, A. Guasque, P. Balbastre, F. Blanes and L. Pomante, "Optimized Scheduling of Periodic Hard Real-Time Multicore Systems," in *IEEE Access*, vol. 11, pp. 30027-30039, 2023.
- [JR.30] Muttillo V., Pomante L., Santic M., Valente G. "SystemC-based Co-Simulation/Analysis for System-Level Hardware/Software Co-Design", *Computers and Electrical Engineering*, 2023.
- [JR.31] Valente G., Muttillo V., Federici F., Pomante L., Di Mascio T. "Analysis of Reconfiguration Delay in Heterogeneous Systems-on-Chip via Traffic Injection", (2024) *IEEE Embedded Systems Letters*, 16 (2), pp. 162 – 165.
- [JR.32] Eramo R., Nolletti M., Pomante L., Pasquale L., Pascucci D. "Model-driven engineering for simulation models interoperability: A case study in space industry", (2024) *Software - Practice and Experience*, 54 (6), pp. 1010 – 1033.
- Peretti, S., Caruso, F., Valente, G., Pomante, L., & Di Mascio, T. (2025). Educating artificial intelligence following the child learning development trajectories. *Behaviour & Information Technology*, 1–17.

INTERNATIONAL CONFERENCES

(*) Personally presented

- [IC.1] Con D. Sciuto, C. Bolchini, F. Salice. "A Synthesis methodology aimed at improving the quality of TSC devices", *Proceedings of IEEE International Symposium on Defect and Fault Tolerance in VLSI System* (IEEE DFT 1999), New Mexico (USA), November 1999, pp. 247-255.
- [IC.2] "Co-design of Multiprocessor Embedded Systems: an Heuristic Multi-Level Partitioning Methodology", *Proceedings on IFIP International Conference on Chip Design Automation* (IFIP ICDA 2000), Beijing (China), Agosto 2000, pp. 421-425. (*)
- [IC.3] Con D. Sciuto, F. Salice, W. Fornaciari, C. Brandoles. "A Multi-Level Strategy for Software Power Estimation", *Proceedings of IEEE International Symposium on System Synthesis* (IEEE ISSS 2000), Madrid (Spain), September 2000, pp. 187-192.
- [IC.4] Con D. Sciuto, F. Salice, C. Bolchini. "Reliability properties Assessment at System Level: A Co-Design Framework", *Proceedings of 7th IEEE International On-Line Testing Workshop* (IEEE IOLTW 2001), Taormina (Italia), 2001, pp. 165-171.
- [IC.5] Con D. Sciuto, F. Salice, W. Fornaciari. "HW/SW Timing Simulation Environment for Multiprocessor Embedded Systems", *5th World Multi-Conference on Systemics, Cybernetics and Informatics* (SCI 2001), Orlando (USA), Luglio 2001, vol. XV, Industrial Systems part II. (*)
- [IC.6] Con D. Sciuto, F. Salice, C. Bolchini. "On-Line Fault Detection in a Hardware/Software Co-design Environment: System Partitioning", *Proceedings of 14th IEEE/ACM International Symposium on System Synthesis* (IEEE/ACM ISSS 2001), Montreal (Canada), Ottobre 2001.
- [IC.7] Con W. Fornaciari, F. Salice, D. Sciuto. "Metrics for Design Space Exploration of Heterogeneous Multiprocessor Embedded System", *IEEE/ACM International Workshop on Hardware Software Co-Design* (IEEE/ACM CODES 2002), Colorado (USA), Maggio 2002. (*)
- [IC.8] Con C. Bolchini, F. Salice, D. Sciuto. "A System Level Approach in Designing Dual-Duplex Fault Tolerant Embedded Systems", *IEEE International On-Line Testing Workshop* (IEEE IOLTW 2002), Isle of Bendor (Francia), Luglio 2002, pp. 32-36.
- [IC.9] Con W. Fornaciari, M. Bombana. "SystemC-Plus Complex Data Type for Telecom Applications", *Proceedings of Forum on Specification and Design Languages* (FDL 2002), vol. 2, Marsiglia (Francia), Settembre 2002. (*)
- [IC.10] Con M. Bombana. "SystemC-Based Library Approach for Data-intensive Applications", *Conference on Design of Circuits and Integrated Systems* (DCIS 2002), Santander (Spagna), Novembre 2002.

- [IC.11] Con W. Fornaciari, F. Salice, L. Del Vecchio. "Partitioning of Embedded Applications onto Heterogeneous Multiprocessor Architectures", *ACM Symposium on Applied Computing* (ACM SAC 2003), Florida (USA), Marzo 2003, pp. 661-665. (*)
- [IC.12] Con F. Salice, W. Fornaciari, D. Sciuto. "An Internal Representation Model for System-Level Co-Design of Heterogeneous Multiprocessor Embedded System", *Forum on Specification and Design Languages* (FDL 2003), Francoforte (Germania), Settembre 2003. pp. 669-679.
- [IC.13] Con R. Farina, L. Pizzamiglio. "System Design using SystemC-Plus: A Case Study in the Telecom Domain", *International Conference on Cybernetics and Information Technologies, Systems and Applications* (CITSA 2004) and the 10th International Conference on Information Systems Analysis and Synthesis (ISAS 2004), Orlando (USA), Luglio 21-25, 2004.
- [IC.14] Con R. Farina, L. Pizzamiglio, "Experimenting Object-Oriented System-Level Design in the ATM domain", *Forum on Specification and Design Languages* (FDL 2004), Lille (Francia), Settembre 2004. (*)
- [IC.15] "Exploiting Polymorphism in the HW Design: a Case Study in the ATM Domain", *CODES+ISSS 2004*, Stoccolma, Settembre 2004. (*)
- [IC.16] Con A. Miele, F. Salice, C. Bolchini, D. Sciuto, "Reliable System Co-Design: the FIR Case Study", *IEEE International Symposium on Defect and Fault Tolerance in VLSI Systems* (DFT 2004), Ottobre 2004, Cannes (Francia).
- [IC.17] Con F. Salice, C. Bolchini, D. Sciuto, "Reliable System Specification for Self-Checking Data-Paths", *Design, Automation and Test in Europe – Conference & Exhibition* (DATE 2005), Marzo 2005, Monaco (Germania).
- [IC.18] Con C. Brandoles, D. Scarpazza, P. Di Felice, "Parsing SystemC: an open-source, easy to extend parser", *IADIS Applied Computing Conf.*, Febbraio 2006, San Sebastian (Spagna). (*)
- [IC.19] Con P. Di Felice, "Integration of Spatial Data Types and Operators into Relational DBMSs: A Survey", *IADIS Applied Computing Conference*, Febbraio 2006, San Sebastian (Spagna). (*)
- [IC.20] Con C. Brandoles, W. Fornaciari, F. Salice, R. Zafalon, "DPM at OS level: low-power scheduling policies", *5th WSEAS International Conference on CIRCUITS, SYSTEMS, ELECTRONICS, CONTROL & SIGNAL PROCESSING* (CSECS '06), Dallas, Texas, USA, Novembre 2006.
- [IC.21] Con P. Di Felice, "Ad-hoc HW/SW Architectures for DBMSs: a Co-Design Approach", *WSEAS International Conferences 2007 (AIKED, SEPADS, EHAC and ISPRA)*, Corfù, Grecia, Febbraio 2007.
- [IC.22] Con F. Graziosi, L. Imbriglio, "Topology-aware System Design Exploration for Embedded Applications implemented onto Heterogeneous Multiprocessor SoC", *IEEE International Conference on Design & Technology of Integrated Systems* (DTIS2008), Marzo 2008, Tozeur (Tunisia). (*)
- [IC.23] Con P. Di Felice, M. Ianni. "A spatial extension of TinyDB for wireless sensor networks", *IEEE Symposium on Computers and Communications* (ISCC'08), Luglio 2008, Marrakech (Marocco). (*)
- [IC.24] Con F. Graziosi, F. Santucci, C. Rinaldi, S. Tennina, C. Fischione. "Mining Ventilation Control: Wireless Sensing, Communication Architecture and Advanced Services". *4th Annual IEEE Conference on Automation Science and Engineering* (CASE 2008), Agosto 2008, Washington DC (USA). (*)
- [IC.25] Con F. Graziosi, C. Rinaldi. "Exploiting WSN for audio surveillance applications: the VoWSN approach", *11th IEEE Euromicro Conference on Digital System Design* (DSD'08), Parma (Italia), Settembre 2008. (*)
- [IC.26] "A System-Level Co-Design Methodology for DBMS-Specific Architectures", *11th IEEE Euromicro Conference on Digital System Design* (DSD'08, WIP-SS), Parma (Italia), Settembre 2008. (*)
- [IC.27] Con F. Graziosi, D. Pacifico. "A Middleware-Based Approach for Heterogeneous Wireless Sensor Networks". *The 12th WSEAS International Conference on COMMUNICATIONS (part of the 12th WSEAS CSCC Multiconference)*, Creta (Grecia), Luglio 2008.
- [IC.28] Con F. Graziosi, L. Imbriglio. "System-Level Design Space Exploration for Application-Specific HW/SW Systems". *2009 IEEE Toronto International Conference-Science and Technology for Humanity (TIC-STH 2009): Symposium on Electronic Design Automation*, Toronto, Settembre 2009. (*)

- [IC.29] Con F. Santucci, M. Pugliese. "Agent-based Scalable Design of a Cross-Layer Security Framework for Wireless Sensor Networks Monitoring Applications". *IEEE International Workshop on Scalable Ad Hoc and Sensor Networks*, San Pietroburgo, Ottobre 2009. (*)
- [IC.30] Con A. Spinosi, L. Lavagno, S. Olivieri, M. Mozumdar. "An extended framework for the development of WSN applications". *Workshop on Mobile Computing and Networking Technologies*. Mosca, Ottobre 2010.
- [IC.31] Con M. Pugliese, F. Santucci. "Topology Optimization and Network Deployment Algorithm in WSNs for Mobile Agent-based Applications". *4th European Modelling Symposium (EMS2010)*. Pisa, Novembre 2010.
- [IC.32] Con A. Spinosi, L. Lavagno, S. Olivieri, M. Mozumdar. "An extended framework for WSN applications". *8th IEEE Consumer Communications and Networking Conference*. Las Vegas, Gennaio 2011.
- [IC.33] Con D. Cassioli, A. Di Marco, V. Cortellessa. "A Successful VISION: Video-oriented UWB based Intelligent Ubiquitous Sensing". *8th IEEE Consumer Communications and Networking Conference*. Las Vegas, Gennaio 2011.
- [IC.34] "System-Level Design Space Exploration for Dedicated Heterogeneous Multi-Processor Systems". *IEEE International Conference on Application-specific Systems, Architectures and Processors*, Santa Monica, Settembre 2011. (*)
- [IC.35] Con C. Rinaldi, D. Ciucu. "A speech indicator for the VoWSN approach". *5th International Symposium on Communications, Control and Signal Processing*, Roma, Maggio 2012.
- [IC.36] Con A. Di Marco, S. Pace, S. Marchesani. "Model-Driven Agent Generation Approach for Adaptable and Resource-Aware Sensor Node". *Third International Workshop on Software Engineering for Sensor Network Applications*, Zurigo, Giugno 2012.
- [IC.37] Con S. Marchesani, P. Serri. "Design Space Exploration for Heterogeneous Multi Multi-Core Processor Dedicated Systems". *3rd Workshop on Design, Modeling and Evaluation of Cyber Physical Systems (CyPhy'13)*, Philadelphia, Aprile 2013.
- [IC.38] Con S. Marchesani, P. Serri. "System-Level Design Space Exploration for Heterogeneous Parallel Dedicated Systems". *ICMAES'2013 - The International Conference on Machines Applications and Embedded Systems, Computer and Information Technology (WCCIT), 2013 World Congress on*, Sousse (Tunisia), Giugno 2013. (*)
- [IC.39] Con C. Rinaldi, M. Santic, S. Tennina. "Performance analysis of a lightweight RSSI-based localization algorithm for Wireless Sensor Networks". *International Symposium on Signals Circuits and Systems - ISSCS 2013*. Iasi (Romania), Giugno 2013.
- [IC.40] Con M. Pugliese, S. Marchesani, F. Santucci. "WINSOME: A Middleware Platform for the Provision of Secure Monitoring Services over Wireless Sensor Networks". *9th International Wireless Communications & Mobile Computing Conference (IWCMC 2013)*, Cagliari, Luglio 2013.
- [IC.41] Con S. Marchesani, M. Pugliese, F. Santucci. "A Middleware Approach to Provide Security in IEEE 802.15.4 Wireless Sensor Networks". *MOBILE Wireless MiddleWARE, Operating Systems and Applications (Mobilware), 2013 International Conference on*, vol., no., pp.85,93, 11-13 Nov. 2013.
- [IC.42] Con C. Tieri, F. Federici, M. Colizza, M. Faccio, R. Cardinali, B. Iorio. "HW Mechanisms to Support Isolation in Mixed-Criticality NoC". *Euromicro Conference on Digital System Design – WIP Session*, Verona, Agosto 2014.
- [IC.43] Con C. Tieri, F. Federici, M. Colizza, M. Faccio, G. Valente. "Hardware Mechanisms to Support Profiling in Many-Core Embedded Systems". *Euromicro Conference on Digital System Design – WIP Session*, Verona, Agosto 2014.
- [IC.44] Con P. Serri, E. Incerto, J. Volpe. "HW/SW Co-Design of Heterogeneous Multiprocessor Dedicated Systems: a SystemC-based Environment". *2th World Congress on Multimedia and Computer Science International Conference on Telecommunications and Modelling, Analysis and Simulation of Computer Systems 2014 (ICTMASCS'2014)* Agosto 9-11, Hammamet, Tunisia. (*)
- [IC.45] Con S. Candia, E. Incerto. *A Model Driven Approach for the Development of an IDE for Spacecraft on Board Software*. *IEEE Aerospace Conference*, Marzo 2015.
- [IC.46] Con A. Falcone, C. Rinaldi, M. Santic. "Performance analysis of a lightweight localization algorithm for WSNs in a real scenario". *International Symposium on Signals Circuits and Systems (ISSCS)*, Luglio 2015. (*)

- [IC.47] Con C. Rinaldi, G. Gustavino, M. Santic, M. Pennese, "Comparison of pitch detection algorithms for the Crazy Square project". *International Symposium on Signals Circuits and Systems* (ISSCS), Luglio 2015. (*)
- [IC.48] Con L. Berardinelli, A. Di Marco, S. Pace, and W. Tiberti. "Energy Consumption Analysis and Design of Energy-aware WSN Agents in fUML". *11th European Conference on Modelling Foundations and Applications* (ECMFA), Luglio 2015.
- [IC.49] Con I. De Cesaris, S. Dell'Osa. "OATS: an Automated Test System for OpenOCD". *The Euromicro Conference series on Software Engineering and Advanced Applications (SEAA 2015) - Work in Progress Session*, Agosto 2015. (*)
- [IC.50] Con V. Muttillo, F. Federici, G. Valente, M. Faccio, C. Tieri. "Enhancing an FPGA-Based SMP Embedded Platform with OpenMP Support and Unobtrusive System Monitor". *Euromicro Conference on Digital System Design – WIP Session*, Agosto 2015. (*)
- [IC.51] Con F. Federici, G. Valente, D. Casalena, D. Andreotti, D. Pascucci. "Exploiting Paravirtualization to Support Time and Space Isolation in Multi-Core Platforms for the Avionic Domain". *Euromicro Conference on Digital System Design – WIP Session*, Agosto 2015. (*)
- [IC.52] Con I. De Cesaris, S. Dell'Osa. "OATS: an Automated Test System for OpenOCD". *IEEE 1st International Forum on Research and Technologies for Society and Industry Leveraging a better tomorrow (RTSI)*, Settembre 2015. (*)
- [IC.53] Con Giacomo Valente, Luigi Pomante, Marco Faccio, Fabio Federici, Vittoriano Muttillo and Andrea Moro. Hardware Performance Sniffers for Embedded Systems Profiling. *Workshop on Intelligent Solutions on Embedded Systems* (WISES), Ottobre 2015.
- [IC.54] Con G. Valente, M. Faccio, F. Federici, V. Muttillo, S. Ferri and A. Moro. A Flexible Profiling Sub-system for reconfigurable logic architectures. *Euromicro International Conference on Parallel, Distributed, and Network-Based Processing* (PDP 2016).
- [IC.55] Con L. Corradetti, D. Gregori, S. Marchesani, M. Santic, W. Tiberti. A Renovated Mobile Agents Middleware for WSN - Porting of Agilla to the TinyOS 2.x Platform. *IEEE RTSI 2016*.
- [IC.56] Con M. Santic. Methodologies, tools and technologies for location-aware AAL. *IEEE RTSI 2016*.
- [IC.57] Con M. Faccio, F. Federici, G. Marini, V. Muttillo, G. Valente. Design and Validation of Multi-core Embedded Systems under Time-to-Prototype and High Performance Constraints. *IEEE RTSI 2016*.
- [IC.58] A.A.V.V. "V2I Cooperation for Traffic Management with SafeCOP". *IEEE Euromicro Conference on Digital System Design (DSD 2016)*.
- [IC.59] A.A.V.V. "Safe Cooperative CPS: A V2I Traffic Management scenario in the SafeCOP project". *International Conference on Embedded Computer Systems: Architectures, Modeling, and Simulation (SAMOS 2016)*.
- [IC.60] Con D. Cassioli, A. Di Marco, F. Gallo, S. Pace and C. Rinaldi. "VISION: Video-oriented UWB-based Intelligent Ubiquitous Sensing". *International Conference on the Science of Electrical Engineering* (ICSEE), 2016.
- [IC.61] Con E. Incerto, D. Di Pompeo, V. Muttillo, G. Valente. "An Efficient Performance-Driven Approach for HW/SW Co-Design". *ICPE 2017 (WIP/Vision track)*.
- [IC.62] Con A. Colarieti, A. Marotta, M. Mpervanakis, V. Tsolkas. "QoE Provisioning over mobile networks: The CASPER perspective". *IEEE CAMAD 2017* (Special Session).
- [IC.63] Con E. Lioutou, A. Marotta, K. Ramantas. "A Middleware Architecture for QoE Provisioning in Mobile Networks". *IEEE CAMAD 2017* (Special Session).
- [IC.64] Con Danilo Andreotti, Fabio Federici, Vittoriano Muttillo, Dario Pascucci. "Analysis and design of a Command & Data Handling platform based on the LEON4 multicore processor and PikeOS hypervisor". *DAta Systems In Aerospace – DASIA 2017*.
- [IC.65] Con W. Afzal, H. Bruneliere, D. Di Ruscio, A. Sadovskyh, S. Mazzini, E. Cariou, D. Truscan, J. Cabot, D. Field, and P. Smrz. "The MegaM@Rt2 ECSEL Project". *IEEE Euromicro Conference on Digital System Design (DSD 2017)*.
- [IC.66] Con V. Muttillo, G. Valente, D. Ciambrone. "HW/SW Co-Simulator for Embedded Heterogeneous Parallel Systems". *IEEE Euromicro Conference on Digital System Design 2017* (WIP Session).
- [IC.67] Con V. Muttillo, G. Valente, V. Stoico, F. D'Antonio. "CC4CS: A Unifying Statement-Level Performance Metric for HW/SW Technologies". *IEEE Euromicro Conference on Digital System Design 2017* (WIP Session).

- [IC.68] Con F. Federici, M. Micozzi, V. Muttillo, G. Valente. "Simulation-Based Analysis of a Hardware Mechanism to Support Isolation in Mixed-Criticality Network on Chip". European Modelling Symposium (EMS2017).
- [IC.69] V. Muttillo, G. Valente, D. Ciambrone, V. Stoico, and L. Pomante, "HEPSYCODE-RT: a Real-Time Extension for an ESL HW/SW Co-Design Methodology", Proceedings of the 10th Workshop on Rapid Simulation and Performance Evaluation: Methods and Tools (RAPIDO'18), ACM, New York, NY, USA, 2018, <https://dl.acm.org/citation.cfm?id=3180670>.
- [IC.70] L. Pomante, W. Tiberti, M. Santic, F. Santucci, M. Pugliese, L. Di Giuseppe, L. Bozzi. TinyWIDS: a WPM-based Intrusion Detection System for TinyOS2.x/802.15.4 Wireless Sensor Networks. Fifth Workshop on Cryptography and Security in Computing Systems (CS2 2018).
- [IC.71] V. Muttillo, G. Valente, L. Pomante, V. Stoico, F. D'Antonio, and F. Salice, "CC4CS: an Off-the-Shelf Unifying Statement-Level Performance Metric for HW/SW Technologies", In Companion of the 2018 ACM/SPEC International Conference on Performance Engineering (ICPE '18), ACM, New York, NY, USA, 2018, pp. 119-122.
- [IC.72] V. Cortellessa, A. Di Marco, D. Di Pompeo, F. Gallo, S. Pace, L. Pomante, W. Tiberti. Energy-Driven Reconfiguration of Applications for Wireless Sensor Networks. In Companion of the 2018 ACM/SPEC International Conference on Performance Engineering (ICPE '18), ACM, New York, NY, USA, 2018, 79-84.
- [IC.73] L. Pomante, G. Valente, V. Muttillo, D. Ciambrone. "HEPSIM: an ESL HW/SW Co-Simulator/Analysis Tool for Heterogeneous Parallel Embedded Systems", In 6th EUROMICRO/IEEE Workshop on Embedded and Cyber-Physical Systems (ECYPS'2018), Budva, Montenegro, 2018. (*)
- [IC.74] D. Ciambrone, S. Tennina, D. Tsolkas, L. Pomante. Performance Evaluation Framework for LTE Networks. IEEE WoWMoM - Workshop on User-centric service provisioning over 5G networks (USEPRO'18). Greece 2018.
- [IC.75] P. Di Felice, L. Pomante and A. Di Felice. Safety of Physical Assets: A Ranking Method and its GIS Implementation. Computational Science and Its Applications, 2 – 5 July, 2018, Melbourne, Australia. Springer International Publishing AG, part of Springer Nature 2018 O. Gervasi et al. (Eds.): ICCSA 2018, LNCS 10962, pp. 1–14, 2018. (*)
- [IC.76] D. Ciambrone, S. Tennina, M. Boschi, D. Tsolkas and L. Pomante. Assessing QoE-driven management policies for VoIP and Video Streaming service provisioning". IEEE 23rd International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (IEEE CAMAD 2018).
- [IC.77] L. Pomante, P. Di Felice. WSN and GIS Integration for a Cost-Effective Real-Time Monitoring of Landslides on Railway Stations and Lines. IEEE 29th Annual International Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC) - Workshop WS-10 on "Railway RoSe: Wireless Robots and Sensors Networks for Railway Systems": IEEE Railway RoSe 2018. (*)
- [IC.78] L. Pomante, B. Křena, T. Vojnar, F. Veljkovic and P. Magnin, "The AQUAS ECSEL Project," 2018 21st Euromicro Conference on Digital System Design (DSD), Prague, 2018, pp. 592-599.
- [IC.79] Zaid Al-Ars, Twan Basten, Ad de Beer, Marc Geilen, Dip Goswami, Pekka Jääskeläinen, Jiří Kadlec, Marcos Martinez de Alejandro, Francesca Palumbo, Geran Peeren, Luigi Pomante, Frank van der Linden, Juka Saarinen, Tero Säntti, Carlo Sau, and Maria Katiuscia Zedda. 2019. The FitOptiVis ECSEL project: highly efficient distributed embedded image/video processing in cyber-physical systems. In Proceedings of the 16th ACM International Conference on Computing Frontiers (CF '19). ACM, New York, NY, USA, 333-338.
- [IC.80] Carlo Centofanti, Luigi Pomante and Marco Santic. A SaaS Framework, Composed of a Number of Remotely Accessible Testbeds and Related SW Tools, for Analysis, Design and Management of Low Data-Rate Wireless Personal Area Networks Based on IEEE 802.15.4. MECO/ECYPS 2019.
- [IC.81] Paolo Giammatteo, Federico Fiordigigli, Luigi Pomante and Tania Di Mascio. Age & Gender Classifier for Edge Computing. MECO/ECYPS 2019.
- [IC.82] Pedro Castillejo, Gorm Johansen, Baran Cürükli, Sonia Bilbao-Arechabala, Roberto Fresco, Belén Martínez-Rodríguez, Luigi Pomante, José-Fernán Martínez-Ortega, Marco Santic. The AFARCLOUD ECSEL Project. Euromicro Conference on Digital System Design, August 2019.
- [IC.83] E. Liotou, D. Tsolkas, S. Tennina, L. Pomante, G. Kalpaktoglou, and N. Passas, "The CASPER project approach towards user-centric mobile networks", Euromicro Conference on Digital System Design, Chalkidiki, Greece, August 2019.

- [IC.84] Vittoriano Muttillo, Luigi Pomante, Patricia Balbastre, Josè Simò, Alfons Crespo. HW/SW Co-Design Framework for Mixed-Criticality Embedded Systems considering Xtratum-based SW Partitions. Euromicro Conference on Digital System Design, August 2019.
- [IC.85] Muttillo, V., Giammatteo, P., Fiorilli, G., Pomante, L. An OpenMP Parallel Genetic Algorithm for Design Space Exploration of Heterogeneous Multi-processor Embedded Systems (PARMA-DITAM 2020), ACM International Conference Proceeding Series, 2020.
- [IC.86] Pomante, L., Romano, F., Serri, P. Ada Ravenscar Profile and C language: Rules Porting and Compatibility Checks Automation. 9th Mediterranean Conference on Embedded Computing, MECO 2020. (*)
- [IC.87] Muttillo, M., Muttillo, V., Pomante, L., Pantoli, L. A Low Cost and Flexible Power Line Communication Sensory System for Home Automation. 2020 IEEE International Workshop on Metrology for Industry 4.0 and IoT, MetroInd 4.0 and IoT 2020.
- [IC.88] G. D'Andrea and L. Pomante, "Design for ReConfigurability: An Electronic System Level Methodology to Exploit Reconfigurable Platforms," 2020 30th International Conference on Field-Programmable Logic and Applications (FPL), Gothenburg, Sweden, 2020, pp. 355-356.
- [IC.89] Tiberti, W., Carmenini, A., Pomante, L., Cassioli, D. A Lightweight Blockchain-based Technique for Anti-Tampering in Wireless Sensor Networks (2020). Proceedings - Euromicro Conference on Digital System Design, DSD 2020, art. no. 9217869, pp. 577-582.
- [IC.90] Pomante, L., Pugliese, M., Bozzi, L., Tiberti, W., Grimani, D., Santucci, F. SEAMLESS Project: Development of a Performing Secure Platform for IEEE 802.15.4 WSN Applications. (2020) Proceedings - Euromicro Conference on Digital System Design, DSD 2020, art. no. 9217831, pp. 588-595.
- [IC.91] Muttillo, V., Valente, G., Pomante, L., Posadas, H., Merino, J., Villar, E. Run-Time Monitoring and Trace Analysis Methodology for Component-based Embedded Systems Design Flow. (2020) Proceedings - Euromicro Conference on Digital System Design, DSD 2020, art. no. 9217797, pp. 117-125.
- [IC.92] Lojo, A., Rubio, L., Ruano, J.M., Di Mascio, T., Pomante, L., Ferrari, E., Vega, I.G., Gurbaynak, F.K., Esnaola, M.L., Orani, V., Abella, J. The ECSEL FRACTAL Project: A Cognitive Fractal and Secure edge based on a unique Open-Safe-Reliable-Low Power Hardware Platform. (2020) Proceedings - Euromicro Conference on Digital System Design, DSD 2020, art. no. 9217800, pp. 393-400.
- [IC.93] Barbosa, R., Basagiannis, S., Giantamidis, G., Becker, H., Ferrari, E., Jahic, J., Kanak, A., Esnaola, M.L., Orani, V., Pereira, D., Pomante, L., Schlick, R., Smrcka, A., Yazici, A., Folkesson, P., Sangchoolie, B. The VALU3S ECSEL Project: Verification and Validation of Automated Systems Safety and Security. (2020) Proceedings - Euromicro Conference on Digital System Design, DSD 2020, art. no. 9217663, pp. 352-359.
- [IC.94] Pomante, L., Palumbo, F., Rinaldi, C., Valente, G., Sau, C., Fanni, T., Linden, F.V.D., Basten, T., Geilen, M., Peeren, G., Kadlec, J., Jaaskelainen, P., Martinez, M., Saarinen, J., Santti, T., Zedda, M.K., Sanchez, V., Goswami, D., Al-Ars, Z., Beer, A.D. Design and management of image processing pipelines within CPS: 2 years of experience from the FitOptiVis ECSEL Project. (2020) Proceedings - Euromicro Conference on Digital System Design, DSD 2020, art. no. 9217819, pp. 378-385.
- [IC.95] G. Valente, T. Di Mascio, L. Pomante and V. Stoico, "An ESL Methodology for HW/SW Co-Design of Monitorable Embedded Systems: the "Design for Monitorability" Project - Work-in-Progress," 2020 International Conference on Hardware/Software Codesign and System Synthesis (CODES+ISSS), Singapore, 2020, pp. 40-42. (*)
- [IC.96] Di Frischia, S., Giammatteo, P., Angelini, F., Spizzichino, V., De Santis, E. & Pomante, L. 2020, "Enhanced Data Augmentation using GANs for Raman Spectra Classification", Proceedings - 2020 IEEE International Conference on Big Data, Big Data 2020, pp. 2891.
- [IC.97] D'Andrea, G., Valente, G., Pomante, L. & Di Mascio, T. 2021, "An investigation of dynamic partial reconfiguration offloading in hard real-time systems", Proceedings - 2021 24th Euromicro Conference on Digital System Design, DSD 2021, pp. 192. (*)
- [IC.98] Pressel, K., Moser, J., Rzepka, S., Brinkfeldt, K., Zhao, S., van Driel, W., Giammatteo, P., Bulut, B., Soyturk, M. & Pomante, L. 2021, "The H2020-ECSEL project "IREL40" (Intelligent Reliability 4.0)", Proceedings - 2021 24th Euromicro Conference on Digital System Design, DSD 2021, pp. 311.
- [IC.99] Caruso, F., T. Di Mascio, S. Peretti, L. Pomante, and G. Valente. 2022. MONICA "On-the-job" technology-enhanced learning environment: An empirical evaluation. Lecture Notes in

- Networks and Systems Volume 326, Pages 54 - 64 2022 11th International Conference on Methodologies and Intelligent Systems for Technology Enhanced Learning, MIS4TEL 2021.
- [IC.100] F. Caruso et al., "Sentient Spaces: Intelligent Totem Use Case in the ECSEL FRACTAL Project," 2022 25th Euromicro Conference on Digital System Design (DSD), Maspalomas, Spain, 2022, pp. 741-747.
- [IC.101] Cortellessa, V., Pomante, L., Stoico, V. 2023, "From UML/MARTE Specifications to ESL HW/SW Co-Design: Early Functional Verification and Timing Validation", ICPE 2023 - Companion of the 2023 ACM/SPEC International Conference on Performance Engineering.
- [IC.102] Stoico V., Cortellessa V., Malavolta I., Di Pompeo D., Pomante L., Lago P. "An Approach Using Performance Models for Supporting Energy Analysis of Software Systems", (EPEW 2023) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 14231 LNCS, pp. 249 – 263.
- [IC.103] L. Fazzini, L. Pomante, M. Santic. An all-digital hardware monitoring system at run-time to improve the reliability of electronic devices. European Conference on Safety and Reliability (ESREL) 2023.
- [IC.104] Santic M., Pomante L., Fazio U., Fucci L. "Wheelchair Embedded Device for Road Surface Classification and Obstacle Detection", 13th Mediterranean Conference on Embedded Computing, MECO 2024.
- [IC.105] Galassi A., Pomante L., Nardocci V. "Application of a system-level HW/SW co-design methodology to an industrial embedded system", 13th Mediterranean Conference on Embedded Computing, MECO 2024.
- [IC.106] A.A.V.V. Trusted SMEs for Sustainable Growth of Europeans Economical Backbone to Strengthen the Digital Sovereignty: The KDT Resilient Trust Project (2024) Proceedings - 2024 27th Euromicro Conference on Digital System Design, DSD 2024.
- [IC.107] Muttillo V., Stoico V., Santic M., Valente G., Pomante L., Frigioni D. SLIDE-x-ML: System-Level Infrastructure for Dataset E-xtraction and Machine Learning Framework for High-Level Synthesis Estimations (2024) Proceedings - IEEE International Conference on Computer Design: VLSI in Computers and Processors, pp. 616 – 619.
- [IC.108] Comai S., Lambruschi M., Ravasio F., Masciadri A., Pomante L., Salice F. Enhancing Bed Safety: Monitoring Sleeping Positions, Bed-Exits, and Falls Using Grid-EYE Infrared Array Sensors (2024) Lecture Notes in Networks and Systems, 1212 LNNS, pp. 418 – 430.
- [IC.109] Rinaldi C., Pomante L., Maggioni E., Campi A. BLE-Based Chair Occupancy Detection: A Low-Energy Approach for Smart Care (2024) Lecture Notes in Networks and Systems, 1212 LNNS, pp. 805 – 816.
- [IC.110] V. Muttillo, V. Stoico, G. Valente, M. Santic, L. Pomante and D. Frigioni. System-Level Timing Performance Estimation Based on a Unifying HW/SW Performance Metric. PARMA-DITAM 2025.

INTERNATIONAL CONFERENCES - POSTER

(*) Personally presented

- [IC.111] Con F. Graziosi, L. Imbriglio. "Application-Specific System-Level Design Space Exploration for Heterogeneous Multiprocessor Embedded Platforms". *DATE'09 Workshop on Designing for Embedded Parallel Computing Platforms: Architectures, Design Tools, and Applications (Poster)*, Nizza, Aprile 2009. (*)
- [IC.112] Con P. Di Felice. "Ad-hoc Architectures for modern DBMS: a HW/SW Co-Design Approach". *DATE'09 Workshop on Designing for Embedded Parallel Computing Platforms: Architectures, Design Tools, and Applications (Poster)*, Nizza, Aprile 2009. (*)
- [IC.113] "Dedicated Architectures for Scientific Computing: an HW/SW Co-Design Approach". *DATE'11 Workshop on Design Methods and Tools for FPGA-based Acceleration of Scientific Computing (Poster)*, Grenoble, Marzo 2011.
- [IC.114] "System-Level Design Space Exploration for Dedicated Heterogeneous Multi-Processor Systems". *DATE'11 Workshop on Designing for Embedded Parallel Computing Platforms: Architectures, Design Tools, and Applications (Poster)*, Grenoble, Marzo 2011.
- [IC.115] "System-Level Design Space Exploration for Dedicated Heterogeneous Multi-Processor Systems". *2nd Workshop on Design Tools and Architectures for Multi-Core Embedded Computing Platforms (DITAM'2013, Poster)*, Berlino, Gennaio 2013.

- [IC.116] Con M. Pennese, C. Rinaldi, M. Santic. "The Crazy Square: an Interactive Music Learning Environment for Digital Natives". *10th International Symposium on Computer Music Multidisciplinary Research*, Marsiglia, Ottobre 2013.
- [IC.117] Con D. Andreatti, F. Federici, V. Muttillo, D. Pascucci, G. Valente. "Analysis of paravirtualization tools supporting isolation in multicore, mixed-criticality aerospace systems". *HIPEAC Conference*, Praga, Gennaio 2016.
- [IC.118] Con F. Federici, V. Muttillo, L. Pomante, P. Serri, G. Valente. A Model-Based ESL HW/SW Co-Design Framework for Mixed Criticality Systems. *CPSWeek2016* (EMC2 Summit).
- [IC.119] Con F. Federici, V. Muttillo, L. Pomante, G. Valente, D. Andreatti, D. Pascucci. Implementing mixed-critical applications on next generation multicore aerospace platforms. *CPSWeek2016* (EMC2 Summit).
- [IC.120] V. Muttillo, G. Valente, and L. Pomante, "Criticality-driven Design Space Exploration for Mixed-Criticality Heterogeneous Parallel Embedded Systems", In Proceedings of the 9th Workshop and 7th Workshop on Parallel Programming and RunTime Management Techniques for Many-core Architectures and Design Tools and Architectures for Multicore Embedded Computing Platforms (PARMA-DITAM '18). ACM, New York, NY, USA, 2018, pp. 63-68. <https://dl.acm.org/citation.cfm?id=3183782>.
- [IC.121] V. Muttillo, G. Valente and L. Pomante, "Criticality-aware Design Space Exploration for Mixed-Criticality Embedded Systems", In Proceedings of the 9th ACM/SPEC on International Conference on Performance Engineering (ICPE '18), ACM, New York, NY, USA, 2018. <https://dl.acm.org/citation.cfm?id=3185769>.
- [IC.122] V. Muttillo, G. Valente and L. Pomante, "Design Space Exploration for Mixed-Criticality Embedded Systems Considering Hypervisor-Based SW Partitions," 2018 21st Euromicro Conference on Digital System Design (DSD), Prague, 2018, pp. 740-744.
- [IC.123] Giacomo Valente, Federica Caruso, Luigi Pomante, Tania Di Mascio. Monica - On-chip Monitoring Systems Characterization. Design Automation Conference (DAC) - IP and Embedded Systems Track, 2021.

INTERNATIONAL CONFERENCES – DEMO PAPER

(*) Personally presented

- [IC.124] Con S. Tennina, F. Graziosi, M. Di Renzo, R. Alesii, F. Santucci. "Localization, tracking, and automatic personal identification in GPS-denied environments: a solution based on a wireless biometric badge", *5th ICST/IEEE/ACM TridentCom (Demo Paper)*, Washington DC (USA), Aprile 2009. (*)
- [IC.125] Con S. Tennina, F. Graziosi, M. Di Renzo, R. Alesii, F. Santucci. "Integrated GPS-denied Localization, Tracking and Automatic Personal Identification". *7th ACM Conf. on Embedded Networked Sensor Systems (SenSys 2009, Demo Paper)*, Berkeley (California), Novembre 2009.
- [IC.126] Con S. Tennina, F. Graziosi, M. Di Renzo, R. Alesii, F. Santucci. "Distributed Localization, Tracking, and Automatic Personal Identification: A Solution based on a Wireless Biometric Badge". *4th ACM Int. Workshop on Wireless Network Testbeds, Experimental Evaluation and Characterization (Demo Paper)*, Pechino, Settembre 2009. (*)
- [IC.127] Con C. Rinaldi, F. Graziosi. "RF Sounding: listening the cellphone", *7th International Symposium on Computer Music Modeling and Retrieval (Demo Paper)*. Malaga (Spagna), Giugno 2010. (*)
- [IC.128] Con C. Rinaldi, R. Alesii, F. Graziosi. "RF Sounding". *8th ACM Conference on Embedded Networked Sensor Systems (Demo Paper)*. Zurigo, Novembre 2010.
- [IC.129] Con S. Tennina, F. Graziosi, M. Di Renzo, R. Alesii, F. Santucci. "Automatic Personal Identification System for Security in Critical Services - A Case Study", *9th ACM Conf. on Embedded Networked Sensor Systems (SenSys 2011, Demo Paper)*, Seattle, Novembre 2011.
- [IC.130] Con S. Marchesani, F. Santucci, M. Pugliese. "A Cryptographic Scheme for Real-World Wireless Sensor Networks Applications". *ACM/IEEE 4th International Conference on Cyber-Physical Systems (Demo Paper)*, Philadelphia, Aprile 2013.
- [IC.131] Con D. Cassioli, A. Di Marco, C. Rinaldi, S. Pace, F. Gallo. "VISION: Video-oriented UWB-based Intelligent Ubiquitous Sensing - Demo of the Video-oriented Intelligent Sensing". *International Conference on Sensor Networks*, Febbraio 2015.
- [IC.132] Con G. Valente, V. Muttillo, F. Federici, M. Faccio. "4-LOOP: 4-core Leon3 with Linux operating system, OpenMP library and hardware profiling system". *Conference on Design and Test Automation in Europe (DATE) – University Booth*, Marzo 2015.

- [IC.133] Con F. Federici, G. Valente, V. Muttillo, A. Moro. "WHICH: Watch over Heterogeneous Multicore ICs to Diagnose Harmful Stalls". *IEEE 1st International Forum on Research and Technologies for Society and Industry Leveraging a better tomorrow (RTSI) - Exhibition*, Settembre 2015. (*)
- [IC.134] Con G. Valente, V. Muttillo, A. Bufalino, M. Faccio, F. Federici. "A-LOOP - AMP system: 2-cores ARM Cortex A9/Linux OS and 4-cores Leon3/Linux OS, OpenMP library and Hardware Profiling system. *Conference on Design and Test Automation in Europe (DATE) – University Booth*, 2016.
- [IC.135] Con G. Valente, A. Bufalino, V. Muttillo, M. Faccio, F. Federici. "AIPHS: AdaptIve Profiling Hardware Sub-system". *Conference on Design and Test Automation in Europe (DATE) – University Booth*, 2016.
- [IC.136] Con M. Santic, W. Tiberti, C. Centofanti, L. Di Giuseppe. "LabSmiling: a framework, composed of a remotely accessible testbed and related SW tools, for analysis and design of low data-rate wireless personal area networks based on IEEE 802.15.4". *Conference on Design and Test Automation in Europe (DATE) – University Booth*, 2017.
- [IC.137] Con G. Valente, V. Muttillo, E. Incerto, D. Di Pompeo, L. Ciambrone. "A System-Level Methodology for HW/SW Co-Design of Heterogeneous Parallel Dedicated Systems". *Conference on Design and Test Automation in Europe (DATE) – University Booth*, 2017. (*)
- [IC.138] Con G. Valente, M. Faccio, V. Muttillo. "F-OMP: A Feedback monitoring infrastructure for OpenMP on embedded systems". *Conference on Design and Automation (DAC) - University Booth*, 2017.
- [IC.139] Federica Caruso, Tania Di Mascio, Alessandro D'Errico, Marco Pennese, Luigi Pomante, Claudia Rinaldi and Marco Santic. Crazy Square. *Conference on Design and Test Automation in Europe (DATE) – University Booth*, 2019.
- [IC.140] Luigi Pomante, Vittoriano Muttillo, Marco Santic and Emilio Incerto. HEPSYCODE-MC: ELECTRONIC SYSTEM-LEVEL METHODOLOGY FOR HW/SW CO-DESIGN OF MIXED-CRITICALITY EMBEDDED SYSTEMS. *Conference on Design and Test Automation in Europe (DATE) – University Booth*, 2019.
- [IC.141] Carlo Centofanti, Luigi Pomante, Marco Santic and Walter Tiberti. LABSMILING: A SAAS FRAMEWORK, COMPOSED OF A NUMBER OF REMOTELY ACCESSIBLE TESTBEDS AND RELATED SW TOOLS, FOR ANALYSIS, DESIGN AND MANAGEMENT OF LOW DATA-RATE WIRELESS PERSONAL AREA NETWORKS BASED ON IEEE 802.15.4. *Conference on Design and Test Automation in Europe (DATE) – University Booth*, 2019.
- [IC.142] Gabriella D'Andrea, Tania Di Mascio, Luigi Pomante and Giacomo Valente. MECO: AN AUTONOMIC MANAGER FOR EDGE-COMPUTING PLATFORMS. *Conference on Design and Test Automation in Europe (DATE) – University Booth*, 2019.
- [IC.143] Walter Tiberti and Luigi Pomante. TINYWIDS: A INTRUSION DETECTION SYSTEM FOR WIRELESS SENSOR NETWORKS. *Conference on Design and Test Automation in Europe (DATE) – University Booth*, 2019.
- [IC.144] Giacomo Valente, Tiziana Fanni, Carlo Sau, Claudio Rubattu, Francesca Palumbo and Luigi Pomante. JOINTER: Joining Flexible Monitors with Heterogeneous Architectures. *Conference on Design and Test Automation in Europe (DATE) – University Booth*, 2020.
- [IC.145] Vittoriano Muttillo, Luigi Pomante, Giacomo Valente, Hector Posadas, Javier Merino, and Eugenio Villar. RUMORE: A Framework For Runtime Monitoring And Trace Analysis For Component-Based Embedded Systems Design Flow. *Conference on Design and Test Automation in Europe (DATE) – University Booth*, 2020.
- [IC.146] Giacomo Valente, Tiziana Fanni, Carlo Sau, Claudio Rubattu, Francesca Palumbo and Luigi Pomante. JOINTER: Joining Flexible Monitors with Heterogeneous Architectures. *Conference on Design and Test Automation in Europe (DATE) – University Booth*, 2021.

AWARDS

- [AW.1] The *Generic Class Library* developed within the ODETTE project [EP.17] has been included by the OSCI (*Open SystemC Initiative*) in the public area of the *Synthesis Working Group* (SWG-2003).

- [AW.2] The project idea "La Casa Attiva", to which I contributed as a member of the proposing group, was the winner of the *Business Plan Competition* of the University of L'Aquila (IIth edition - 2012).
- [AW.3] The Artemis PRESTO project [EP.15], of which I was technical-scientific manager for the DEWS and coordinator of the national cluster, has been awarded the *Artemis Recognition Certificate 2015*.
- [AW.4] The article [IC.73] was awarded the title of *Best Paper Award*.
- [AW.5] The poster [IC.111] was awarded the title of *Best Poster Award*.
- [AW.6] The paper [IC.84] was awarded the *Outstanding Paper Award*.
- [AW.7] The article [IC.104] was awarded the title of *Best Paper Award*.
- [AW.8] A research collaboration proposal with Prof. E.A. Lee at UC Berkeley has been selected for funding in the context of the European project DISCOVER-US (1st call - 2024).

Qualified as an engineer (1998)

Politecnico di Milano

Winner of *Business Plan Competition* (2012)

University of L'Aquila

In collaboration with "La Casa Attiva - Società di Ingegneria" (<http://www.lacasaattiva.it/>) he was the winner of the "Business Plan Competition (IIth edition - 2012)", organized by the University of L'Aquila, with the support of the Abruzzo Region, and aimed at spreading the culture of innovation thanks to high-tech business ideas.

National Scientific Qualification – Sector IINF/05-a (ex ING-INF/05) – Associate Professor (obtained on 17/12/2023)