

Pomante Luigi

Curriculum Vitae (last update May 2022)

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GENERAL INFORMATION

Date of birth	October 1 st , 1972
Place of birth	Giulianova (Italy)
Nationality	Italian
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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*

▪ *Architecture and Design of 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 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

2012-2021

“Consiglio di Area Didattica” of DISIM - Member

Università degli Studi dell’Aquila

SCIENTIFIC ACTIVITIES

SCIENTIFIC RESEARCH

(Co) Author of 174 scientific publications (28 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][BK.11][BK.10][JR.11][JR.26][JR.22][IC.80][IC.30][IC.32]

SCIENTIFIC ASSIGNMENTS

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” (Università Politecnica di Valencia)

since 2016

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

Responsible of the node at Università degli Studi dell’Aquila

HiPEAC Member and scientific responsible of the group related to Università degli Studi dell’Aquila (*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

Università degli Studi dell’Aquila

EDITORIAL BOARD ACTIVITIES

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

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 2019-2020-2021-2022)*
- *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 (EEEWSN 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 3.5 M €), 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

ECSEL-JU RIA-2018 – COMP4DRONES (running)

Framework of key enabling technologies for safe and autonomous drones' applications

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

OPTIMised video content delivery chains leveraging data analysis over joint multi-access edge computing and 5G radio network infrasTructures

ECSEL-JU RIA-2019 - FRACTAL (running)

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 (running)

Intelligent Reliability 4.0

ECSEL-JU RIA-2020 – AIDOART (running)

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

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

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 250 K€) and he has been also the person in charge of scientific, technical and some administrative issues for such contracts.

PHD STUDENTS SUPERVISOR

since 1999

(Co)Supervisor for several PhD Thesis

Università degli Studi dell'Aquila

RESEARCH PERIOD IN FOREIGN INSTITUTIONS

2016-2017

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

REVIEWER

since 2020

Reviewer and contributor for the Electronic Components and Systems - Strategic Research & Innovation Agenda (ECS-SRIA 2021), AENEAS/ARTEMIS-IA/EPOSS Industry Associations.

since 1999

Reviewer for several international journals and conferences.

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. Brandolese, 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] Brandolese, 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. Muttillio, 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 Muttillio, Mirco Muttillio, 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 Muttillio, 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. Muttillio, 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 Muttillio, Marco Santic, Paolo Serri, SystemC-based electronic system-level design space exploration environment for dedicated heterogeneous multi-processor systems, *Microprocessors and Microsystems*, Volume 72, 2020, 102898, ISSN 0141-9331, <https://doi.org/10.1016/j.micpro.2019.102898>.
- [JR.19] V. Muttillio, 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 Liotou, Dimitris Tsolkas, Giorgos Kalpaktsoglou, 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. Muttillio, 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 5 July 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.

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.
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