

Pomante Luigi

Curriculum Vitae (last update August 2017)

GENERAL INFORMATION

First Name	Luigi
Surname	Pomante
Date of birth	1 st October, 1972
Place of birth	Giulianova (Italy)
Nationality	Italian
Contacts	luigi.pomante@univaq.it, +393207745347
Website	www.pomante.net

MAIN ACTIVITIES

Since November 2008

Assistant Professor

- *University of L'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)*

2002 (AY 2000/2001)

Research doctorate degree (i.e. Italian Ph.D.) in Computer Science Engineering

- *Politecnico di Milano*

Since 1999

R&D Consultant

- 2006-2008: *Center of Excellence DEWS*
- 2005-2006: *Department of Electrical and Information Engineering*
 - o *University of L'Aquila – Faculty of Engineering*
- 1999-2005: *Center of Excellence CEFRIEL*
 - o *Politecnico di Milano (ITALY)*

Temporary Professor, Lecturer

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

Advisor and Tutor for Master and PhD Thesis

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

1999 (AY 1998/1999)

2nd level University Master degree in Information Technology

- *CEFRIEL*

1998 (AY 1996/1997)

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

- *Politecnico di Milano*

EDUCATION

2002 (AY 2000/2001)

Research doctorate degree (Italian PhD) in Computer Science Engineering

- *Politecnico di Milano*

Thesis: “*System-Level Co-Design of Heterogeneous Multiprocessor Embedded Systems*”
[TH.3]

1999 (AY 1998/1999)

2nd level University Master degree in Information Technology

(100/100 L)

- *CEFRIEL*

ICT Center of Excellence For Research, Innovation, Education and industrial Labs partnership, Via Fucini 2, 20133, Milano

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

[TH.2]

1998 (AY 1996/1997)

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

(83/100)

- *Politecnico di Milano - DEI*

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*”)

[TH.1]

1991 (AY 1990/1991)

High school degree “Industrial Computer Science Technician”

(58/60)

- *I.T.I.S. “G. e M. Montani”, Fermo (AP), ITALY*

TEACHING ACTIVITIES

ACADEMIC

Since 2008

University of L'Aquila
“Embedded Systems” course

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

1999-2004

Politecnico di Milano
“Computer Science” course (assistant)
“Computer Architectures” course (assistant)
“Operating Systems” course (assistant)
“Industrial Computer Science” course (assistant)

1998-1999

Politecnico di Milano
“Computer Science” course (tutor)

CEFRIEL CENTRE 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++

MAIN RESEARCH AREAS

Electronic Design Automation - Electronic System-Level Design

In particular:

HW/SW Co-Design of Heterogeneous Parallel Dedicated/Embedded Systems (System-Level Synthesis, Design Space Exploration, HW/SW Co-Simulation) targeting several NF requirements: Real-Time, Error Detection, Mixed-Criticality, Monitorability.

Networked Embedded Systems

In particular:

HW/SW Technologies for (Networked) Embedded Systems

Wireless Sensor Networks

(Middleware, Localization/Tracking, Security, EDA tools for WSN)

Mixed-criticality Systems

In particular:

Hypervisor technologies for mixed-criticality multi-core and NOC platforms

RESEARCH PROJECTS

From 2009 he has personally contributed to the proposals writing (and to the management of related issues on behalf of University of L'Aquila - DEWS) for more than 30 European and national research proposals. For the following ones, that have been funded (for a total funding of near 2 M €), he has been the person in charge of scientific, technical and several administrative issues:

European Research Projects

ERC-2009-StG 240555 VISION (closed)

Video-oriented UWB-based Intelligent Ubiquitous Sensing

For this project he has been WP leader

ARTEMIS-JU ASP 2010-269362 PRESTO (closed)

ImProvements of industrial Real Time Embedded SysTems develOpment process

For this project he has been the coordinator of the national cluster and WP leader

ARTEMIS-JU ASP 2011-295371 CRAFTERS (closed)

ConstRaint and Application-driven Framework for Tailoring Embedded RT Systems

For this project he has been also the coordinator of the national cluster

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 (running)

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

ECSEL-JU RIA-2015 – SAFECOP (running)

Safe Cooperating Cyber-Physical Systems using Wireless Communication

For this project he is the coordinator of the national cluster and WP leader

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

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

For this project he is the coordinator of the national cluster

ECSEL-JU RIA-2016 – AQUAS (running)

Aggregated Quality Assurance for Systems

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

RESEARCH PROJECTS

From 1999 he has 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

From 2002 he has collaborated to (and sometimes also managed) more than 10 national industrial R&D projects with CEFRIEL and DEWS. In particular, on behalf of DEWS, he has personally arranged 4 third party contracts with Italian industrial subjects (for a funding of near 150 K€) and he has been also the person in charge of scientific, technical and several administrative issues for such contracts.

ACCEPTED/INVITED TALK

2016

1st Italian Workshop on Embedded Systems (IWES 2016)

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

2015

HIPEAC Computer Systems Week 2015 – Thematic Session Security Intelligence

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

2014

Autumn School “Engineering Resilient Cyber Physical Systems” abbinata al workshop SERENE 2014 (Software Engineering for Resilient Systems)

“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”

2010

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

“System-Level Design Space Exploration for HMPSoC”

INTERNATIONAL CONFERENCES SESSION CHAIR AND TPC MEMBER

2017

Special Session Chair

- *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).*

From 2008

TPC Member

- *Int. Conf. on Computer Engineering and Information System (CEIS2016)*
- *Int. Wireless Communications & Mobile Computing Conference (IWCMC 2013-2016)*
- *International Conference on Digital Telecommunications (ICDT 2012-2016)*
- *International Conference on Advanced Research in Material Sciences, Manufacturing, Mechanical and Mechatronic Engineering Technology (AR4MET 2015-2016)*
- *International Conference on Networking and Services (ICNS 2015-2016)*
- *International Conference on Integrated and Sustainable Transportation (INTGAST'2015)*
- *International Conference on Computing in Mechanical Engineering (ICCM 2015)*
- *International Summit on Bio-Metrics and Smart Government (IBMSG 2015)*
- *International Conference on Connected Vehicles & Expo (ICCV 2014-2015)*
- *Intern. Conference Mathematics and Computers in Sciences and Industry (MCSI 2014-2015)*
- *Workshop on Mobile Development Lifecycle (MobileDeLi 2013-2015)*
- *Intern. Conf. on Consumer Electronics, Communications and Networks (CECNet 2014-2016)*
- *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)*
- *Int. Workshop on the Engineering of Mobile-Enabled Systems (MOBS 2013- 2014)*
- *IEEE Consumer Communications and Networking Conference (CCNC 2011-2014)*
- *International Conference on Connected Vehicles & Expo (ICCV 2013)*
- *Fed. Conference on Computer Science and Information Systems (FedCIS 2012-2013)*
- *Int. Workshop on Software Engineering for Sensor Network Applications (SESENA 2012)*
- *International Conference on Signals, Circuits & Systems (SCS 2008)*

OTHER RELEVANT ACTIVITIES

Since 2016

European Research Project TULIPP: Advisory Board Member

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

HiPEAC Member

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

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

2016

Independent expert inserted in the evaluators list for *Eurostars 5th Cut-Off*.

Since 2015

DEWS delegate in the context of the European association ARTEMIS-IA

ARTEMIS (Advanced Research & Technology for Embedded Intelligence and Systems) Industry Association

2015

Independent expert inserted in the EC evaluators list for *and “Customised and low-power computing” call (Horizon 2020)*.

2014

Independent expert inserted in the EC evaluators list for *“ICT Components and Systems” call (Horizon 2020)*.

Since 2009

Team Leader: responsible of National and International technical and 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

Since 1999

Reviewer for several international journals and conferences

Advisor and Tutor for Master and PhD Thesis

- *Politecnico di Milano, CEFRIEL, University of L’Aquila, DEWS*

PUBLICATIONS

INTERNATIONAL JOURNALS

- [JR.1] with D. Sciuto, F. Salice, W. Fornaciari. "Hw/Sw Cosimulation for Fast Design Space Exploration of Multiprocessor Embedded Systems", Canadian Journal of Electrical and Computer Engineering (CJECE), vol. 26, n. 3/4, 2001, pp.135-140.
- [JR.2] with C. Bolchini, F. Salice, D. Sciuto. "Reliability Properties Assessment at System Level: a Co Design Framework", Journal of Electronic Testing - Theory and Application (JETTA), Kluwer Academic Publishers, The Netherlands, Vol. 18, no. 3, p. 351-356, 2002 (ISSN 0923-8174)
- [JR.3] with C. Bolchini, F. Salice, D. Sciuto. "The Design of Reliable Devices for Mission Critical Applications", IEEE Trans. on Instrumentation and Measurement (TIM), Vol. 52, no. 6, pp. 1703-1712, 2003 ISSN:0018-9456/03.
- [JR.4] with D. Sciuto, F. Salice, W. Fornaciari, C. Brandolese. "Affinity-Driven System Design Exploration for Heterogeneous Multiprocessor SoC", IEEE Transactions on Computers, vol. 55, no. 5, 2006.
- [JR.5] with C. Brandolese, W. Fornaciari, F. Salice, R. Zafalon, "Energy Aware Scheduling of Processes at OS Level", WSEAS Transactions on CIRCUITS and SYSTEMS, Issue 12, Vol. 5, 2006, ISSN 1109-2734.
- [JR.6] with P. Di Felice, "A System-Level HW/SW Co-Design Methodology for Ad-Hoc Implementation of DBMS Operators", WSEAS TRANSACTIONS on COMPUTER RESEARCH, Issue 2, Volume 2, 2007 ISSN 1991-8755.
- [JR.7] with P. Di Felice, M. Ianni. "Design and evaluation of a spatial extension of TinyDB for wireless sensor networks", International Journal of Computers and Their Applications Manuscript, 2010.
- [JR.8] "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), print ISSN: 2278-652X, online ISSN: 2278-6538.
- [JR.9] "HW/SW Co-Design of Dedicated Heterogeneous Parallel Systems: an Extended Design Space Exploration Approach". IET Computers & Digital Techniques, Institution of Engineering and Technology, 2013, Vol. 7, Iss. 6, pp. 246-254.
- [JR.10] with P. Serri. "SystemC-based HW/SW Co-Design of Heterogeneous Multiprocessor Dedicated Systems". International Journal of Information Systems, Journal ISSN Online: 2356-5896, Journal ISSN Print: 2382-2597, Vol. 1, 2014.
- [JR.11] with F. Santucci, S. Marchesani, M. Pugliese. "A Middleware Approach for IEEE 802.15.4 Wireless Sensor Networks Security". EAI Endorsed Transactions on Ubiquitous Environments, 2015.
- [JR.12] with V. Muttillio, G. Valente, F. Federici, M. Faccio, C. Tieri, S. Ferri. "A design methodology for soft-core platforms on FPGA with SMP Linux, OpenMP support, and distributed hardware profiling system". EURASIP Journal on Embedded Systems, 2016.

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.

BOOK CHAPTERS

- [BK.2] With 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] With R. Alesii, G. Gargano, F. Graziosi, C. Rinaldi. "WSN-based Audio Surveillance Systems", SPRINGER VERLAG Book - Springer Verlag Lecture Notes Series, 2009.

- [BK.4] With 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] With 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] With 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] With 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] With 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] With 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] With 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] With 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 CONFERENCES

- [IC.1] with 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)*.
- [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)*.
- [IC.3] with D. Sciuto, F. Salice, W. Fornaciari, C. Brandolese. “A Multi-Level Strategy for Software Power Estimation”, *Proceedings of IEEE International Symposium on System Synthesis (IEEE ISSS 2000)*.
- [IC.4] with 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)*.
- [IC.5] with 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)*.
- [IC.6] with 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)*.
- [IC.7] with 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)*.

- [IC.8] with 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)*.
- [IC.9] with W. Fornaciari, M. Bombana. "SystemC-Plus Complex Data Type for Telecom Applications", *Proceedings of Forum on Specification and Design Languages (FDL 2002)*.
- [IC.10] with M. Bombana. "SystemC-Based Library Approach for Data-intensive Applications", *Conference on Design of Circuits and Integrated Systems (DCIS 2002)*.
- [IC.11] with W. Fornaciari, F. Salice, L. Del Vecchio. "Partitioning of Embedded Applications onto Heterogeneous Multiprocessor Architectures", *ACM Symposium on Applied Computing (ACM SAC 2003)*.
- [IC.12] with 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)*.
- [IC.13] with 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)*.
- [IC.14] with R. Farina, L. Pizzamiglio, "Experimenting Object-Oriented System-Level Design in the ATM domain", *Forum on Specification and Design Languages (FDL 2004)*.
- [IC.15] "Exploiting Polymorphism in the HW Design: a Case Study in the ATM Domain", *CODES+ISSS 2004*.
- [IC.16] with 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)*.
- [IC.17] with F. Salice, C. Bolchini, D. Sciuto, "Reliable System Specification for Self-Checking Data-Paths", *Design, Automation and Test in Europe – Conference & Exhibition (DATE 2005)*.
- [IC.18] with C. Brandolese, D. Scarpazza, P. Di Felice, "Parsing SystemC: an open-source, easy to extend parser", *IADIS Applied Computing Conference, 2006*.
- [IC.19] with P. Di Felice, "Integration of Spatial Data Types and Operators into Relational DBMSs: A Survey", *IADIS Applied Computing Conference, 2006*.
- [IC.20] with C. Brandolese, 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)*.
- [IC.21] with P. Di Felice, "Ad-hoc HW/SW Architectures for DBMSs: a Co-Design Approach", *WSEAS International Conferences 2007 (AIKED, SEPADS, EHAC and ISPRA), 2007*.
- [IC.22] with 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)*.
- [IC.23] with P. Di Felice, M. Ianni. "A spatial extension of TinyDB for wireless sensor networks", *IEEE Symposium on Computers and Communications (ISCC'08)*.
- [IC.24] with 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)*.
- [IC.25] with F. Graziosi, C. Rinaldi. "Exploiting WSN for audio surveillance applications: the VoWSN approach", *11th IEEE Euromicro Conference on Digital System Design (DSD'08)*.
- [IC.26] "A System-Level Co-Design Methodology for DBMS-Specific Architectures", *11th IEEE Euromicro Conference on Digital System Design (DSD'08, WIP-SS)*.
- [IC.27] with 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)*.
- [IC.28] with 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*.
- [IC.29] with 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, 2009*.

- [IC.30] with A. Spinosi, L. Lavagno, S. Olivieri, M. Mozumdar. "An extended framework for the development of WSN applications". *Workshop on Mobile Computing and Networking Technologies*, 2010.
- [IC.31] with M. Pugliese, F. Santucci. Topology Optimization and Network Deployment Algorithm in WSNs for Mobile Agent-based Applications. *4th European Modelling Symposium (EMS2010)*, 2010.
- [IC.32] with A. Spinosi, L. Lavagno, S. Olivieri, M. Mozumdar. "An extended framework for WSN applications". *8th IEEE Consumer Communications and Networking Conference (WIP-SS)*, 2011.
- [IC.33] with D. Cassioli, A. Di Marco, V. Cortellessa. "A Successful VISION: Video-oriented UWB based Intelligent Ubiquitous Sensing". *8th IEEE Consumer Communications and Networking Conference (WIP-SS)*, 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, September 2011.
- [IC.35] with C. Rinaldi, D. Ciuca. "A speech indicator for the VoWSN approach". *5th International Symposium on Communications, Control and Signal Processing*, Rome, May 2012.
- [IC.36] with 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*, June 2012, Zurigo.
- [IC.37] with S. Marchesani, P. Serri. "Design Space Exploration for Heterogeneous Multi Multi-Core Processor Dedicated Systems". *3th Workshop on Design, Modeling and Evaluation of Cyber Physical Systems (CyPhy'13)*, Philadelphia, April 2013.
- [IC.38] with M. Pugliese, S. Marchesani, F. Santucci. "Definition and Development of a Topology-based Cryptographic Scheme for Wireless Sensor Networks". *S-CUBE 2013*, June 2013.
- [IC.39] with 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*, June 2013.
- [IC.40] with 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*, June 2013.
- [IC.41] with 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, July 2013.
- [IC.42] with S. Marchesani, S. Pace, A. Di Marco, L. Berardinelli. "Modeling and Timing Simulation of Agilla Agents for WSN applications in Executable UML". *10th European Workshop on Performance Engineering (EPEW 2013)*, Venice, Italy, 16-17 September, 2013.
- [IC.43] with 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*, October 2013.
- [IC.44] with 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*, Nov. 2013.
- [IC.45] with 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*, 2014.
- [IC.46] with 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*, 2014.
- [IC.47] with 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)*.

- [IC.48] with C. Rinaldi, F. Battisti, M. Carli. "Design of a non-intrusive augmented trumpet". *International Conference on Arts and Technology (ArtsIT 2014)*, Istanbul, Turchia.
- [IC.49] with S. Candia, E. Incerto. "A Model Driven Approach for the Development of an IDE for Spacecraft on Board Software". *IEEE Aerospace Conference*, Big Sky, Montana (USA), 2015.
- [IC.50] with 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)*, 2015.
- [IC.51] with 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.
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