

PERSONAL INFORMATION

Marco Lucio Scarpa


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 [ORCID 0000-0002-9560-7504](https://orcid.org/0000-0002-9560-7504)

Gender Male | Date of birth 4th March 1969 | Nationality Italian

EDUCATION AND TRAINING

October 1994 - February 1999

PhD course in Computer Science

Title of certification awarded

PhD in Computer Science

Dissertation title: *Non-Markovian Stochastic Petri Nets with Concurrent Generally Distributed Transitions*

Principal subjects/Occupational skills covered

Teaching skills and research activity about Performance and reliability evaluation of systems, with particular interest in formal modeling techniques and in the combined performance and reliability measures of distributed systems; Petri nets with non exponentially distributed firing time events and their numerical solution algorithms.

Name and type of organization providing education and training

University of Turin, Department of Computer Science, Italy

October 1994 - February 1999

Professional training in Engineering

Name and type of organization providing education and training

University of Catania, Engineering Faculty, Italy

October 1987 - July 1994

Master degree in Computer Engineering

110/110 cum laude

Title of certification awarded

Master's degree in Computer Engineering

Dissertation title: *Markov regenerative processes for generalizing Petri nets*

Principal subjects/Occupational skills covered

Operating systems, programming and programming languages, artificial intelligence, computer networks, system theory, automatic control process, data-bases, operational research, information theory

Name and type of organization providing education and training

University of Catania, Engineering Faculty, Italy

October 1982 - August 1987

High school

56/60

Title of certification awarded

High school diploma

Principal subjects/Occupational skills covered

Maths, physics, natural sciences, chemistry, Italian, Latin, technical drawing, arts

Name and type of organization providing education and training

Liceo Scientifica Statale "Galileo Galilei", Catania, Italy

WORK EXPERIENCE

January 2021 - Present

Full professor in Computer Engineering

Employer

University of Messina

Piazza Pugliatti, 1

98122 Messina - Italy

Type of business or sector

Teaching and research in computer engineering

- October 2006 - December 2020** **Associate professor in Computer Engineering**
Employer University of Messina
Piazza Pugliatti, 1
98122 Messina - Italy
Type of business or sector Teaching and research in computer engineering
- 10/10/2008 - 06/03/2009** **Technical consultant**
Employer "T.A.R. Sicilia" court
Court in Catania - Italy
Main activities and responsibilities Technical consulting on distributed computer architecture acquiring and storing medical data
Process n.1458/2006 R.G., Andra s.p.a. versus A.U.S.L. n.8 of Siracuse
Recommended by the Engineering Faculty at the University of Messina
Type of business or sector Computer engineering
- October 2003 - September 2006** **Research fellow**
Employer Department of Maths - University of Messina
Viale F. Stagno d'Alcontres, 31
98166 Messina - Italy
Main activities and responsibilities Research focused on Techniques for evaluating the performance and reliability of operating systems
- 06/12/2004 - 31/08/2005** **Independent research consultant**
Employer SeaSoft s.p.a.
XVI Strada, C.da Torre Allegra, Zona Industriale
Catania - Italy
Main activities and responsibilities Software development within the research project *ISID: increase of security in company information systems*
Granted by MURST - Italian Ministry of Education and University - prot. 10525, 10/09/2002
Type of business or sector Software development
- 2/05/2002 - 22/12/2002** **Research assistant**
Employer "Computer center" of University of Messina
Piazza Pugliatti, 1
98122 - Messina
Italy
Main activities and responsibilities Coordination of teaching and project activities within the project *Sottoprogetto 3 "Formazione di Specialisti di Rete" del piano GARR-B denominato "Sviluppo della rete nazionale della ricerca"*
Type of business or sector Computer networks
- March 2000 - April 2003** **Postdoctoral researcher**
Employer *The Science and Technology Park of Sicily (PSTS)*
Via A. Borrelli, 10
90139 - Palermo
Italy
Main activities and responsibilities The research was focused on
– ISO TC184SC4 "STEP" standard
– how to automatize data managing during the design phase in electromechanical and metalworking companies
– interfacing Data Bases compliant with the ISO TC184SC4 standard
within the Innovation Project n. 3.6 - <Quality> - Prat. IMI n. 63039 sub n.3.6.2 "Subsystem <CAD/CAM for for quality in electromechanical and metalworking companies>"
Type of business or sector Computer engineering applied to industries

October 2000 - September 2001 Postdoctoral researcher

Employer *Consorzio Ennese Universitario*
 Faculty of Engineering
 Cittadella Universitaria
 94100 - Enna
 Italy

Main activities and responsibilities – Coordination of teaching and research project activities for the bachelor degree in *Engineering for the environment and the territory*
 – Teaching *Basics on computer science*

Type of business or sector Research and teaching in computer engineering

February 2000 Adjunct Professor

Employer *University of Catania - Italy*
 P.zza Università, 2 95131 - Catania Italy

Main activities and responsibilities Teaching computer sciences at the IT training course for technical and administrative staff of the University of Catania - A 30 hours long course

Type of business or sector Teaching in computer engineering

October 1999 - September 2000 Postdoctoral researcher

Employer *Consorzio Ennese Universitario*
 Faculty of Engineering
 Cittadella Universitaria
 94100 - Enna
 Italy

Main activities and responsibilities – Coordination of teaching and research project activities for the bachelor degree in *Engineering for the environment and the territory*
 – Teaching *Basics on computer science*

Type of business or sector Research and teaching in computer engineering

March 1999 - September 1999 Postdoctoral researcher

Employer *The Science and Technology Park of Sicily (PSTS)*
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 90139 - Palermo
 Italy

Main activities and responsibilities The research was focused on
 – ISO TC184SC4 “STEP” standard
 – how to automatize data managing during the design phase in electromechanical and metalworking companies
 – interfacing Data Bases compliant with the ISO TC184SC4 standard within the Innovation Project n. 3.6 - <Quality> - Prat. IMI n. 63039 sub n.3.6.2 “Subsystem <CAD/CAM for for quality in electromechanical and metalworking companies>”

Type of business or sector Computer engineering applied to industries

MEMBERSHIPS
January 2017 - Present Institute of Electrical and Electronics Engineers (IEEE)

Member of IEEE Computer Society

Membership number 94227397

January 2017 - Present Association for Computing Machinery (ACM)

Member of SIGMETRICS - Special Interest Group on Measurement and Evaluation

Membership number 6342294

SCIENTIFIC ACTIVITY

Research interests

Stochastic Petri nets with generally distributed firing time transitions, with the possibility of modelling non-Markovian systems; algorithms suitable for solving Petri net models releasing any constraints on timing and the structure of the model.

Analysis of distributed systems defining models useful for assessing reliability, performance and combined measures (performability measures). Software engineering techniques called Software Performance Evaluation (*SPE*) to derive software performance indices from a project defined in UML (*Unified Modeling Language*). Application of *SPE* techniques to distributed systems taking WEB based applications as reference.

Technique for generation and symbolic representation of the reachability graph of non-Markovian models. With this technique it is possible to efficiently model and analyze complex systems characterized by high dimensions of the reachability graph, the presence of memory and phenomena of dynamic variation of the properties of a system.

Wireless sensor networks routing algorithm based on *swarm intelligence* and its modelling based on *Markovian Agents*, with the aim to show how the modelling paradigm is robust with respect to possible node failures and highly adaptable to changes in the surrounding environment. The activity on Markovian agents has continued, leading recently to the creation of a C library for the definition and analysis of models based on this paradigm, and then used to define more flexible models than those present in the literature for the representation of CSMA/CD protocols.

User data confidentiality in Cloud storage providing to the end user the ability to use a multi-cloud environment.

Study and implementation of new techniques by exploiting digital signal processing and machine learning with the aim to identify a song (cover song) within a databases exceeding one million specimens. A method based on the power spectral density has been developed to generate the information (fingerprint) capable of characterizing each small segment of a piece of music.

Research and cooperation projects

2019 - 2020	Basic University Research Activities (FFABR Unime)
Main responsibilities	Project leader
2007 - 2010	Reliability and quality of service in monitoring systems based on Wireless Sensor Networks for critical applications (PRIN 2007)
Main responsibilities	Research unit leader
2013 - 2015	SIGMA Training - "Training of highly qualified personnel in the design and management of complex monitoring infrastructures with distributed computing support"
Main responsibilities	Project PON 2007-2013; Responsible for carrying out the project activities
2017 - Present	Cooperation project between the University of Messina and the Politechnic University of Hong Kong for the activities related to the double degree in Computer Science based on the master's course in Engineering and Computer Science at the University of Messina
Main responsibilities	Project leader at University of Messina
2016 - 2017	Joint research laboratory between <i>International Institute of Information Technology Naya Raipur (IIIT Naya Raipur)</i> and the <i>University of Messina</i>
Main activity	Computer security applied to Cloud Computing, with particular reference to Secure Storage
Main responsibilities	Principal Investigator
2015	Research agreement between the <i>Mediterranean High Technology Consortium (CMAT)</i> and the <i>Department of Civil, Informatics, Building, Environmental and Applied Mathematics (DI-CIEAMA)</i> , University of Messina

Main activity	Fundamental research about Hyperlan wireless networks
Main responsibilities	Principal Investigator
2008 - 2009	Ordinary project at University of Messina “ <i>Tools for automatic creation of virtual Worker Nodes in Grid environments</i> ”, ID num. ORME09WK97
Main responsibilities	Principal Investigator
2006 - 2007	Ordinary project at University of Messina “ <i>Quality guaranteed wireless sensor networks for industrial applications</i> ”, ID num. ORME07MAR4
Main responsibilities	Principal Investigator
2006 - 2007	Project for young researchers, “ <i>Techniques for an efficient solution of models for evaluating the performance and reliability of real-time systems</i> ”, ID num. GRME030584
Main responsibilities	Principal Investigator
2018 - 2019	PON Governance 2014-2020 project, “TOO(L)SMART: tools for the informed and inclusive management of urban policies for Smart Cities”
Main responsibilities	Researcher
2011 - 2015	POR FESR project, “SIMONE - Integrated system for MONITORING of electricity production”
Main responsibilities	Researcher
2010 - 2013	European project FP7, “Virtualized Storage Services Foundation for the Future Internet - VISION CLOUD”, Grant Agreement n. 257019
Main responsibilities	Researcher
2005 - 2007	POR Sicilia 2000-2006 project, “TriGrid VL: Trinacria Grid Virtual Laborator”
Main responsibilities	Researcher
2005 - 2008	PON Research 2000-2006 project, “PI2S2: Project for the Implementation and Development of an e-Infrastructure in Sicily based on the Grid paradigm”
Main responsibilities	WP leader, researcher
2008 - 2011	European project FP7-ICT 2007-2013, “RESERVOIR - Resources and Services Virtualization without Barriers”, Grant Agreement n. 257019
Main responsibilities	Researcher
2002 - 2005	FIRB 2002 project, “Performance Evaluation of Complex Systems: Techniques, Methodologies and Tools”
Main responsibilities	Researcher
2000 - 2002	MURST co-funded project, “Reactive and reliable systems for industrial applications”
Main responsibilities	Researcher
1998 - 1999	Italy-Hungary cooperation project for researchers mobility
Main responsibilities	Researcher, as PhD student
1998 - 1999	Human capital and mobility in collaboration with <i>Laboratoire Masi, Univ. Paris 6</i> , “Modelling and analysis of time constrained and hierarchical system”
Main responsibilities	Researcher, as PhD student
Main responsibilities	CNR coordinated project, “Timed process algebras for evaluating performance of concurrent and distributed systems”
Main responsibilities	Researcher, as PhD student

Main responsibilities	1998 60% co-funded MURST project, "Fundamentals, methods and tools of computer science" Researcher, as PhD student
Main responsibilities	1997 60% co-funded MURST project, "Modeling and evaluation of distributed computing systems performance" Researcher, as PhD student
Main responsibilities	1994 - 1996 40% co-funded MURST project, "V&V methodologies and tools for functionality and reliability of processes and products in software engineering" Researcher, as PhD student

Awards

- Marco Lucio Scarpa received the following awards for the results achieved in scientific activity:
- **Best paper award** for "A GSPN Model To Analyze Performance Parameters In Glite Grids" in *17th IEEE International Workshops on Enabling Technologies: Infrastructures for Collaborative Enterprises (WETICE 2008)* IEEE CS press pp.198-203, Rome, 23-25 June 2008 [C20].
 - **Best paper award** for "Optimizing routine maintenance team routes" in *17th International Conference on Enterprise Information Systems, Proceedings (ICEIS)*, Volume: 1 , pages 535-546 , SciTePress , Barcelona, Spain, 27-30 April 2015 [C49].
 - The paper " KAOS: A Kinetic Theory Tool for Modeling Complex Social Systems", in *3rd International Conference on Industrial Engineering and Applications (ICIEA 2016)* [C55] has been awarded as **Excellent paper**.

Engineering and Development of Software Applications

	WebSPN (http://webspn.unime.it)
Features	Software tool for the analysis of non-Markovian stochastic Petri nets, which releases some of the restrictions present in the current analytical modelling packages Equipped with a complete solution method and graphic interface for defining the model
Main activities and responsibilities	Project team leader, designer, developer
	ArgoPerformance (http://argoperformance.tigris.org)
Features	Plugin of the ArgoUML software tool for the development of software projects using the UML language It allows to annotate UML objects and derive software performance measures, directly from the graphical interface of ArgoUML, generating and solving an appropriate Petri net model
Main activities and responsibilities	Project team leader, designer
	Grid Secure Storage - GS3
Features	Extension of the gLite middleware for the management of a GRID infrastructure It provides commands for the management of the files stored in the gLite storage, transparently to the user and intelligible to the owner only
Main activities and responsibilities	Project team leader, co-designer
	KAOS (https://github.com/MDSLlab/KAOS)
Features	software tool for modeling complex systems through kinetic theory for active particles
Main activities and responsibilities	Co-designer
	ARIANNA
Features	Android devices application for accessing a multi-Cloud infrastructure based on the ESSB system ARIANNA allows the upload and download of files from the device to the Cloud ensuring the confidentiality of the file content to the owner only

- Main activities and responsibilities Co-designer
- [MAGNET](http://perf.unime.it/magnet) (<http://perf.unime.it/magnet>)
- Features C library implementing all the primitives for the design and solution of a Markovian agents model
- The solution algorithm implemented in MAGNET supports multithreading by exploiting the intrinsic modularity of Markovian agents models
- Main activities and responsibilities Project team leader, co-designer, developer

Editorial activities

- International Journal of Distributed Sensor Networks
- Publisher Taylor & Francis, Inc.
- 2-Year Impact Factor 1.614; CiteScore 1.630; SCImago Journal Rank (SJR) 0.272
- Main responsibilities Editor
- Performance Evaluation - Special Issue *ValueTools 2016*
- Publisher Elsevier
- 5-Year Impact Factor 1.782; CiteScore 1.92; SCImago Journal Rank (SJR) 0.517
- Main responsibilities Editor
- EAI Endorsed Transactions on Cloud System (ToCS)
- Publisher European Alliance for Innovation
- Main responsibilities Area Editor
- Applied Computing and Informatics
- Publisher Elsevier
- Main responsibilities Advisory Board

International conference committees

- The 10th International Conference on Performance Evaluation Methodologies and Tools - VAL-UETOOLS 2016
- Taormina, Italy, 25-28 July 2016
- Main responsibilities Technical Program co-Chair
- The 16th International Conference on Ad Hoc Networks and Wireless – AdHoc-Now 2017
- Messina, Italia, 20-22 September 2017
- Main responsibilities Submissions & Registrations Chair

Technical Program Committee member of:

- *11th EAI International Conference on Performance Evaluation Methodologies and Tools - VALUETOOLS 2017*, Venice, Italy, 05-07 December 2017
- *EPEW 2007 - 4th European Performance Engineering Workshop*, Berlino, Germania, 27-28 September, 2007
- *EPEW 2008 - 5th European Performance Engineering Workshop*, Palma di Maiorca, Spagna, 24-25 September, 2008
- *EPEW 2009 - 6th European Performance Engineering Workshop*, Londra, UK, 9-10 July, 2009
- *EPEW 2010 - 7th European Performance Engineering Workshop*, Bertinoro, Italia, 23-24 September, 2010
- *EPEW 2011 - 8th European Performance Engineering Workshop*, Borrowdale, The English Lake District, UK, 12-13 October, 2011
- *17th Emerging Technologies for Next generation GRID (ETNGRID), IEEE International Workshops on Enabling Technologies Infrastructures for Collaborative Enterprises*, Roma, Italia, 23-25 June 2008
- *The 21th International Conference on Analytical & Stochastic Modelling Techniques & Applications ASMTA-2014*, Budapest, Ungheria, 30 June - 2 July 2014
- *The 22th International Conference on Analytical & Stochastic Modelling Techniques & Applications ASMTA-2015*, Albena, Bulgaria, UK, 24-26 August 2015
- *The 23th International Conference on Analytical & Stochastic Modelling Techniques & Applications ASMTA-2016*, Cardiff, Wales, UK, 24-26 August 2016
- *The 24th International Conference on Analytical & Stochastic Modelling Techniques & Applications ASMTA-2017*, Newcastle-upon-Tyne, UK, 10-12 July, 2017
- *The 25th International Conference on Analytical & Stochastic Modelling Techniques & Applications ASMTA-2019*, Mosca, Russia, 23-25 October, 2019
- *The 16th International Conference on Ad Hoc Networks and Wireless – AdHoc-Now 2017*, Messina, Italia, 20-22 September 2017
- *The 17th International Conference on Ad Hoc Networks and Wireless – AdHoc-Now 2017*, St. Malo, Francia, 5-7 September 2018
- *The 18th International Conference on Ad Hoc Networks and Wireless – AdHoc-Now 2018*, Luxembourg, 1-3 October 2019
- *The 19th International Conference on Ad Hoc Networks and Wireless - ADHOC-NOW'20*, Bari, Italy, 19-21 October 2020
- *WoSAR'15 - 7th International Workshop on Software Aging and Rejuvenation*, Gaithersburg, USA, 2-5 Novembre 2015
- *WOSAR'16 - 8th International Workshop on Software Aging and Rejuvenation*, Ottawa, Canada, 23-27 October 2016
- *WOSAR'17 - 9th International Workshop on Software Aging and Rejuvenation*, Toulouse, France, 23-26 October 2017
- *WOSAR'18 - 10th International Workshop on Software Aging and Rejuvenation*, Memphis, USA, 15-18 October 2018
- *WOSAR'20 - 12th International Workshop on Software Aging and Rejuvenation*

Reviewer of international journals
and conference

International journals:

- *IEEE Transactions on Parallel and Distributed Systems*, IEEE Computer Society
- *IEEE Transactions on Reliability*, IEEE Computer Society
- *IEEE Transactions on Software Engineering*, IEEE Computer Society
- *IEEE Transactions on Dependable and Secure Computing*, IEEE Computer Society
- *International Journal on Grid Computing*
- *International Journal of Critical Computer-Based Systems (IJCCBS)*
- *Journal of Systems and Software*, Elsevier
- *Information Processing Letters*, Elsevier
- *Journal of King Saud University - Computer and Information Sciences*, Elsevier
- *Journal of Computational Science*, Elsevier
- *Performance Evaluation*, Elsevier, North-Holland
- *Applied Computing and Informatics*, Elsevier
- *Information Processing Letters*, Elsevier
- *Journal of Environmental Science*, Elsevier
- *International Journal of Systems Science*, Taylor & Francis publisher
- *International Journal of Parallel, Emergent and Distributed Systems*, Taylor & Francis publisher
- *The Computer Journal*, OXFORD university Press
- *International Journal of Modelling and Simulation*, ACTA Press / IASTED
- *ACM Transactions on Modeling and Performance Evaluation of Computing Systems*, ACM

International conference:

- *International Workshop on Petri Nets and Performance Models (PNPM95)*, Durham, NC, USA, October 3-6, 1995.
- *International Workshop on Petri Nets and Performance Models (PNPM97)*, Saint Malo, France, June 3-6, 1997.
- *IASTED Applied modelling and simulation*; Honolulu, Hawaii, USA, August 1 – 4, 1998.
- *19th International Conference on Application and Theory of Petri Nets (ICATPN98)*, Lisbon, Portugal, June 22–26, 1998.
- *IEEE International Computer Performance and Dependability Symposium (IPDS '98)*, Durham, North Carolina, September 7-9, 1998.
- *10th International Conference on Modelling Techniques and Tools for Computer Performance Evaluation (TOOLS '98)*, Palma de Mallorca, Spain September 14–18, 1998.
- *International Workshop on Petri Nets and Performance Models (PNPM 2001)*, Aachen, Germany, 11-14 September, 2001.
- *IEEE Symposium on Computers & Communications (ISCC 2001)*, Hammamet, Tunisia, 3-5 July, 2001.
- *IEEE International Computer Performance and Dependability Symposium (IPDS 2002)*, Fort Lauderdale, Florida, USA, April 15-19, 2002.
- *IEEE Symposium on Computers & Communications (ISCC 2002)*, Taormina/Giardini Naxos, Italy, July 1 - 4, 2002.
- *IEEE Symposium on Computers & Communications (ISCC 2003)*, Kemer - Antalya, Turkey, June 30 - July 3, 2003.
- *IEEE Symposium on Computers & Communications (ISCC 2004)*, Alexandria, Egypt, June 28-July 1, 2004.
- *IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks - WoWMoM 2005*, Taormina - Giardini Naxos, 13-16 June, 2005.
- *IEEE Symposium on Computers & Communications (ISCC 2005)*, Cartagena, Spain, June 27-30, 2005
- *Design and Modeling in Science, Education, and Technology: DeMset*, Orlando, Florida USA, November 29th - December 2nd, 2011.
- *International Workshop on Sustainable Internet and Internet for Sustainability (Sustalnet 2011)*, Lucca, Italy, June 20, 2011
- *International Conference on Cloud Computing Technology and Science (CLOUDCOM 2012)*, Taipei, Taiwan, December 3-6, 2012
- *The 19th International Conference on Ad Hoc Networks and Wireless (AdHoc-Now 2020)*, Bari, Italy, 19-21 October 2020

Attendance at international
conferences

Attendant as speaker at:

- ESS'96 - *8th European Simulation Symposium*, Genova, Ottobre 24-26, 1996 [C3];
- ICATPN'97 - *18th Int. Conf. on Application and Theory of Petri Nets*, (Toulouse (Francia)), Giugno 23-27, 1997 [C6];
- TOOLS 2000 - *11th IEEE Int. Conf. on Modelling Techniques and Tools for Computer Performance Evaluation*, (Chicago (Illinois)), March 27-31, 2000 [C11];
- ISCC 2002 - *Proceedings of the Seventh IEEE Symposium on Computers & Commyunications*, Taormina - Giardini Naxos (Italy), July 1-4, 2002 [C12];
- ISCIS'04 - *19th International Symposium on Computer and Information Sciences*, Kemer - Antalya, Turkey, 27-29 October, 2004 [C15];
- *Workshop on Techniques, Methodologies and Tools for Performance Evaluation of Complex System*, Torino, Italy, September 19, 2005 [C18];
- ETNGRID '08 - *17th IEEE International Workshop on Emerging Technologies for Next Generation GRID*, Rome, 23-25 June 2008 [C20];
- VALUETOOLS 2009 - *4th International Conference on Performance Evaluation Methodologies and Tools*, Pisa, Italy, 20-22 October [C23];
- Sensors 2010 - *9th Annual IEEE Conference on Sensors*, Waikoloa, Hawaii (USA), 1-4 November 2010 [C32];
- Sensors 2010 - *9th Annual IEEE Conference on Sensors*, Waikoloa, Hawaii (USA), 1-4 November 2010 [C41];
- EDCC 2010 - *8th European Dependable Computing Conference*, Valencia, Spagna, 28-30 April 2010 [C39];
- DIVANet'13 - *3rd ACM international symposium on Design and analysis of intelligent vehicular networks and applications*, Barcellona, Spain, 3-8 November 2013 [C44];
- EPEW 2104 - *11th European Workshop on Performance Engineering*, Florence, Italy, 11-12 September, 2014 [C47];
- ICEIS 2015 - *17th International Conference on Enterprise Information Systems*, Barcelona, Spain, 27-30 April, 2015 [C49];
- PETRINET 2015 - *36th International Conference on Application and Theory of Petri Nets and Concurrency*, Brussels, Belgium, June 2015 [C50];
- ASMTA 2017 - *24th International Conference on Analytical and Stochastic Modelling Techniques and Applications*, Newcastle-upon-Tyne, UK, 10-12 July 2017 [C56];
- SMARTGREENS 2017 - *6th International Conference on Smart Cities and Green ICT Systems*, Porto, Portugal, 22-24 April 2017 [C59];
- VALUETOOLS 2017 - *11th EAI International Conference on Performance Evaluation Methodologies and Tools*, Venice, Italy, 5-7 December 2017 [C61];
- IoTSMS'18 - *Fifth International Conference on Internet of Things: Systems, Management and Security*, Valencia, Spain, 15-18 October 2018 [C64].

COOPERATION WITH INDUSTRIES

Type of business or sector	<p>STMicroelectronics s.p.a.</p> <p>the collaboration has been in progress for many years with the computer engineering research group at the University of Messina; the activities which the collaboration focuses on are related to software development on embedded systems and the application of software engineering techniques.</p>
Type of business or sector	<p>Meridionale Impianti s.r.l.</p> <p>Meridionale Impianti is a company operating in the field of services and products for semiconductor, pharmaceutical, chemical and energy industries, in international contexts. In relation to the activities constituting the core business of the company, the collaboration has been developed over time thanks to the participation in common research projects. In particular, the collaborations focused on innovative aspects of experimental hardware/software modules and on the support in designing optimization algorithms.</p>

EARONE s.r.l.

Type of business or sector The common research is based on the combination of technological advances in the field of numerical processing of audio signals, classification, recognition and identification systems based on deterministic, statistical and soft computing techniques with Big-Data techniques analysis, with the support of advanced techniques for evaluating the performance and reliability of the reference infrastructure. This approach aims to create a system capable of operating in the context of the Music Information Retrieval in order to create a robust and fast identification system for music tracks stored into a huge database with over one million songs.

MANAGING RESPONSIBILITY

2013 - 2018 **University Information Center (CIAM)**

Institution University of Messina, Italy

Main activities and responsibilities Member of the management board

2011 - 2014 **Multi-companies consortium for the promotion and the adoption of advanced computation techniques (COMETA)**

Main activities and responsibilities Member of the Administrative board on behalf of the University of Messina, Italy

2007 - 2010 **Center on Information Technologies Development and their Applications (CIA)**

Institution University of Messina, Italy

Main activities and responsibilities Vice director

2019 **Competition selection board**

Competition for selecting an assistant professor, non-tenured position, in Computer Engineering (ricercatore a tempo determinato di tipo B, SSD ING-INF/05) at University of Messina

Main activities and responsibilities Member of the jury

2017 **Competition selection board**

Competition for selecting a unit of technical-scientific staff for data processing with full-time subordinate employment, expert in the programming and management of distributed systems based on the paradigm of Cloud computing and advanced virtualization systems at University of Messina

Main activities and responsibilities Chairman of the jury

2011 **Competition selection board**

Competition for selecting an assistant researcher, non-tenured position, in Computer Science (ricercatore a tempo determinato di tipo A, INF/01) at University of Messina

Main activities and responsibilities Member of the jury

2010 **Competition selection board**

Competition for selecting an assistant researcher, non-tenured position, in Computer Science (ricercatore a tempo determinato di tipo A, INF/01) at University of Messina

Main activities and responsibilities Member of the jury

2006 **Competition selection board**

Competition for selecting a unit of technical-scientific staff for data processing with full-time subordinate employment, expert in data collection, processing and distribution, at University of Messina

Main activities and responsibilities Chairman of the jury

TEACHING ACTIVITY

Teaching management

- September 2017; Elected as **Coordinator** of the *International Master's Degree Course* in textit Engineering and Computer Science, Department of Engineering, University of Messina, for the three-year period 2017-2020
- September 2014; Elected as **Coordinator** of the *International Master's Degree Course* in textit Engineering and Computer Science, Department of Engineering, University of Messina, for the three-year period 2014-2017
- Academic year 2014/2015; **Director** of the *1st level Master in "Research technician specialized in the use and design of distributed networks and software environments"*, University of Messina
- Academic year 2011/2012; **Director** of the *2nd level Master in "Open Source and IT Security"*, University of Messina
- Academic year 2010/2011; **Director** of the *2nd level Master in "Open Source and IT Security"*, University of Messina
- Academic year 2007/2008; **Coordinator** of the *2nd level Master in "Open Source and IT Security"*, University of Messina
- From a.y. 2006/2007 to a.y. 2010/2011; member of the *teaching board* Engineering Faculty at University of Messina

Teaching as Associate Professor

- a.y. 2006/2007 - a.y.2009/2010 **Performance Evaluation (6 ETCS)**, at the Master's degree course in Computer Engineering, University of Messina
- a.y. 2006/2007 - Present **Operating Systems (6 ETCS)**, at the Bachelor's degree course in Electronics and Computer Engineering, University of Messina
- a.y. 2006/2007 - a.y.2010/2011 **Basics on Computer Science I (6 ETCS)**, at the Bachelor's degree course in Computer Engineering and Telecommunications, University of Messina
- a.y. 2011/2012 - a.y.2013/2014 **Basics on Computer Science (mod. A) (6 ETCS)**, at the Bachelor's degree course in Electronics and Computer Engineering, University of Messina
- a.y.2013/2014 **Database I (9 ETCS)**, at the Bachelor's degree course in Computer Science, University of Messina
- a.y. 2014/2015 - a.y. 2016/2017 **Computer System Dimensioning (12 ETCS)**, at the Master's degree course in Engineering and Computer Science, University of Messina
- a.y. 2017/2018 - Present **Computer System Analysis (12 ETCS)**, at the Master's degree course in Engineering and Computer Science, University of Messina
- a.y. 2008/209 - a.y. 2018/2019 **Computer Science (1 ETCS)**, at the Specialization School in Thoracic Surgery, University of Messina

Teaching as Adjunct Professor

- a.y. 2005/2006 **Performance Evaluation (6 ETCS)**, at the Master's degree course in Computer Engineering, University of Messina
- a.y. 2004/2005 **Applied Computer Science (40 hours)**, at the Master in Organization of Transport in the Port and Maritime Authorities, University of Messina
- a.y. 2003/2004 - a.y. 2004/2005 **Operating Systems (60 hours)**, at the Bachelor's degree course in Computer Engineering and Telecommunications, University of Messina
- a.y. 2001/2002 **Laboratory of Computer Science (60 hours)**, at the Bachelor's degree course in Computer Engineering and Telecommunications, University of Messina
- a.y. 1998/1999 **Quality Control Technician, mod. M6 "Statistics" (10 hours)**, University of Catania

International PhD Committee

June 2014 ParisTech - Paris Institute of Technology

Main activities and responsibilities Member of the jury

PhD Tutoring

- XXXIII cycle Murtadha Bin Arif Sahbudin - PhD course in "Cyber Physical Systems" at University of Messina
- XXXIII cycle Chakib Chaouk - PhD course in "Cyber Physical Systems", University of Messina
Scholarship funded by MIUR, grant "Ricerca e Innovazione 2014-2020", Innovative doctorates with industrial characterization in collaboration with EARONE s.r.l. and Duke University (Durham, U.S.A.)
- XXIII cycle Francesco Longo - PhD course in "Advanced Technologies for Information Engineering"

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PERSONAL SKILLS

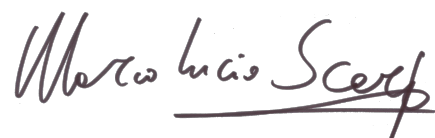
Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C2	B2	C1	C2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
[Common European Framework of Reference for Languages](https://www.cedefop.europa.eu/en/etd/122)

The applier



Messina, March 18, 2022