CURRICULUM VITAE OF VINCENZO PIURI

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1 Contact Information

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2 Education

- Ph.D. degree in Electronic Engineering of Information and Systems, Nov. 1985 – Nov. 1988, Politecnico di Milano, Italy; thesis: "Fault tolerance techniques for arithmetic array processors"
- M.S. degree (with honors) in Electronic Engineering, Nov. 1979 – July 1984, Politecnico di Milano, Italy; awarded with the 1984 IEEE Student Award

3 Positions

- Oct. 2000 - present: Full Professor in Computer Engineering, Università degli Studi di Milano, Italy (position won in 1999)
- Aug. 2012, Aug. 2013: Visiting Researcher, George Mason University, Fairfax, VA, USA
- Oct. 2007 - May 2012: Director of the Department of Information Technology, Università degli Studi di Milano, Crema, Italy
- Nov. 2005 - Sep. 2007: Director of the Ph.D. Degree Program in Computer Science, Università degli Studi di Milano, Italy
- Summers 1996-99: Visiting Associate Professor, University of Texas at Austin, Austin, TX, USA
- Nov. 1992 - Sep. 2000: Associate Professor of Computer Engineering, Politecnico di Milano, Italy (position won in 1991)
- Nov. 1988 - Oct. 1992: Director of the Computer Center, Department of Electronics and Information, Politecnico di Milano, Italy

4 Research

The research activity has been carried out in the field of information processing technology and systems, with reference to distributed, massively-parallel and adaptive approaches, from the points of view of hardware, computational paradigms, and intensive-computing applications. In particular, the following areas have been addressed.

- *Neural techniques, architectures and applications*
  Theoretical, architectural, and application aspects of artificial neural networks have been studied for implementing optimized solutions, with particular reference to identification, prediction, control, signal, and image processing applications. Design methodologies have been developed for designing embedded composite systems and fault tolerance systems. Advanced industrial applications have been realized for production process and environmental monitoring, quality certification, and biomedical analysis.

- *Biometrics techniques and systems*
  Biometrics technologies and systems, including multi-modal approaches, have been studied for person verification, identification and recognition as well as for behavioral analysis, with specific reference to security applications. Biometric technologies and systems have been evaluated from different points of view to support a comprehensive design methodology. Privacy issues in biometrics have been analyzed.

- *Distributed and parallel information processing architectures*
  Modeling approaches have been studied for concurrent processes and communications in distributed and multiprocessor systems. Methodologies have been defined for evaluating process parallelism and system dimensioning, including fault tolerance capacity. The virtual FPGA management and an innovative agent-based distributed file system have been proposed.

- *Arithmetic units*
  Algorithmic and structural characteristics of arithmetic units and systems have been studied. New architectural solutions have been defined, with specific reference to high computational performance, high modularity, regularity of the integrated implementation, and fault tolerance by using codes.

- *Fault-tolerant architectures*
  Techniques and design methodologies have been studied for information processing systems with high performance and fault tolerance characteristics. In particular, innovative solutions have been proposed for array processors, and digital systems for signal and image processing applications.

Researches performed in these areas are strictly related since they focus on advanced performances and characteristics, even if they consider different abstraction levels. The main goals have been the development of highly adaptive functionalities and systems, the definition of structures and computational approaches having high computational performance, and the definition of advanced fault tolerance capabilities. Studies and implementations have been carried out with the purpose of integrating the theoretical analysis with the definition of methodologies and tools to achieve practical results efficiently.

These researches have been carried out within national and international projects, in cooperation with Italian universities (University of Bologna, Brescia, Genova, Modena, Pavia, Padova, Salerno, Trento, Udine, Politecnico di Bari, Politecnico di Torino), foreign universities (Austin - TX-USA, Berkeley - CA-USA, Boulder - CO-USA, Erlangen - Germany, George Mason University - VA-USA, Karlsruhe - Germany, Massey - New Zealand, Minsk - Belarus, Singapore), research centers (Academy of the Sciences of the Belarus - Belarus, Academy of the Sciences of the URSS - Moscow-URSS, ASI - Italian Space Agency, CNR IEIIT - Istituto di Elettronica e di Ingegneria dell'Informazione e delle Telecomunicazioni - Sezione di Milano, Consorzio Crema Ricerche, Consorzio Padova Ricerche, CSELT-Torino-Italy, IRST-Trento-Italy, CERN-Switzerland), and industries (C.R.F. - FIAT, Edison, ENEL, Gilardoni, Hewlett-Packard, IBM, Italtel S.I.T., Philips, Selenia, ST Microelectronics, Tecnogamma, Trumpf, Alenia Spazio, Laben, Planetek, Space Sofware Italia, IMAL).

Main research projects: EU ABC4EU, EU I-PAN, EU PrimeLife, EU PRIME, EU COST IntelliCIS, ASI COSMO-SkyMed, ASI GUTTER, EU IMS-BRITE SLAPS, EU CRAFT TRACKS, EU META, CERN FERMI, EU Esprit PATRICIA, EU Esprit ARTS-IP, EU CVT CAD VLSI for Telecommunications, MURST-MPI projects - Italian Ministry of Higher Education and Research, CNR Progetto Finalizzato MADESS II, CNR Progetto Finalizzato MADESS, CNR Piano Nazionale Microelettronica, CNR Progetto Finalizzato Informatica.

5 Teaching

Undergraduate and graduate courses

- Undergraduate courses at Università degli Studi di Milano, Italy: Operating Systems I (6 ECTS; academic years 2010/11 - 2013/14; online edition: academic years 2010/11 - 2013/14), Operating Systems II (6 ECTS; academic years 2010/11 - 2013/14; online edition: academic years 2010/11 - 2013/14), Operating Systems (12 ECTS; academic years 2003/04 - 2009/10; online edition: academic years 2005/06 - 2009/10), Dependable Systems (6 ECTS; academic year 2006/07), Neural Networks - for biotechnology (5 ECTS; academic years 2000/01 - 2004/05), Foundations of Computer Science (6 ECTS; academic years 2000/01 - 2002/03), Algorithms and Data Structures (5 ECTS; academic years 2000/01 - 2002/03)
- Undergraduate courses at Politecnico di Milano, Italy: Information Processing Systems (7.5 ECTS; 2002/03 - 2007/08), Operating Systems 1 (1 semester; academic year 1993/94; 2 editions given in the academic years 1994/95 - 1999/00), Operating Systems 1 (1 semester; 1993/94, 2 editions: 1994/95 - 1999/00), Operating Systems 2 (1 semester; academic years 1993/94 - 1994/95; 2 editions given in the academic years 1995/96 - 1999/00), Operating Systems (2 semesters; academic year 1993/94), Foundations of Computer Science (2 semesters; academic year 1992/93), Laboratory of Electrotechnics and Applied Electronics (2 semesters; academiv year 1992/93)
- Graduate courses at Università degli Studi di Milano, Italy: Intelligent Systems (6 ECTS; academic years 2009/10 - 2011/12, 2013/14), Intelligent Systems for Monitoring and Control (6 ECTS; academic year 2011/12 - 2013/14), Neural Networks (5 ECTS; academic years 2000/01 - 2008/09; available also to undergraduate students)

International M.S. programs

- International Master's Degree Program on Soft Computing for Industrial Applications, Università degli Studi di Milano, Italy: Implementations of soft computing (1 ECTS), Soft Computing for Measurement and Monitoring Systems (1 ECTS), Soft Computing for Web Applications (1 ECTS), Laboratory of Soft Computing 1 (4 ECTS), Laboratory of Soft Computing 2 (4 ECTS); (2004/05)
- joint M.S. Degree Program in Software Engineering, Politecnico di Milano, Italy - University of Illinois at Chicago, USA: Networked Operating Systems (2 semesters; 1999/00 - 2001/02)

Specialization school for teaching in secondary educational programs

- Scuola di Specializzazione per l'Insegnamento Secondario SILSIS, Milan, Italy: Laboratory of Operating Systems (1999/00 - 2008/09), Laboratory of Management of Computer Laboratories (2000/01 - 2008/09)

Ph.D. programs

- Soft computing for industrial applications, Università degli Studi di Milano, Italy, course: 10 hours + 30 hours for research project (2004)
- Fault Tolerant Arithmetic, University of Texas at Austin, TX, USA, course: 40 hours, open also to M.S. degree students (1996-99)
- Fault tolerance techniques in arithmetic circuits, Politecnico di Milano, Italy, course: 20 hours (1997)
- Fault tolerant arithmetic units, Università degli Studi di Genova, Italy, seminars (1995-98)

Summer schools for Ph.D. students

- IEEE International Measurement University IMU 2009, Povo, Italy, 20-24 July 2009: Virtual Instruments and Distributed Instruments (4 hours)
- NATO-IEEE-INNS-ENNS Advanced Study Institute on Neural Networks for Instrumentation, Measurement, and Related Industrial Applications NIMIA2001, Crema, Italy, 9-20 October 2001: Implementations of Soft Computing (8 hours), Soft Computing for measurement and monitoring systems (8 hours)

Steering Committee of Summer Schools

- IEEE International School on Imaging (since 2013, member)

Courses for international scientific associations

- IEEE E-Learning Library (formerly IEEE Expert Now Program), continuous education program: Implementations of Computational Intelligence Techniques, in cooperation with Fabio Scotti (2007)

Ph.D. supervision

- Gerson Antunes Soares, "Context-aware Dependability in Cloud Computing", Ph.D. Degree Program in Information Technology, Università degli Studi di Milano, 2017
- Aleksandar Rikalovic, "GSI-based Data Mining Production Site Selection", Ph.D. Degree Program in Information Technology, University of Novi Sad, Serbia, 2014
- Angelo Genovese, "Less-Constrained Tri-Dimensional Biometrics: the Palmprint", Ph.D. Degree Program in Information Technology, Università degli Studi di Milano, 2014
- Ravi Jhawar, "Dependability in Cloud Computing", Ph.D. Degree Program in Information Technology, Università degli Studi di Milano, 2014 (co-supervisor)
- Terez Varkonyi, "New Adaptive Methods for Robust Fixed Point Transformations-based Control of Nonlinear Systems", Dual Ph.D. Degree's Program in Computer Science of the Obuda University and the Università degli Studi di Milano (Ph.D. Degree in Applied Informatics of the Obuda University and the Ph.D. Degree in Information Technology of the Università degli Studi di Milano), 2013 (co-supervisor)
- Ruggero Donida Labati, "Contactless Fingerprint Biometrics: Acquisition, Processing, and Privacy Protection", Ph.D. Degree Program in Information Technology, Università degli Studi di Milano, 2013
- Alberto Amato, "Semantic Analysis and Understanding of Human Behaviour in Video Streaming", Ph.D. Degree Program in Information Technology, Università degli Studi di Milano, 2011
- Francesco Bellocchio, "Online Hierarchical Models for Surface Reconstruction", Ph.D. Degree Program in Information Technology, Università degli Studi di Milano, 2011
- Marco Calabrese, "Hierarchical-Granularity Holonic Modelling", Ph.D. Degree Program in Information Technology, Università degli Studi di Milano, 2011
- Vladimir Novakovic, "Mobile Agents for a Distributed File System", Ph.D. Degree Program in Information Technology, Università degli Studi di Milano, 2004
- Fabio Scotti, "Designing Methodologies for Composite Systems", Ph.D. Degree Program in Information and Automation Engineering, Politecnico di Milano, 2003 (co-supervisor)
- Stefano Ferrari, "A Hierarchical Methodology for the Analysis and the Synthesis of Tri-Dimensional Images", Ph.D. Degree Program in Information and Automation Engineering, Politecnico di Milano, 2001

Ph.D. referee/external examiner

- G.B.Technical University, Lucknow, India (2014)
- ABV - Indian Institute of Information Technology and Management, Gwalior, Madhya Pradesh, India (2013)
- Nanyang Technological University, Singapore (2005, 2006, 2012)

Support activities for educational programs

- In the research project CEE ESPRIT META, he cooperated to the specification of a distributed, multimedia, hypertext system for education in local and geographic environments (1994-96).
- In an internal project of the Department of Electrotechnics and the M.E.T.I.D. Center, Politecnico di Milano, Italy, he studied the use of distributed systems supporting educational activities by means of hypertext technology, directed to implement distributed, virtual educational environments and the related development environments (1997-00). The experimental case was the virtual educational laboratory for the course of electrical measurements at Politecnico di Milano, Italy, which is still used at the Department of Electrotechnics, Politecnico di Milano, Italy, and, remotely, in the electrical measurement laboratories at Politecnico di Torino and at Università of Padova, Italy.

Teaching activities before the appointment as professor

- Cooperation in the management of the Microcomputer and Microelectronics Laboratory at the Department of Electronics and Information, Politecnico di Milano, Italy (1984-92), supervising training projects and M.S. research in distributed systems, massively-parallel processing architectures, arithmetic units, neural networks, CAD tools for VLSI design, also in cooperation with companies (Italtel, Philips, Selenia, SGS-Thompson, Telettra)
- Seminars in undergraduate and graduate courses at Politecnico di Milano (1984-92), on electrotechnics and foundations of computer science

6 Awards

- IEEE-RIVF International Conference on Computing and Communication Technologies Outstanding Contribution Award (2013) in recognition of the outstanding leadership and services to the conference series
- IEEE Ambassador (2012), to increase the awareness about IEEE in scientific and technological communities and the general public, in recognition of excellence in research, education, and service
- Admitted to the IEEE-HNK (2011), the honor society of the IEEE, for excellence in research, education, and service to the communities of information and communication technology and the related disciplines
- Distinguished Lecturer of the IEEE Systems Council for biometric technology and applications (2011)
- Runner-up Best Paper Award of the 2010 IEEE International Joint Conference on Neural Networks, for the paper: S. Ferrari, F. Bellocchio, V. Piuri, and N. Borghese, "Multi-scale support vector regression," in Proceedings of IJCNN 2010 (IEEE International Joint Conference on Neural Networks), Jul. 2010, pp. 2159-2164
- INNS Senior Member (2009)
- IEEE Computational Intelligence Society Meritorious Service Award (2009) for leadership and dedication to the Computational Intelligence Society and for having stimulated the active cooperation among volunteers
- ACM Distinguished Scientist (2008) for his contribution to neural networks and digital embedded architectures for industrial applications
- IEEE Instrumentation and Measurement Society Distinguished Service Award (2008)
- IEEE Instrumentation and Measurement Society Technical Award (2002) for the contributions to the advancement of theory and practice of computational intelligence in measurement systems and industrial applications
- IEEE Fellow (2001) for his contributions to neural networks and digital embedded architectures for industrial applications
- Meeting Planner of the Year (2000 and 2003), jointly presented by the "Zitelle" Congress Center, Venice, Italy, and the monthly magazine "Meeting & Congressi"
- Certificate of Appreciation of the IEEE Computer Society (2001) for the services as General Chair of the 2001 IEEE International Symposium on Defect and Fault Tolerance in VLSI Systems
- Certificate of Appreciation of the IEEE Computer Society (2000) for the services as Chair of the Technical Activity Committee on Defect Tolerance of the Test Technology Technical Council in the period 1993-2000, and as member of the steering committee, General Chair and Program Chair of the IEEE International Workshop/Symposium on Defect and Fault Tolerance in VLSI Systems
- IEEE Senior Member (1996)

7 Associations

- IEEE (Fellow) - Institute of Electrical and Electronic Engineers
- ACM (Distinguished Scientist) - Association for Computing Machinery
- INNS (Senior Member) - International Neural Network Society
- IMACS - International Association for Mathematics and Computers in Simulation
- AEIT - Italian Federation for Electrotechnics, Electronics, Automation, Informatics and Telecommunications (formerly, Associazione Eletrotecnica ed Elettronica Italiana, AEI)
- SIREN - Italian Society for Neural Networks

8 Organization

8.1 Research activities

Research organization

- Member of the Scientific Committee of the European Centre for Soft Computing, Mieres, Spain (2012-15)
- Scientific manager of the Industrial and Environmental Informatics Laboratory, Department of Computer Science, Università degli Studi di Milano (since 2006)
- Member of the Interdisciplinary Center for Nanostructured Materials and Interfaces (CIMAINA), Università degli Studi di Milano (since 2002)
- Scientific manager for research projects at Politecnico di Milano and Università degli Studi di Milano, funded by the Italian Ministry of University and Scientific and Technological Research, the European Union, the National Research Council of Italy, the Italian Space Agency, and industries (since 1994)
- Member of the Committee for the Scientific Research and Technology Transfer of the Università degli Studi di Milano (2006-11), elected by the faculty members in information technology
- Member of the Research Center for the Entrepreneurship Development (CERSI) of the Catholic University of the Sacred Hearth, Milan (2007-09)
- Scientific manager of the Biometric Systems Laboratory, Department of Information Technology, Università degli Studi di Milano (2003-09)
- Member of the Committee on Information Technology for the Scientific Research and Technology Transfer of the Università degli Studi di Milano (2003-06), elected by the faculty members in information technology
- Scientific manager of the Advanced Research Center on Evolutionary Knowledge for Design Innovation by High-Performance Computing, Department of Information Technology, Università degli Studi di Milano (2002-07), directed to study evolutionary and adaptive computational intelligence approaches to knowledge analysis and discovery for advanced design methodologies, products, and industrial applications, by using supercomputing environments (sponsored by the companies of the Finmeccanica Group: Laben SpA, Space Software Italia SpA, Quadrics Supercomputers World Ltd)

Management of research projects

- Scientific manager of the Research Unit at Università degli Studi di Milano in the EU project "ABC gates for Europe - ABC4EU" (2013-16), for studying and implementing an innovative, integrated, interoperable and citizens rights respectful ABC system at EU level
- Scientific manager of the industrial research contract of Università degli Studi di Milano with Edison (2013-14) to study prediction techniques for alternative energies management and pricing
- Deputy scientific manager of the Research Unit at Università degli Studi di Milano in the EU project "Innovative poplar low density structural panel - I-PAN" (2012-15), for studying and implementing an adaptive monitoring and control system for advanced poplar lightweight panel production
- Coordinator of the task "State-of-the-Art Analysis on the Multi-objective Optimization Techniques for Maintenance Scheduleing in Electrical Power Distribution Networks" in the Project "NEXT FFM Field Force Management", Università degli Studi di Salerno, funded by MIUR - the Italian Ministry of Education, University and Research within the National Operating Program (Programma Operativo Nazionale) "Research and Competitiveness" 2007-13, for the design and implementation of an optimized maintenance management system in complex electric power distribution networks
- Italian scientific co-liaison in the EU COST Action "Intelligent Monitoring, Control and Security of Critical Infrastructure Systems - IntelliCIS" (2009-13), for developing innovative intelligent monitoring, control and safety methodologies for critical infrastructure systems, such as electric power systems, telecommunication networks, and water distribution systems
- Scientific manager of the Research Unit at Università degli Studi di Milano in the project "Privacy aware processing of encrypted signals for treating sensitive information" (2008-10), for studying biometric information processing techniques ensuring privacy protection, funded by MIUR - the Italian Ministry of Education, University and Research
- Scientific manager of the Research Unit at Università degli Studi di Milano in the project "System for interpreting SAR images - GUTTER - preliminary analysis " (2004), for analyzing Earth images for environmental applications, funded by ASI - the Italian Space Agency
- Scientific manager of the Research Unit at Università degli Studi di Milano in the project "Perceptive agencies for environmental monitoring" (2003-04), for the implementation of a multi-agent cooperative environment for collecting and analyzing environmental measurements, funded by MIUR - the Italian Ministry of Education, University and Research

- Scientific manager of the project "Biometric methodologies and techniques for security: identification and recognition of persons" (2003-04), for the study of biometric solutions for person identification and recognition in security applications, funded by Fondazione CARIPLO
- Accomplished the functions of scientific manager of the Research Unit at Università degli Studi di Milano in the project "COSMO/Skymed Mission Planning" (2003), for studying optimization techniques for planning the collection of Earth-observation images from the satellites, funded by ASI - the Italian Space Agency
- Scientific manager of the Research Unit at Politecnico di Milano in the EU IMS-BRITE project "Self-tuning and user-independent laser material processing units - SLAPS" (1999-2002), for the implementation of a laser cutting and welding cell controlled by using neural techniques, in cooperation with Philips, Centro Ricerche FIAT, LaserZentrum Hannover, Trumpf, e Jurca
- Accomplished the functions of scientific manager of the Research Unit at Politecnico di Milano in the EU CRAFT project "An integrated system for on-line inspection of railways tracks - TRACKS" (1998-2000), for the implementation of a non-invasive neural-based monitoring and measurement system for the profile of railways tracks working on carriages moving at normal operating speed
- Accomplished the functions of scientific manager both of the Research Unit at Politecnico di Milano and the whole national project "Design of composite systems", funded by MURST - the Italian Ministry for University, Research and Scientific and Technological Research (1998-99)
- Scientific manager of the industrial research contracts of Politecnico di Milano with ENEL (1995-97)
- Accomplished the functions of scientific manager both of the Research Unit at Politecnico di Milano and the whole national project "Methodologies and design techniques for heterogeneous systems based on neural architectures", funded by MURST - the Italian Ministry for University, Research and Scientific and Technological Research (1996)
- Scientific manager of the industrial research contracts of Politecnico di Milano with Autostrade Centro-Padane (1994-96)
- Accomplished the functions of scientific manager both of the Research Unit at Politecnico di Milano and the whole national project "Analysis and optimization of neural paradigms and architectures oriented to the digital implementation on silicon", funded by MURST - the Italian Ministry for University, Research and Scientific and Technological Research (1993-95)

Supervision of assistant research projects and positions

- "Adaptive signal and image processing techniques for industrial and environmental applications" (Università degli Studi di Milano, 2014)
- "Analysis of functional characteristics of adaptive less-constrained biometric systems" (Università degli Studi di Milano, 2014)
- "Signal and image processing techniques for industrial applications" (Università degli Studi di Milano, 2014)
- "Analysis of functional characteristics of less-constrained biometric systems" (Università degli Studi di Milano, 2013-15)
- "Computational intelligence techniques for image processing" (Università degli Studi di Milano, 2011)
- "Computational intelligence techniques for environmental monitoring of critical infrastructures" (Università degli Studi di Milano, 2010), for young investigators without Ph.D. degree
- "Analysis of the architectural and functional characteristics of biometric systems" (Università degli Studi di Milano, 2009-10)
- "Intelligent systems and global communication infrastructure for the information and knowledge society" (Università degli Studi di Milano, 2008-09)
- "Evolutionary knowledge for innovating the information systems design methodologies by using high-performance systems" (Università degli Studi di Milano, 2005-07)
- "Intelligent systems and global communication infrastructure for the information and knowledge society" (Università degli Studi di Milano, 2003-04)
- "Person identification by biometric recognition" - No. 2 positions (Università degli Studi di Milano, 2003-04)
- "Analysis and development of optimum allocation algorithms of distributed agencies for environmental monitoring" (Università degli Studi di Milano, 2003-04)
- "Analysis, specification and development of methodologies and techniques for the analysis of air pollution" (Università degli Studi di Milano, 2003-04)
- "Analysis, specification and development of the operating environment of distributed agencies for environmental monitoring" (Università degli Studi di Milano, 2003-04)
- "Evolutionary knowledge for innovating the information systems design methodologies by using high-performance systems" (Università degli Studi di Milano, 2002-04)

- "Composite techniques for image analysis in quality monitoring of manufacturing processes" (Politecnico di Milano, 2002)
- "Composite techniques for image processing in manufacturing processes" (Politecnico di Milano, 2002)
- "Information flow in adaptive information systems: from the observation of the user behavior to the evolutionary self-generation of the information system behavior" (Università degli Studi di Milano, 2001-02)
- "Optimization of composite techniques for signal processing in laser-based manufacturing processes" (Politecnico di Milano, 2001-02)

Evaluation of scientific projects

- Shota Rustaveli National Science Foundation, Georgia (2013-11)
- "Futuro in Ricerca" Program, MIUR Ministry of Higher Education and Research, Italy, (2013)
- European Regional Development Fund, Regional Operating Program of the Lazio Region 2007-13 - Priority 1, Italy (2012-13)
- FAR 2012 Programs, MIUR Ministry of Higher Education and Research, Italy, (2012)
- Strategic Research Funding, City University of Hong Kong, Hong Kong (2012)
- National Science Foundation, USA, Project "Enhancing STEM (Science, Technology, Engineering and Mathematics) Education using Biometrics Applications to Security and Robotics for Emergency Management (BASREM)", New York University, Queens College, QueensBorough Community College, and John Jay College (2012)
- Natural Sciences and Engineering Research Council of Canada, Canada (2012, 2011, 2010, 2002)
- National Priorities Research Program, Qatar National Research Fund, Qatar (2011, 2009)
- PRIN Program, MIUR Ministry of Higher Education and Research, Italy, (2010, 2009)
- Foundation for Polish Science, Poland (2009)
- Ontario Research Fund, Canada (2007)
- CONSOLIDER-Ingenio2010 Program, Ministry of Education and Science, Spain (2007)
- Hong Kong Research Grants Council, Hong Kong (2002)
- ASI Agenzia Spaziale Italiana - Italian Space Agency, Italy (2002)
- Italian Republic Council Presidency - Presidenza del Consiglio della Repubblica Italiana, Dipartimento Innovazione e Tecnologie, Italy, for the public competitive tender on e-government for the Italian public administration (2002)

Technology transfer and spin-off companies

- He was co-founder and president of Sensure s.r.l, Italy (2007-10), an academic spin-off company of Università degli Studi di Milano, directed to design, implement and deploy advanced signal and image processing systems for industrial applications based on computational intelligence technologies. The company received several recognitions for innovation and high-technology products: it won the "Scouting ICT 2009" Award for the best industrial collaboration of the academic spin-offs in Milan, the "Universo 2007" Award for the promotion of academic spin-offs (BIC La Fucina, Lombardy Region), the "Matching competences 2005/06" (BIC La Fucina); it was among the top 20 national entrepreneurial projects of the Innovation National Award 2006, and won the third place of the Lombardy StartCup 2006.

Design activities and public competitive tenders

- Cooperation in the design and the supervision of the implementation of complex integrated information systems in health-care structures (1995-2000), specifically for the Hospital "S. Carlo Borromeo" in Milan, the USSL-Melegnano, the Lombardy Region - Directorate General for Experimentation in Milan, and the Hospital "Fatebenefratelli e Oftalmico" in Milan
- Selection committee member of public competitive tenders for advanced distributed information processing systems in public bodies (1993-2000), specifically Lombardy region, Marche Region, Cremona Province, Società Autostrade Centro-Padane, Politecnico di Milano, Hospital "S. Carlo Borromeo" in Milano, USSL Melegnano, Lombardy Region - Directorate General for Experimentation in Milan, and Club Alpino Italiano
- Cooperation in the design and the realization of distributed information processing systems in various campuses of Politecnico di Milano (1989-2000)
- Consultant for the restructuring, design and implementation of the information processing center of the Marche Region (1994)
- Technical committee reporting member of the "Lorenzo Lunelli Project" (1988), funded by Politecnico di Milano - Department of Electronics and Information, and the National Research Council of Italy - Research Centers CSISEI, CSTS e CST, directed to design and implement an advanced information processing system for the research and educational activities at the Department of Electronics and Information for the

Nineties; he performed the preliminary and detailed designs and the whole restructuring of the department information processing system

Services for research and higher education

- Chair of the Scientific Committee of the Computational Modeling of the Lombardy Inter-University Consortium for Information Processing (2003-04)
- Member of the Scientific Committee of the Lombardy Inter-University Consortium for Information Processing, for the High-Performance Computing Section (2002-04)

8.2 Editorial activities

Editor-in-Chief of journals

- IEEE Systems Journal (2013-17)

Editorial boards

- Associate Editor of Majlesi Journal of Mechatronic Systems, Majlesi Publications Corporation, Iran (since 2013)
- Associate Editor of Acta Polytechnica Hungarica, Obuda University, Hungary (since 2012)
- Associate Editor of Soft Computing, Springer (since 2011)
- Member of the Scientific Editorial Board of the Neural Network Technologies, Scientific Center for Neurocomputing, Moscow, Russia (since 2010)
- Editor of the Biometrics Series of the IEEE eLearning Library (since 2009)
- Member of the Scientific Editorial Board of the International Journal of Advanced Science and Technology, Science & Engineering Research Support Center, Republic of Korea (since 2009)
- Member of the Editorial Board of the IEEE eLearning Library, formerly called IEEE Expert Now (since 2008)
- Member of the Scientific Editorial Board of the Journal of Information Technology and Intelligent Computing, Academy of Humanities and Economics, Poland (since 2006)
- Member of the Scientific Editorial Board of the International Journal of Hybrid Intelligent Systems, Advanced Knowledge International, Australia (since 2003)
- Member of the Scientific Editorial Board of Computing, Ternopil Academy of National Economy, Ucraina (since 2002)
- Editor-at-Large of the IEEE Computational Intelligence Magazine (2010-14)
- Associate Editor of the IEEE Transactions on Neural Networks (2001-04)
- Associate Editor of the Journal of Systems Architecture, Elsevier Science (2001-04)
- Member of the Scientific Editorial Board of Mondo Digitale, AICA (2002)
- Associate Editor of the IEEE Transactions on Instrumentation and Measurement (1997-2002)
- Associate Editor of the International Journal of Integrated Computer-Aided Engineering, Wiley Interscience - John Wiley & Sons Inc. till 1997 and IOS Press since 1998 (1997-2001)

Guest editor in journals

- Special Issue on Big Data Analytics and Management in Internet of Things, in the IEEE Internet of Things Journal, 2015
- Special Issue on Biometric Systems and Applications, in the IEEE Transactions on Systems, Man and Cybernetics: Part A - Systems, 2014
- Special Issue on Cybermatics, in Science China (Information Schience), 2014
- Special Issue on Information and Knowledge Technology for Computing and Communication, in Fundamenta Informaticae, 2013
- Special Section on Biometric Systems, in IEEE Systems Journal, 2009
- Special Section on Computational Intelligence for Measurement Systems and Applications, in IEEE Transactions on Instrumentation and Measurement, 2008
- Special Section on Virtual and Intelligent Measurement Systems, in IEEE Transactions on Instrumentation and Measurement, 2008
- Special Section on Defect and Fault Tolerance in VLSI Systems, in IEEE Transactions on Reliability, 2004
- Special Section on Virtual and Intelligent Measurement Systems, in IEEE Transactions on Instrumentation and Measurement, 2003
- Special Issue on Defect and Fault Tolerance in VLSI Systems, in International Journal of Systems Architecture, North-Holland Publishing Co, 2002

- Special Issue on expanded and extended versions of papers presented at the VIMS2000 symposium, in IEEE Instrumentation and Measurement Magazine, 2000
- Special Issues on expanded and extended versions of papers presented at the IMTC/99 conference, in IEEE Transactions on Instrumentation and Measurement, April 2000 and June 2000
- Special Issue on Industrial Application of Wavelet Transforms, in International Journal of Integrated Computer-Aided Engineering, IOS Press, 2000
- Special Issue on Neural Technologies for Industrial Application, in International Journal of Integrated Computer-Aided Engineering, IOS Press, 1999
- Special Issue on Neural Technologies for Identification, Control, Robotics, and Signal/Image Processing, in International Journal of Systems Architecture, North-Holland Publishing Co, 1998
- Special Issue on Defect and Fault Tolerance in VLSI Systems, in International Journal of Microelectronic Systems Integration, Plenum Press, 1997
- Special Issue on Neural Technologies for Identification, Control, Robotics, and Signal/Image Processing, in International Journal of Microelectronic Systems Integration, Plenum Press, 1997

Steering Committees of journals

- IEEE Transactions on Autonomous Mental Development, as liaison of the IEEE Computational Intelligence Society (since 2008, member)
- IEEE Transactions on Information Forensics and Security, as liaison of the IEEE Computational Intelligence Society (2008-10, member)
- IEEE Transactions on Computational Intelligence and AI in Games, as liaison of the IEEE Computational Intelligence Society (2008-10, member)

Advisory Committees of journals

- Journal of Management Analytics, published by Taylor and Francis, UK (since 2014, member)
- ICST Transactions on Industrial Networks and Intelligent Systems, EAI-ICST (since 2013, member)
- Journal of Engineering and Technology, published by Wolters Kluwer, India (since 2013, member)
- LPU Journal of Computing, published by LPU, Phagwara, India (since 2013, member)

Reviewer for journals

Reviewer for many IEEE journals and magazines, and other international scientific journals (since 1986), among which: IEEE Transactions on Computer, IEEE Transactions on Instrumentation and Measurement, IEEE Transactions on Reliability, IEEE Computer Magazine, IEEE Instrumentation and Measurement Magazine, IEEE Parallel and Distributed Processing Magazine, International Journal of VLSI Design, International Journal of Microelectronic System Integration, International Journal on Integrated Computer-Aided Engineering, International Journal of Systems Architecture

Book editor

- Encyclopedia of Cryptography and Security (2nd edition), Editors: Henk C.A. van Tilborg and Sushil Jajodia, Springer, 2011 (area editor for biometrics)
- Neural Networks for Instrumentation, Measurement, and Related Industrial Applications, Editors: S. Ablameyko, L. Goras, M. Gori, and V. Piuri, IOS Press, 2003
- Limits and Future Trends of Neural Computing, Editors: S. Ablameyko, L. Goras, M. Gori, and V. Piuri, IOS Press, 2003
- Proceedings of the 2001 NATO ASI on Neural Networks for Instrumentation, Measurement, and Related Industrial Applications NIMIA2001: Study Cases, Crema, Italia, Editors: S. Ablameyko and V. Piuri, 2001
- Proceedings of the 2000 IEEE-INNS-ENNS International Joint Conference on Neural Networks IJCNN2000, Como, Italia, Editors: S.-I. Amari, C.L. Giles, M. Gori, and V. Piuri, 2000
- Proceedings of the IEEE International Workshop on Low-Power Design, Como, Italia, Editor: V. Piuri, 1999
- Proceedings of the 16th IEEE International Measurement Technology Conference IMTC/99, Venice, Italy, Editors: V. Piuri and M. Savino, 1999
- Proceedings of the 1998 IEEE International Workshop on Emergent Technologies, Intelligent Measurement and Virtual System for Instrumentation and Measurement, St. Paul, MN, USA, Editors: S. Adam, E.M. Petriu, and V. Piuri, 1998

8.3 Conference activities

Honorary chair

- 3rd International Conference on Intelligent Machines, Tunis, Tunisia (2014, co-chair)
- 2012 IEEE International Conference on Computational Intelligence for Measurement Systems and Applications, Tianjin, China (2012, co-chair)
- 2011 IEEE Symposium Series on Computational Intelligence, Paris, France (2011)
- 2011 IEEE International Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems, Ottawa, Canada (2011, co-chair)
- 6th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania (2011, co-chair)
- 2010 IEEE International Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems, Taranto, Italy (2010, co-chair)
- 2010 IEEE Workshop on Environmental, Energy, and Structural Monitoring Systems, Taranto, Italy (2010, co-chair)
- 5th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania (2009, co-chair)
- International Workshop on Computational Intelligence in Security for Information Systems, Genova, Italy (2008, co-chair)
- 4th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania (2007, co-chair)

General chair

- 2014 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications, Ottawa, Canada (2014, co-chair)
- 2014 International Conference on Intelligent Computing ICIC, Taiyuan, China (2014, co-chair)
- 9th International Conference on Communications and Networking in China, Maoming, China (2014, co-chair)
- 2013 IEEE International Conference on Internet of Things, Beijing, China (2013, co-chair)
- 2013 IEEE-RIVF International Conference on Research, Innovation and Vision for the Future in Information and Communication Technologies, Hanoi, Vietnam (2013, co-chair)
- 2013 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications, Milan, Italy (2013, co-chair)
- 2013 International Symposium on Innovations in Intelligent Systems and Applications, Albena, Bulgaria (2013, co-chair)
- 10th IEEE International Conference on Pervasive Intelligence and Computing, Changzhou, China (2012, co-chair)
- 2012 IEEE Workshop on Biometrics Measurements and Systems for Security and Medical Applications, Salerno, Italy (2012)
- 2012 International Symposium on Innovations in Intelligent Systems and Applications, Trabzone, Turkey (2012, co-chair)
- 2010 International Symposium on Innovations in Intelligent Systems and Applications, Kayseri, Turkey (2010, co-chair)
- 2010 IEEE Workshop on Biometrics Measurements and Systems for Security and Medical Applications, Taranto, Italy (2010)
- 2009 IEEE Symposium Series on Computational Intelligence, Nashville, TN, USA (2009)
- 2009 IEEE International Instrumentation and Measurement Technology Conference, Singapore (2009)
- 2007 IEEE Symposium on Computational Intelligence in Security and Defense Applications, Honolulu, HW, USA (2007, co-chair)
- 2006 IEEE International Conference on Computational Intelligence for Homeland Security and Personal Safety, Alexandria, VA, USA (2006, co-chair)
- 2006 IEEE International Workshop on Measurement Systems for Homeland Security, Contraband Detection, and Personal Safety, Alexandria, VA, USA (2006, co-chair)
- 2005 IEEE International Conference on Computational Intelligence for Homeland Security and Personal Safety, Orlando, FL, USA (2005, co-chair)
- 2005 IEEE International Workshop on Measurement Systems for Homeland Security, Contraband Detection, and Personal Safety, Orlando, FL, USA (2005, co-chair)

- 2004 IEEE International Instrumentation and Measurement Technology Conference, Como, Italy (2004, co-chair)
- 2004 IEEE International Conference on Computational Intelligence for Homeland Security and Personal Safety, Venice, Italy (2004, co-chair)
- 2003 IEEE International Symposium on Computational Intelligence for Measurement Systems and Applications, Lugano, Switzerland (2003, co-chair)
- 2002 IEEE International Symposium on Virtual and Intelligent Measurement Systems, Girdwood, AK, USA (2002, co-chair)
- 2000 IEEE International Symposium on Defect and Fault Tolerance in VLSI Systems, Tokyo, Japan (2000, co-chair)
- 1999 IEEE International Workshop on Virtual and Intelligent Measurement Systems, Venice, Italy (1999)

Program chair

- 2012 IEEE-RIVF International Conference on Research, Innovation and Vision for the Future in Information and Communication Technologies, Ho Chi Minh City, Vietnam (2012, co-chair)
- 2010 IEEE-INNS International Joint Conference on Neural Networks, Barcelona, Spain (2010)
- 2010 IEEE International Instrumentation and Measurement Technology Conference, Austin, TX, USA (2010)
- 2010 IAPR Workshop on Emerging Techniques and Challenges for Hand-based Biometrics, Istanbul, Turkey (2010, co-chair)
- 2010 IEEE-RIVF International Conference on Research, Innovation and Vision for the Future in Information and Communication Technologies, Hanoi, Vietnam (2010, computational intelligence track co-chair)
- 2009 IEEE-INNS International Joint Conference on Neural Networks, Atlanta, GA, USA (2009, vice chair)
- 2009 IEEE-RIVF International Conference on Research, Innovation and Vision for the Future in Information and Communication Technologies, Da Nang City, Vietnam (2009, computational intelligence track co-chair)
- 2004 IEEE-INNS International Joint Conference on Neural Networks, Budapest, Hungary (2004, international program committee coordinator)
- 2004 ACM International Conference on Computing Frontiers, Ischia, Italy (2004, co-chair)
- 2003 IEEE International Workshop on Soft Computing Techniques in Instrumentation, Measurement and Related Applications, Provo, UT, USA, (2003, co-chair)
- 2003 IEEE International Workshop on Advanced Environmental Sensing and Monitoring Technologies, Como, Italy (2003, co-chair)
- 2001 IEEE International Workshop on Advanced Environmental Sensing and Monitoring Technologies, Milan, Italy (2001, co-chair)
- 2000 IEEE-INNS-ENNS International Joint Conference on Neural Networks, Cernobbio, Italy (2000, co-chair)
- 1999 IEEE International Instrumentation and Measurement Technology Conference, Venice, Italy (1999, co-chair)
- 1999 IEEE International Symposium on Defect and Fault Tolerance in VLSI Systems, Albuquerque, NM, USA (1999, co-chair)
- 1998 IEEE International Workshop on Emergent Technologies, Intelligent Measurement and Virtual System for Instrumentation and Measurement, St. Paul, MN, USA (1998, co-chair)
- 1997 IEEE International Workshop on Emergent Technologies and Virtual System for Instrumentation and Measurement, Niagara Falls, Canada (1997, co-chair)
- 1996 IEEE International Workshop on Neural Networks for Identification, Control, Robotics, and Signal/Image Processing, Venice, Italy (1996)
- 1996 IEEE International Workshop on Emergent Technologies for Instrumentation and Measurement, Como, Italy (1996)
- 1996 IEEE International Symposium on Circuits and Systems, Atlanta, GA, USA (1996, associate area coordinator for neural networks)

Steering committees of conferences

- IEEE-RIVF International Conference on Research, Innovation and Vision for the Future in Information and Communication Technologies (since 2013, member)
- IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications (since 2012, co-chair)
- 9th IEEE International Conference on Computational Cybernetics (2013, member)

- IEEE International Conference on Computational Intelligence for Measurement Systems and Applications (2003-12, chair)
- IEEE International Conference on Virtual Environments, Human-Computer Interfaces, and Measurement Systems (2008-12, co-chair)
- IEEE International Conference on Imaging Systems and Techniques (2010-12, member)
- IEEE International Instrumentation and Measurement Technology Conference (2000-05, 2008-10, member)
- IEEE International Symposium on Defect and Fault Tolerance in VLSI Systems (1997-2007, member)
- IEEE International Conference on Computational Intelligence for Homeland Security and Personal Safety (2003-06, co-chair)
- IEEE International Workshop on Measurement Systems for Homeland Security, Contraband Detection and Personal Safety (2004-06, co-chair)
- ACM International Conference on Computing Frontiers (2004-05, member)
- IEEE International Symposium on Virtual and Intelligent Measurement Systems (2002, member)
- IEEE International Workshop on Virtual and Intelligent Measurement Systems (1996-2001, member)

Other positions in conferences

- 2014 International Conference on Innovative applications of Computational Intelligence on Power, Energy, Control and its impact on Humanity, Ghaziabad, India (2014, International Advisory Board Member)
- 2014 IEEE International Conference on Frontiers of Information Technology, Islamabad, Pakistan (2014, Steering Committee Member)
- 2014 International Conference on Industrial and Information Systems, Gwalior, India (2014, Advisory Committee Member)
- 2014 International Conference on Extreme Learning Machines, Singapore (2014, Advisory Committee Member)
- 2014 IEEE Symposium on Computational Intelligence for Security and Defense Applications, Orlando, FL, USA (2014, Advisory Committee Member)
- 4th Annual World Congress of U-World-2014, Dalian, China (2014, Scientific Advisory Committee Member)
- International Conference on Telecommunications and Multimedia, Heraklion, Greece (2014, Tutorial Chair)
- 4th International Symposium on Biometrics and Security Technologies, Kuala Lumpur, Malaysia (2014, Advisory Committee Member)
- 2013 IEEE International Workshop on Intelligent Signal Processing, Funchal, Portugal (2013, Honorary Committee Member)
- 2013 IEEE Symposium Series on Computational Intelligence, Singapore (2013, Advisory Committee Member)
- 4th Joint International Conference on Swarm , Evolutionay and Memetic Computing, Chennai, India (2013, Advisory Committee)
- 2012 International Symposium on Extreme Learning Machines, Singapore (2012, Advisory Committee Member)
- 2009 International Conference on Intelligent Systems Design and Applications, Pisa, Italy (2009, Advisory Committee Member)
- 2007 International Symposium on Neural Networks, Nanjing, China (2007, Advisory Committee Member)
- 2007 Biometrics Symposium, Baltimore, MD, USA (2007, IEEE Co-Liaison)
- 1993 IEEE International Conference on Application Specific Array Processors, Venice, Italy (1993, finance chair)
- 1993 IEEE International Workshop on Defect and Fault Tolerance in VLSI Systems, Venice, Italy (1993, finance chair)

Special session organizer

IEEE World Congress on Computational Intelligence (2012), IEEE Instrumentation and Measurement Technology Conference (2000-02, 1998), KES International Conference on Knowledge-based Intelligent Engineering and Information Systems (2002), ISATA International Symposium on Automotive Technologies and Automation (1998, 1997), IEEE Conference on Computational Engineering in Systems Applications (1998, 1996), IMACS World Congress (1997, 1994), IEEE International Symposium on Circuits and Systems (1996, 1995), IEEE International Conference on Systems, Man, and Cybernetics (1996), IEEE International Midwest Symposium on Circuits and Systems (1995)

Member of technical program committee of conferences

IMEKO World Congress (2015), IEEE-INNS International Joint Conference on Neural Networks IJCNN

(2014-11, 2008, 2007, 2004), IEEE Congress on Evolutionary Computation CEC (2011-14), IEEE Instrumentation and Measurement Technology Conference IMTC (2011-14, 2005-08, 2000-03), IEEE International Conference on Communications ICC - Communication and Information Systems Security Symposium (2014, 2013, 2011, 2010, 2009), International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems IPMU (2014, 2010, 2008, 2006), IEEE Globecom Communication and Information System Security GLOBECOM CISS (2014, 2013, 2011, 2010), IEEE Globecom Wireless Communications Symposium GWCS (2014), Conference on Learning and Intelligent OptimizatioN LION (2007-14), Pacific-Asia Conference on Knowledge Discovery and Data Mining PAKDD (2011-14, 2009, 2008, 2007), International Multi-Conference on Systems, Signals and Devices SSD (2014), International Conference on Pervasive and Embedded Computing and Communication Systems PECCS (2011-14), Workshop on Artificial Neural Networks and Intelligent Information Processing ANNIIP (2014), International Symposium on Security in Computing and Communications SSCC (2014), IEEE International Conference on Fuzzy Systems FUZZIEEE (2013, 2012), IEEE International Conference on Image Processing ICIP (2013, 2011), IEEE International Systems Conference (2014, 2013, 2011, 2010, 2009), International Conference on Fuzzy Systems and Knowledge Discovery FSKD (2013, 2012, 2010), International Conference on Natural Computation ICNC (2013), IEEE International Symposium on Trust, Security and Privacy for Emerging Applications TSP (2013, 2010), ENNS International Conference on Artificial Neural Networks ICANN (2013, 2010, 2009, 1997), IEEE International Conference on Emerging Technologies and Factory Automation ETFA (2013, 2012), World Congress on Information and Communication Technologies WICT (2013), IEEE International Workshop on Intelligent Signal Processing WISP (2013, 2011, 2009, 2007, 2005, 2003, 2001, 1999, 1997), IEEE International Workshop on Artificial Neural Networks IWANN (2013, 2011, 2007, 2005, 1997, 1995), International Conference on Intelligent Systems Design and Applications ISDA (2013, 2012), IEEE International Conference on Imaging Systems and Techniques IST (2013, 2012), International Workshop on Biometrics: Technologies, Systems and Applications BTSA (2013), Social Media SM (2013), IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications IDAACS (2013, 2011, 2009, 2001), International Symposium on Security in Computing and Communications (2013), European Society for Fuzzy Logic and Technology Conference EUSFLAT (2013, 2005), International Conference on Computer and Applications CCA (2013), International Workshop on Embedded and Ubiquitous (2013), International Conference on Connected Vehicles and Expo ICCVE (2013, 2012), International Multi-Topic Conference IMTIC (2013), IEEE Symposium on Computational Intelligence for Security and Defence Applications CISDA (2012), International Conference on Neural Networks and Artificial Intelligence ICCNAI (2012), International Conference on Frontier of Computer Science and Technology FCST (2012, 2011, 2010), IEEE International Conference on Imaging Systems and Techniques (2012), IEEE International Conference on Computational Intelligence for Measurement Systems and Applications CIMSA (2012), IEEE International Conference on Virtual Environments, Human-Computer Interface, and Measurement Systems VECIMS (2012, 2006, 2005), IEEE International Conference on Intelligent Systems IS (2012), International Workshop on Smart Mobile Applications (2012, 2011), IAPR International Conference on Pattern Recognition and Information Processing PRIP (2011), International Symposium on Innovations in Intelligent Systems and Applications INISTA (2011, 2009), IEEE International Conference on Communications ICC - Computer and Communications Network Security Symposium (2007), AEIT Congress (2011), International Conference on Artificial Intelligence and Soft Computing ICAISC (2010, 2008, 2006), International Conference on the Applications of Digital Information and Web Technologies ICADIWT (2010), IEEE Conference on High Performance Computing and Communications HPCC (2010), IEEE International Workshop on Electronic Design, Test and Applications DELTA (2010, 2008, 2006, 2004, 2002), International Conference on Neural Networks and Artificial Intelligence ICNNAI (2010, 2006, 2003), IMEKO World Congress on Fundamental and Applied Metrology (2009), IEEE/IFIP International Symposium on Trusted Computing and Communications TRUSTCOM (2009), IEEE Globecom Computer and Communications Network Security Symposium GLOBECOM CCNS (2009, 2008), IEEE International Workshop on Haptic Audio Visual Environments and Games HAVE (2009), IEEE International Workshop on Haptic Audio Visual Environments and their Applications HAVE (2008, 2007), IEEE International Conference on Intelligent Systems ICIS (2008), IEEE International Symposium on Computer Science and its Applications CSA (2008), IEEE Workshop on Robust Biometrics: Understanding the Science and Technology ROBUST (2008), IEEE International Workshop/Symposium on Defect and Fault Tolerance in VLSI Systems DFT (2001-2007, 1994-1998), International Conference on Computational Intelligence for Modelling, Control and Automation CIMCA (2006), IMACS World Congress (2005, 1997, 1994), IEEE Sensors for Industry Conference SICON (2005, 2004), IEEE International Workshop on Robotic and Sensor Environments ROSE (2005), International Conference on Technology and Automation ICTA (2005), International Conference on Supercomputer Systems and Applications SSA (2004), IMACS-

IEEE International Conference on Computational Engineering in Systems Applications CESA (2003, 1998), KES International Conference on Knowledge-based Intelligent Engineering and Information Systems KES (2003), IEEE International Conference on Computer Arithmetic ARITH (2001, 1999), Italian Workshop on Neural Networks WIRN (1998-2001), International Conference on Intelligent Agents, Web Technology and Internet Commerce IAWTIC (2001), Euromicro Workshop on Computational Intelligence (1998), IEEE International Conference on Architectures, Algorithms and Applications of Parallel Processing ICA3PP97 (1997), ISATA International Symposium on Automotive Technologies and Automation (1997), IEEE International Conference on Application-Specific Array Processors ASAP (1995, 1994), ISCA International Conference on Intelligent Systems (1996), ISCA Golden West Conference on Intelligent Systems (1995), BIAS Micro95 (1995), AICA Congress (1994), IMACS International Symposium SPRANN'94 (1994).

Invited seminars and keynote speaker at conferences

- "Dependable Cloud Computing Frameworks for Critical Monitoring and Control Applications", in the 11th IEEE International Conference on Networking, Sensing and Control (ICNSC 2014), Miami, FL, USA, 2014
- "Biometric Technologies for Ambient Intelligence in Internet-of-Things Environments", in the 17th International Conference on Network-Based Information Systems (NBIS 2014) and the 6-th International Conference on Intelligent Networking and Collaborative Systems (INCoS 2014), Salerno, Italy, 2014
- "Biometric Technology and Applications", in the 9th International Conference on Communications and Networking in China (ChinaCom 2014), Maoming, China, 2014
- "Dependable Cloud Computing Frameworks for Critical Applications in Monitoring and Control", in the 11th IEEE International Conference on Networking, Sensing and Control, Miami, FL, USA, 2014
- "Using Biometric Technologies for Smart Cities and Adaptive Environments", New Jersey Institute of Technology & IEEE North Jersey Section Microwave Theory and Techniques Chapter, Newark, NJ, USA, 2014
- "Dependable Cloud Computing", in the 10th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC 2013), 10th IEEE International Conference on Autonomic and Trusted Computing (ATC 2013), and 13th International Conference on Algorithms and Architectures for Parallel Processing (AAPP 2013), Vietri sul Mare, Italy, 2013
- "Reconstruction of 3D surfaces", in the 8th International Conference on Embedded and Multimedia Computing (EMC 2013), Taipei, Taiwan, 2013
- "Biometric technologies and applications for smart cities and an intelligent planet", Institute of Automation, Chinese Academy of Science, Beijing, China, 2013
- "Dependability in Cloud Computing", in the 8th International Conference on Communications and Networking in China (ChinaCom 2013), Guilin, China, 2013
- "Dependable User-Centric Operations in Cloud Computing", in the 20th Workshop on Intelligent Machines: Theory and Applications, Sousse, Tunisia, 2013
- "Biometric technologies and applications for intelligent transportation", in the International Conference on Advanced Logistics and Transport (ICALT'2013), Sousse, Tunisia, 2013
- "Biometric technologies and applications for a smart city", in the APEC Smart City Industrial Technology Cooperation Forum, Changzhou, China, 2012
- "Biometric systems: technologies and applications", in the 5th International Conference on Security of Information and Networks (SIN 2012), Jaipur, India, 2012
- "Computational intelligence for surface modeling", in the 7th International Conference on Neural Networks and Artificial Intelligence (ICNNAI 2012), Minsk, Belarus, 2012
- "Holonic Systems as Software Paradigms for Industrial Automation and Environmental Monitoring", in 2011 IEEE Workshop on Intelligent Agents, part of the 2011 IEEE Symposium Series on Computational Intelligence (SSCI 2011), Paris, France, 2011
- "Holonic Systems: a Software Paradigm for Engineering Applications and Service-Oriented Architectures", in 2011 IEEE International Workshop on New Trends of Computational Intelligence in Engineering Informatics, Salerno, Italy, 2011
- "Hierarchical Neural-based Techniques for Regression", in 2011 International Symposium on Innovations in Intelligent Systems and Applications (INISTA 2011), Istanbul, Turkey, 2011
- "Biometrics Privacy: Technologies and Applications", in 2011 International Joint Conference on E-Business and Telecommunications (ICETE 2011), Seville, Spain, 2011
- "Neural Techniques for 3D Surface Reconstruction", in 2011 Seventh International Conference on Intelligent Computing (ICIC 2011), Zhengzhou, China, 2011
- "3D Surface Modeling: from 3D Scanning to Neural-Based Surface Reconstruction", in Eurographics Italian Chapter Conference, Salerno, Italy, 2011

- "Biometrics Privacy", in 2008 IEEE International Conference on Research, Innovation and Vision for the Future in Information and Communication Technologies (RIVF'08), Ho Chi Minh City, Vietnam, 2008
- "Biometrics Privacy", in Workshop on Biometrics and Computational Intelligence, part of the 2007 IEEE International Joint Conference on Neural Networks (IJCNN'07), Orlando, FL, USA, 2007
- "Computational intelligence for Biometrics", in International Conference on Natural Computation (ICNC'06) and International Conference on Fuzzy Systems and Knowledge Discovery (FSKD'06), Xi'an, China, 2006
- "Computational intelligence for industrial quality control", Chiao Tung University and IEEE CIS Taipei Chapter, Taipei, Taiwan, R.O.C., 2006
- "Computational intelligence for industrial quality control", National Cheng Kung University and IEEE CIS Tainan Chapter, Tainan, Taiwan, R.O.C., 2006
- "Computational intelligence for Biometrics", Xidian University, Xi'an, China, 2006
- "Computational intelligence for Biometrics", Hong Kong Polytechnic University, Hong Kong, 2006

Tutorials

- V. Piuri, F. Scotti, "Biometrics for ambient intelligence in the internet of things", in the 2013 IEEE International Conference on Internet of Things, Beijing, China, 2013
- V. Piuri, F. Scotti, "Biometrics Privacy: Technologies and Applications", in the 2011 IEEE International Systems Conference, Montreal, Canada, 2011
- V. Piuri, S. Ferrari, F. Bellocchio, "3D Scanners: State of the Art", IEEE International Instrumentation and Measurement Technology Conference, Singapore, 2009; also distributed online on the educational web site of the IEEE Instrumentation and Measurement Society
- V. Piuri, F. Scotti, "Implementations of Computational Intelligence Techniques", IEEE Expert Now, IEEE, ISBN: 0-7803-9671-5, 2007
- V. Piuri, "Composite Technologies for Intelligent Industrial Laser Processing", IEEE International Conference on Sensors for Industry Sicon/02, Houston, TX, USA, 2002

Panels

- "Biometrics for smart cities", in the APEC Smart City Industrial Technology Cooperation Forum, Changzhou, China, 2012
- "Real World Applications of Computational Intelligence", IEEE World Congress on Computational Intelligence WCCI2012, Brisbane, Australia, 2012

8.4 Educational activities

International programs

- Leading proposer of the Dual Ph.D. Degree programs in Computer Science of the Università degli Studi di Milano (Italy) with Universidad de Oviedo (Oviedo, Spain, established in 2011), Obuda University (Budapest, Hungary, established in 2011), Vietnam National University - Ho Chi Minh City (Ho Chi Minh City, Vietnam, established in 2011), National Cheng Kung University (Tainan, Taiwan, established in 2008); he has also been appointed as Co-Chair of the Admission Committees representing the Università degli Studi di Milano and Delegate of the Director of the Ph.D. School in Information Technology at the Università degli Studi di Milano for the management of these agreements
- Director of the international educational program "Information, communication and knowledge science and technology" (2003-05), directed to promote the international exchange of students and lecturers among the Università degli Studi di Milano (Italy), the University of Pisa (Italy), the University of Venice (Italy), Carnegie Mellon University (USA), and University of Ottawa (Canada), funded by the Italian Ministry of Education, University and Research in the Program "Internationalization of the Italian Academic System"
- Director of the International Master's Degree Program on Soft Computing for Industrial Applications (2003-04), Università degli Studi di Milano (Italy), with the scientific cooperation of Carnegie Mellon University (USA), Örebro University (Sweden), University of Ottawa (Canada), University of Siena (Italy), and Warsaw University of Technology (Poland), and with the support of the IEEE Neural Networks Society, IEEE Instrumentation and Measurement Society, INNS - International Neural Networks Society, ENNS - European Neural Network Society, and SIREN - Società Italiana Reti Neurali
- Scientific Co-Director of the NATO-IEEE-INNS-ENNS Advanced Study Institute on Neural Networks for Instrumentation, Measurement, and Related Industrial Applications NIMIA2001, Crema, Italy, 2001

National programs

- Director of the Curriculum "Multi-dimensional Signal Processing and Applications" of the Ph.D. School in Information Technology at the Università degli Studi di Milano, Italy (since 2008)
- Member of the Council of the Ph.D. School in Information Technology at the Università degli Studi di Milano, Italy (since 2008)
- Director of the Ph.D. Degree Program in Computer Science, Università degli Studi di Milano, Italy (2005-07)
- Coordinator of the project for the creation of the Ph.D. School in Information Technology at the Università degli Studi di Milano, Italy (2007), and Director ad interim of this School (5 May - 30 September 2007)
- Member of the Milan Section Scientific Council of the Lombardy Inter-University Specialization School for High-School Educators SILSIS (1999-2002), representing Politecnico di Milano (1999-2000) and Università degli Studi di Milano (2000-02) for the area of the information and communication technology
- Scientific coordinator of the post-high-school professional education in information and communication technologies (IFTS) for the Università degli Studi di Milano - Department of Information Technology: "Advanced technician for ICT systems and technology" (2006-07, scientific director), "Advanced technician for the industrialization of the products and the processes" (2006-07), "Advanced technician for communication and multimedia" (2005-06), "Advanced technician for web and e-commerce" (2003-04, chair of the management committee), "Advanced technician for medical informatics" (2003-04), "Advanced technician for web environments in marketing end e-commerce" (2002-03, chair of the management committee), "Advanced technician for e-learning in biomedical environments (ECM)" (2002-03), "Protected internet-working manager" (2001-02), "Advanced technician in foreign languages and specialized in web design and e-commerce" (2001-02, chair of the management committee), "Information and Communication Technician: expert of Intranet/Internet information systems" (2001-02), "Logos - Data warehouse in networked systems" (2000-01)
- Coordinator of the project for the creation of the M.S. Degree (Laurea Specialistica) program in "Information Sciences and Technologies" (in the M.S. Class of Informatics 23/S) at the Università degli Studi di Milano, Italy (2001)
- Education coordinator of the continuous education courses in information and communication technology and office automation for public administrations (1993-2000), organized by Politecnico di Milano for non-ICT personnel of Politecnico di Milano, Prefecture of Milan, Procura della Repubblica presso la Pretura Circondariale di Milano, Ministry of Finance - Tax Department - Lombardy Regional Directorate
- Member of the Permanent Committee of the Faculty of Engineering at Como, Politecnico di Milano, Italy (1997-00)
- Member of the Management Committee of the Continuous Education Center of Politecnico di Milano, Italy (1998-00)
- Member of the Rectoral Committee of Politecnico di Milano for the creation of the Lombardy Inter-University Specialization School for High-School Educators SILSIS (1998)

8.5 University services

Academic committees

- Member of the Committee for Mobility and International Programs of the Università degli Studi di Milano, as Delegate of the Department of Computer Science (since 2013)
- Member of the Executive Committee of the Department of Computer Science at the Università degli Studi di Milano (since 2012)
- Delegate for internationalization activities of the Department of Computer Science at the Università degli Studi di Milano (since 2012)
- Erasmus Programs Coordinator for the Department of Computer Science at the Università degli Studi di Milano (since 2012)
- Representative of the Università degli Studi di Milano to the Academic Group of Information Engineering - Gruppo di Ingegneria Informatica GII (since 2002), the committee for the coordination of the Italian professors and researchers in information engineering
- Coordinator of the contract of the Università degli Studi di Milano with the cultural non-profit association Nova Multimedia, for the scientific cooperation in the area of education and the technologies for education, training, continuous education, and cultural dissemination (2008-14)
- Coordinator for the internationalization activities of the Università degli Studi di Milano for Vietnam (2011-12)
- Director of the Department of Information Technology at the Università degli Studi di Milano (2007-12)

- Member of the Committee for the International Initiatives of the Faculty of Mathematical, Physical and Natural Sciences, Università degli Studi di Milano (2003-08)
- Coordinator of the Dual PhD Degree Programs in Computer Science of the Department of Computer Science at the Università degli Studi di Milano (since 2008)
- Director of the Ph.D. Degree Program in Computer Science, Università degli Studi di Milano, Italy (2005-07)
- Member of the Executive Committee of the Department of Information Technology at the Università degli Studi di Milano (2004-07)
- Member of the Scientific Committee of the Lombardy Inter-University Consortium for Automatic Information Processing CILEA, for the service promoting and supporting high-performance computing (2002-04)
- Coordinator of the contract of the Università degli Studi di Milano with Laben S.p.A, Space Software Italia S.p.A, and Quadrics Supercomputers World Ltd (Finmeccanica Group) for the project "Advanced Research Center on Evolutionary Knowledge for Design Innovation by High-Performance Computing", directed to realize the homonymous research center for studying and developing adaptive and evolutive methodologies based on high-performance computing for industrial innovation (2002-04)
- Chair of Scientific Council of the Center for the Computational Modeling at the Lombardy Inter-University Consortium for Automatic Information Processing CILEA, (2003-04)
- Coordinator of the contract of the Università degli Studi di Milano with Promelit S.p.A., for the scientific cooperation in the area of wireless networks for experimentation in university environments (2003)
- Coordinator of the Area "User Assistance and Office Automation" in the Management Committee of the Electronic Data Processing of the administration of Politecnico di Milano (1995-2000)
- Coordinator of the Office for Information Processing Services at the Como Campus of Politecnico di Milano (1995-2000)
- Member of the Scientific Council of the Center for Computing and Networks at Politecnico di Milano (1997-2000)
- Coordinator of the Help Service for Computer Systems and Applications directed to the non-ICT personnel of Politecnico di Milano (1993-96)
- Member of the Executive Committee of the Department of Electronics and Information at the Politecnico di Milano (1993-96)
- Member of the Rectoral Committee for the Information Processing Services of the Politecnico di Milano (1995-96)

Academic examination committees

- Certified as possible member of the Evaluation Committee for the Italian National Certification of Academic Educational Programs for the scientific sector ING-INF/05 Information Processing Systems: 2013 call for applications ANVUR Board of Directors motion No. 11, 30/1/2013 (2013)
- Member of the Comparative Evaluation Committee for positions as research assistant in the scientific sector ING-INF/05 Information Processing Systems: competition established at Università degli Studi di Firenze, by the Rectoral Decree No. 1205/2012, published in the web site of the university on 18/12/2012, and appointed to the committee by Rectoral Decree prot. No. 220, 22/2/2013 (2013)
- Certified as possible member of the Evaluation Committee for the Italian National Scientific Certification for the scientific sector ING-INF/05 Information Processing Systems: 2013 call for applications MIUR Director Decree No. 161, 28/1/2013 (2013)
- Member of the Comparative Evaluation Committee for positions as research assistant in the scientific sector ING-INF/05 Information Processing Systems: competition established at Politecnico di Torino, by the Rectoral Decree No. 366, published in the web site of the university on 30/09/2010, and appointed to the committee by Rectoral Decree prot. No. 88, 28/03/2011 (2011)
- Member of the Comparative Evaluation Committee for positions as research assistant in the scientific sector ING-INF/05 Information Processing Systems: competition established at Università Telematica Internazionale, by the Rectoral Decree No. 3/2009, published in the web site of the university on 27/3/2009, and appointed to the committee by Rectoral Decree prot. No. 10, 8/10/2009 (2009)
- Member of the Comparative Evaluation Committee for positions as full professors in the scientific sector ING-INF/05 Information Processing Systems: competition established at Politecnico di Milano, by the Rectoral Decree No. 12, 23/03/2004, published in the Official Gazette of the Italian Republic No. 28 - 4th special series, 07/09/2004, and appointed to the committee by Rectoral Decree prot. No. 3284, 22.10.2004 (2004-05)
- Member of the Evaluation Committee for the Final Exam of Ph.D. Degree Programs: Ph.D. Degree Program in Engineering for Environment and Landscape (XVII Cycle) at Politecnico di Bari (2005), Ph.D. Degree

Program in Computer Science (XVII Cycle) at the Università degli Studi di Milano (2005), Ph.D. Degree Program in Information and Automation Engineering at Politecnico di Milano (2001)
- Member of the Evaluation Committee for the Admission Exam of the Ph.D. Degree Program in Computer Science at the Università degli Studi di Milano: XXV Cycle (2009), XX Cycle (2004)

8.6 Scientific associations

Technical committees of international scientific associations

- Emerging Technical Committee on Internet of Things of the IEEE Communications Society (since 2013, member)
- Technical Subcommittee on Green Communications and Computing of the IEEE Communications Society (since 2013, member)
- Technical Committee on Communications and Information Security of the IEEE Communications Society (since 2012, member)
- Technical Committee on Monitoring Critical Infrastructures of the IEEE Systems Council (since 2010, member)
- Technical Committee on Security and Privacy in Complex Information Systems of the IEEE Systems Council (since 2010, member)
- Technical Committee on Security and Contraband Detection of the IEEE Instrumentation and Measurement Society (since 2002, founding co-chair)
- Technical Committee on Emergent Technologies of the IEEE Instrumentation and Measurement Society (since 1994, founding co-chair)
- Technical Steering Committee on Neural Networks of the IMACS association (since 1994, member)
- Technical Steering Committee on Computer Arithmetic of the IMACS association (since 1994, member)
- Task Force on Virtual Reality of the Technical Committee on Intelligent System Applications of the IEEE Computational Intelligence Society (2008-10, member)
- IEEE TAB NTDC Technical Committee on Biometrics (2005-08, vice chair)
- IEEE TAB NTDC Technical Committee on Brain-Computer Interface (2006-08, member)
- Technical Activity Committee on Defect Tolerance of the IEEE Computer Society Test Technology Technical Committee (1995-2006, co-chair)
- Standards Committee of the IEEE Computational Intelligence Society (2005, member)
- Technical Committee on Emerging Technologies of the IEEE Neural Networks Society (2003-05, member)
- Working Group on Homeland Security of the IEEE Computational Intelligence Society Technical Committee on Intelligent System Applications (2003-05, founding co-chair)
- Technical Committee on Intelligent Measurement Systems of the IEEE Instrumentation and Measurement Society (1997-2002, founding co-chair)

Conference coordination committees of international scientific associations

- Conference Committee of the IEEE Computational Intelligence Society (2008-09, 2004-05; member)
- Conference Committee of the IEEE Neural Network Council/Society (2003, 2001, 2000; member)
- Technical Meetings Review Committee of the Technical Committee on Test Technologies of the IEEE Computer Society (2000, member)

Publication coordination committees of international scientific associations

- IEEE Publication Services and Products Board (2013, member)
- IEEE PSPB Strategic Planning Committee (2013, 2009-11, member)
- IEEE TAB/PSPB Products & Services Committee (2013, 2008-09, 2005-06, member)
- IEEE PSPB Nominations and Appointments Committee (2013, member)
- Vice-President for Publications of the IEEE Systems Council (2008-11)
- IEEE Systems Council Publications Committee (2008-11, chair)
- Publications Committee of the IEEE Computational Intelligence Society (2008, member)
- Working Group 2 "Practical Content" of the IEEE PSPB strategic planning experiments (2006, member)
- Vice-President for Publications of the IEEE Instrumentation and Measurement Society (2002-04)
- IEEE Instrumentation and Measurement Society Publications Committee (2002-04, chair)

Educational coordination committees of international scientific associations

- IEEE Biometrics Certification Committee (2008-13; chair)
- Vice President for Education of the IEEE Biometrics Council (2008-09)

- IEEE Biometrics Council Education Committee (2008-09, chair)
- IEEE EAB/SA Standards Education Committee (2008; member)
- Liaison of the IEEE Educational Activity Board to the IEEE TAB PSPB Product and Services Committee (2008)

Member services coordination committees of international scientific associations

- Meritorious Service Award Sub-Committee of the IEEE Computational Intelligence Society (2012-13, member)
- History Sub-Committee of the IEEE Computational Intelligence Society (2008, member)
- IEEE RAB Transnational Committee (2005, member)
- Vice-President for Members Activities of the IEEE Neural Networks Society (2003-04)
- IEEE Neural Networks Society Members Activities Committee (2003-04, chair)
- Women in Computational Intelligence Committee of the IEEE Computational Intelligence Society (2004-05, member)
- IEEE Student Branch at Politecnico di Milano (1993-2004, counselor)

Coordination and management committees of international scientific associations

- IEEE Past Vice President for Technical Activities (2016)
- IEEE Board of Directors (2015, 2010-12, member)
- IEEE Vice President for Technical Activities (2015)
- IEEE Nominations and Appointments Committee (2014, member)
- IEEE Strategic Planning AdHoc Committee (2014, member)
- IEEE Vice President-elect for Technical Activities (2014)
- IEEE TAB Presidents' Forum (2014, chair)
- IEEE TAB Management Committee (2014, member)
- IEEE TAB Nominations and Appointments Committee (2014, chair)
- IEEE TAB-SPC Global Perspectives Ad-Hoc Committee (2014, chair; 2013, member)
- IEEE TAB Biometrics Council Steering Commitee (2013-14, member)
- IEEE TAB Strategic Planning Committee (2011-14, member)
- IEEE TAB-SPC Subcommittee on Community Initiation (2013, chair)
- IEEE TAB Conflict Resolution Committee (2013, member)
- IEEE Public Visibility Committee (2012-13, member)
- IEEE Brand Ambassadors Program (2012, speaker)
- IEEE Director - Division X Director (2010-12)
- IEEE Technical Activities Board (2010-12, 2006-07; member)
- IEEE Assembly (2010-12, member)
- IEEE Division X Delegate (2010-12)
- IEEE TAB Ethics and Conflict Resolution Committee (2011-12, member)
- Finance Committee of the IEEE Computational Intelligence Society (2012-13, 2008-09, member)
- IEEE Division X Nominations Committee (2005, member; 2011, chair)
- IEEE PSPB Nominations and Appointments Committee (2010-11, member)
- IEEE Systems Council Administrative Committee (2008-11, member)
- IEEE Biometrics Council Administrative Committee (2008-09, member)
- Constitution and Bylaws Committee of the IEEE Computational Intelligence Society (2008-09, chair; 2013, member)
- Nominations Committee of the IEEE Computational Intelligence Society (2008-09, chair)
- Past-President of the IEEE Computational Intelligence Society (2008-09)
- IEEE Computational Intelligence Society Administrative Committee (2005-08, member)
- President of the IEEE Computational Intelligence Society (2006-07)
- President-Elect of the IEEE Computational Intelligence Society (2005)
- IEEE Instrumentation and Measurement Society Administrative Committee (1998-2005, member)
- Nomination and Appointment Committee of the IEEE Neural Networks Society (2004, member)
- IEEE Neural Networks Society Administrative Committee (2003-04, member)
- IEEE Neural Networks Council Administrative Committee (2002, member)

Award committees of international scientific associations

- IEEE Frank Rosenblatt Award Committee (2013, 2009, 2005, member; 2014, 2006-08, chair)
- IEEE TAB Hall of Honor Selection Committee (2013, member)

- IEEE Systems Council Fellow Evaluation Committee (2013, member)
- Fred Castro Lifetime Achievement Award of the Web Education Foundation (2013, member)
- IEEE Technical Field Awards Council Committee (2006-08, member)
- IEEE Joseph F. Keithley Award Committee (2002-04, member)

National scientific associations

- Scientific Council of the Italian Society for Neural Networks SIREN (since 2009, 2000-04; member)
- IEEE Systems Council Italy Chapter (2008-09, founding chair)
- IEEE Biometrics Council Italy Chapter (2009, founding chair)
- Executive Council of the Specialistic Group "Information Technology and Applications" of the Associazione Elettrotecnica ed Elettronica Italiana (AEI) (2001-03, member)
- North-Italy Chapter of the IEEE Instrumentation and Measurement Society (1993-2000, secretary)
- North-Italy Chapter of the IEEE Computer Society (1991-2000, secretary)
- Representative of the Associazione Elettrotecnica ed Elettronica Italiana (AEI) to Politecnico di Milano (1990-2000)
- General Council of the Associazione Elettrotecnica ed Elettronica Italiana (AEI) (1998-99, member)
- Associazione Elettrotecnica ed Elettronica Italiana (AEI) - Milano Section (1995-97, secretary)
- Associazione Elettrotecnica ed Elettronica Italiana (AEI) - Milano Section (1992-95, vice secretary)

9 Publications

9.1 Research books and chapters in books published by international publishers with scientific editorial board

BC–1 R. Jhawar, V. Piuri, "Dependability-Oriented Resource Management Schemes for Cloud Computing Data Centers ", in *Handbook on Data Centers*, A.Y. Zomaya, S.U. Khan (eds.), Springer, 2014.

BC–2 M. Albanese, S. Jajodia, R. Jhawar, V. Piuri, "Securing Mission-Centric Operations in the Cloud", in *Secure Cloud Computing*, S. Jajodia, K. Kant, P. Samarati, V. Swarup, C. Wang (eds.), Springer, 2014. ISBN: 978-1-4614-9277-1.

BC–3 F. Bellocchio, N.A. Borghese, S. Ferrari, V. Piuri, *3D Surface Reconstruction: Multi-Scale Hierarchical Approaches*, Springer, 2013. ISBN: 978-1-4614-5631-5.

BC–4 A. Amato, V. Di Lecce, V. Piuri, *Semantic Analysis and Understanding of Human Behavior in Video Streaming*, Springer, 2013. ISBN: 978-1-461-45485-4.

BC–5 S. De Capitani di Vimercati, A. Genovese, G. Livraga, V. Piuri, F. Scotti, "Privacy and Security in Environmental Monitoring Systems: Issues and Solutions", in *Computer and Information Security Handbook, 2nd Edition*, J. Vacca (ed.), Morgan Kaufmann, pp. 835-853, 2013. ISBN: 978-0-1239-4397-2.

BC–6 R. Jhawar, V. Piuri, "Fault Tolerance and Resilience in Cloud Computing Environments", in *Computer and Information Security Handbook, 2nd Edition*, J. Vacca (ed.), Morgan Kaufmann, pp. 125-141, 2013. ISBN: 978-0-1239-4397-2.

BC–7 R. Donida Labati, A. Genovese, V. Piuri, F. Scotti, "Iris segmentation: state of the art and innovative methods", in *Cross Disciplinary Biometric Systems*, C. Liu, V.K. Mago (eds.), Springer, pp. 151-182, 2012. ISBN: 978-3-642-28457-1. [DOI: 10.1007/978-3-642-28457-1_8]

BC–8 R. Donida Labati, V. Piuri, F. Scotti, "Biometric Privacy Protection: Guidelines and Technologies", in *Communications in Computer and Information Science*, M. S. Obaidat, J.S. Sevillano, F. Joaquim (eds.), Springer, pp. 3-19, 2012. ISBN: 978-3-642-35754-1. [DOI: 10.1007/978-3-642-35755-8_1]

BC–9 S. Cimato, M. Gamassi, V. Piuri, R. Sassi, F. Scotti, "Privacy in biometrics", in *Biometrics: theory, methods, and applications*, N.V. Boulgouris, K.N. Plataniotis, E. Micheli-Tzanakou (eds.), Wiley-IEEE Press, pp. 633-654, 2009. ISBN: 978-0-470-24782-2.

BC–10 A. Ferrante, S. Chandra, V. Piuri, "IPSec database query acceleration", in *E-business and telecommunications*, J. Filipe, M.S. Obaidat (eds.), Springer, pp. 188-200, 2008. ISBN: 978-3-540-88652-5. [DOI: 10.1007/978-3-540-88653-2_14]

BC–11 S. Cimato, M. Gamassi, V. Piuri, R. Sassi, F. Scotti, "Privacy Issues in Biometric Identification", in *Touch Briefings*, Business Briefings LtD, pp. 40-42, 2006. ISBN: 1-905-05296-0.

BC–12 C. Alippi, V. Piuri, F. Scotti, "High-level design of composite systems", in *Soft computing in software engineering: theory and applications*, E. Damiani, L.C. Jain, M.Madravio (eds.), Springer, pp. 183-220, 2004. ISBN: 3-540-22030-5.

BC–13 S. Ferrari, V. Piuri, "Neural networks in intelligent sensors and measurement systems for industrial applications", in *Neural networks for instrumentation, measurement, and related industrial applications*, S. Ablameyko, L. Goras, M. Gori, V. Piuri (eds.), IOS Press, pp. 19-42, 2003. ISBN: 1-586-03303-4.

BC–14 V. Piuri, S. Ablameyko, "Introduction to neural networks for instrumentation, measurement, and industrial applications", in *Neural networks for instrumentation, measurement and related industrial applications*, S. Ablameyko, L. Goras, M. Gori, V. Piuri (eds.), IOS Press, pp. 1-7, 2003. ISBN: 1-586-03303-4.

BC–15 D. D'Amore, V. Piuri, "Behavioral simulation of neural networks: an approach based upon SPICE", in *Network models for control and processing*, M. Fraser (ed.), Intellect, pp. 109-142, 2000. ISBN: 978-1-841-50006-5.

BC–16 C. Alippi, V. Piuri, "Neural networks for identification, control, robotics, signal and image processing", in *Encyclopedia of computer science and technology*, A. Kent, J. Williams (eds.), Marcel Dekker, New York, pp. 171-193, 1998. ISBN: 0-824-72292-2.

BC–17 A. Ferrero, V. Piuri, "Soft-computing and virtual environment-based applications", in *Instrumentation and measurement technology and applications*, E.M. Petriu (ed.), IEEE Press, pp. 453-457, 1998. ISBN: 0-780-34268-2.

BC–18 S. Wang, V. Piuri, "A unified view of CORDIC processor design", in *Application specific processors*, E.E. Swartzlander Jr. (ed.), Kluwer, pp. 121-160, 1997. ISBN: 0-792-39792-4.

BC–19 V. Piuri, "FAPES: an expert system for designing and optimising fault-tolerant arithmetic array processors", in *Robotic systems and AMT*, G. Halevi, R. Weill, I. Yudilevich (eds.), Elsevier, pp. 267-278, 1990. ISBN: 0-444-88828-4.

9.2 Refereed international journals articles

IJ–1   R. Donida Labati, A. Genovese, V. Piuri, F. Scotti, "Touchless Fingerprint Biometrics: a Survey on 2D and 3D Technologies", in *Journal of Internet Technology*, 2014. ISSN: 1607-9264. (Accepted)

IJ–2   C. A. Ardagna, R. Jhawar, V. Piuri, "Dependability Certification of Services: A Model-Based Approach", in *Computing*, Springer, PP. 1-28, October, 2013. ISSN: 0010-485X. [DOI: 10.1007/s00607-013-0348-7]

IJ–3   R. Jhawar, V. Piuri, M. D. Santambrogio, "Fault Tolerance Management in Cloud Computing: A System-Level Perspective", in *IEEE Systems Journal*, pp. 288-297, June, 2013. ISSN: 1932-8184. [DOI: 10.1109/JSYST.2012.2221934]

IJ–4   R. Donida Labati, A. Genovese, V. Piuri, F. Scotti, "Wildfire Smoke Detection using Computational Intelligence Techniques Enhanced with Synthetic Smoke Plume Generation", in *IEEE Transactions on Systems, Man and Cybernetics Part A: Systems and Humans*, pp. 1003-1012, June, 2013. ISSN: 1083-4427. [DOI: 10.1109/TSMCA.2012.2224335]

IJ–5   F. Bellocchio, S. Ferrari, V. Piuri, N.A. Borghese, "Hierarchical approach for multi-scale support vector regression", in *IEEE Transactions on Neural Networks and Learning Systems*, September, pp. 1448-1460, September, 2012. ISSN: 1045-9227. [DOI: 10.1109/TNNLS.2012.2205018]

IJ–6   M. Calabrese, A. Amato, V. Di Lecce, V. Piuri, "Hierarchical-granularity holonic modelling", in *Journal of Ambient Intelligence and Humanized Computing*, Springer, pp. 199-209, September, 2010. ISSN: 1868-5137. [DOI: 10.1007/s12652-010-0013-3]

IJ–7   F. Scotti, V. Piuri, "Adaptive Reflection Detection and Location in Iris Biometric Images by Using Computational Intelligence Techniques", in *IEEE Transactions on Instrumentation and Measurement*, pp. 1825-1833, July, 2010. ISSN: 0018-9456. [DOI: 10.1109/TIM.2009.2030866]

IJ–8   V. Piuri, F. Scotti, "Design of an Automatic Wood Types Classification System by Using Fluorescence Spectra", in *IEEE Transactions on Systems, Man, and Cybernetics, Part C: Applications and Reviews*, pp. 358-366, May, 2010. ISSN: 1094-6977. [DOI: 10.1109/TSMCC.2009.2039479]

IJ–9   S. Ferrari, F. Bellocchio, V. Piuri, N.A. Borghese, "A Hierarchical RBF Online Learning Algorithm for Real-Time 3-D Scanner", in *IEEE Transactions on Neural Networks*, pp. 275-285, February, 2010. ISSN: 1045-9227. [DOI: 10.1109/TNN.2009.2036438]

IJ–10 W. Pedrycz, A. Amato, V. Di Lecce, V. Piuri, "Fuzzy Clustering With Partial Supervision in Organization and Classification of Digital Images", in *IEEE Transactions on Fuzzy Systems*, pp. 1008-1026, August, 2008. ISSN: 1063-6706. [DOI: 10.1109/TFUZZ.2008.917287]

IJ–11 S. Ferrari, G. Ferrigno, V. Piuri, N.A. Borghese, "Reducing and Filtering Point Clouds With Enhanced Vector Quantization", in *IEEE Transactions on Neural Networks*, pp. 161-177, January, 2007. ISSN: 1045-9227. [DOI: 10.1109/TNN.2006.886854]

IJ–12 F. Amigoni, A. Brandolini, V. Caglioti, V. Di Lecce, A. Guerriero, M. Lazzaroni, F. Lombardi, R. Ottoboni, E. Pasero, V. Piuri, O. Scotti, D. Somenzi, "Agencies for perception in environmental monitoring", in *IEEE Transactions on Instrumentation and Measurement*, pp. 1038-1050, August, 2006. ISSN: 0018-9456. [DOI: 10.1109/TIM.2006.877747]

IJ–13 M. Choi, N. Park, V. Piuri, F. Lombardi, "Reliability measurement of mass storage system for onboard instrumentation", in *IEEE Transactions on Instrumentation and Measurement*, pp. 2297-2304, December, 2005. ISSN: 0018-9456. [DOI: 10.1109/TIM.2005.858514]

IJ–14 S. Ferrari, I. Frosio, V. Piuri, N.A. Borghese, "Automatic multiscale meshing through HRBF networks", in *IEEE Transactions on Instrumentation and Measurement*, pp. 1463-1470, August, 2005. ISSN: 0018-9456. [DOI: 10.1109/TIM.2005.851471]

IJ–15 M. Gamassi, M. Lazzaroni, M. Misino, V. Piuri, D. Sana, F. Scotti, "Quality assessment of biometric systems: a comprehensive perspective based on accuracy and performance measurement", in *IEEE Transactions on Instrumentation and Measurement*, pp. 1489-1496, August, 2005. ISSN: 0018-9456. [DOI: 10.1109/TIM.2005.851087]

IJ–16 M. Choi, N. Park, V. Piuri, F. Lombardi, "Evaluating the repair of system-on-chip (SoC) using connectivity", in *IEEE Transactions on Instrumentation and Measurement*, pp. 1464-1472, December, 2004. ISSN: 0018-9456. [DOI: 10.1109/TIM.2004.834603]

IJ–17 D. Ardagna, C. Francalanci, V. Piuri, "Designing and rightsizing the information system architecture", in *Information Systems Frontiers*, Springer, pp. 229-245, September, 2004. ISSN: 1387-3326. [DOI: 10.1023/B:ISFI.0000037878.11967.50]

IJ–18 M. Choi, N. Park, V. Piuri, Y.-B. Kim, F. Lombardi, "Balanced dual-stage repair for dependable embedded memory cores", in *Journal of Systems Architecture*, pp. 281-285, April, 2004. ISSN: 1383-7621. [DOI: 10.1016/j.sysarc.2003.08.004]

IJ–19 W.P.M. Allen, D.G. Bailey, S.N. Demidenko, V. Piuri, "Analysis and application of digital spectral warping in analog and mixed-signal testing", in *IEEE Transactions on Reliability*, pp. 444-457, December, 2003. ISSN: 0018-9529. [DOI: 10.1109/TR.2003.821933]

IJ–20 C. Alippi, C. de Russis, V. Piuri, "A neural-network based control solution to air-fuel ratio control for automotive fuel-injection systems", in *IEEE Transactions on Systems, Man, and Cybernetics, Part C: Applications and Reviews*, pp. 259 -268, May, 2003. ISSN: 1094-6977. [DOI: 10.1109/TSMCC.2003.814035]

IJ–21 G. Bertoni, L. Breveglieri, I. Koren, P. Maistri, V. Piuri, "Error analysis and detection procedures for a hardware implementation of the advanced encryption standard", in *IEEE Transactions on Computers*, pp. 492-505, April, 2003. ISSN: 0018-9340. [DOI: 10.1109/TC.2003.1190590]

IJ–22 S. Demidenko, V. Piuri, "Concurrent diagnosis in digital implementations of neural networks", in *Neurocomputing*, Elsevier, pp. 879-903, October, 2002. ISSN: 0925-2312. [DOI: 10.1016/S0925-2312(01)00678-6]

IJ–23 M. Choi, N. Park, F. Lombardi, V. Piuri, "Quality enhancement of reconfigurable multichip module systems by redundancy utilization", in *IEEE Transactions on Instrumentation and Measurement*, pp. 740-749, August, 2002. ISSN: 0018-9456. [DOI: 10.1109/TIM.2002.803305]

IJ–24 L. Breveglieri, V. Piuri, "Digital Median Filters", in *The Journal of VLSI Signal Processing*, Springer, pp. 191-206, July, 2002. ISSN: 1939-8018. [DOI: 10.1023/A:1015487418553]

IJ–25 N. Park, F. Lombardi, V. Piuri, "Testing and evaluating the quality-level of stratified multichip module instrumentation", in *IEEE Transactions on Instrumentation and Measurement*, pp. 1615-1624, December, 2001. ISSN: 0018-9456. [DOI: 10.1109/19.982955]

IJ–26 S. Ferrari, A. Borghese, V. Piuri, "Multiscale models for data processing: an experimental sensitivity analysis", in *IEEE Transactions on Instrumentation and Measurement*, pp. 995-1002, August, 2001. ISSN: 0018-9456. [DOI: 10.1109/19.948314]

IJ–27 A. Antola, F. Ferrandi, V. Piuri, M. Sami, "Semiconcurrent error detection in data paths", in *IEEE Transactions on Computers*, pp. 449-465, May, 2001. ISSN: 0018-9340. [DOI: 10.1109/12.926159]

IJ–28 C. Alippi, V. Piuri, F. Scotti, "Accuracy versus Complexity in RBF Neural Networks: A System Level Design Approach", in *IEEE Instrumentation and Measurement Magazine*, pp. 32-36, March, 2001. ISSN: 1094-6969. [DOI: 10.1109/5289.911171]

IJ–29 V. Piuri, "Analysis of fault tolerance in artificial neural networks", in *Journal of Parallel and Distributed Computing*, Academic Press, pp. 18-48, January, 2001. ISSN: 0743-7315. [DOI: 10.1006/jpdc.2000.1663]

IJ–30 H. Lim, V. Piuri, E.E., Jr. Swartzlander, "A serial-parallel architecture for two-dimensional discrete cosine and inverse discrete cosine transforms", in *IEEE Transactions on Computers*, pp. 1297-1309, December, 2000. ISSN: 0018-9340. [DOI: 10.1109/12.895848]

IJ–31 C. Alippi, E. Casagrande, F. Scotti, V. Piuri, "Composite real-time image processing for railways track profile measurement", in *IEEE Transactions on Instrumentation and Measurement*, pp. 559-564, June, 2000. ISSN: 0018-9456. [DOI: 10.1109/19.850395]

IJ–32 L. Benetazzo, M. Bertocco, F. Ferraris, A. Ferrero, C. Offelli, M. Parvis, V. Piuri, "A Web-based distributed virtual educational laboratory", in *IEEE Transactions on Instrumentation and Measurement*, pp. 349 -356, April, 2000. ISSN: 0018-9456. [DOI: 10.1109/19.843077]

IJ–33 C. Alippi, V. Piuri, "Neural modeling of dynamic systems with nonmeasurable state variables", in *IEEE Transactions on Instrumentation and Measurement*, IEEE, pp. 1073-1080, December, 1999. ISSN: 0018-9456. [DOI: 10.1109/19.816116]

IJ–34 F. Marino, V. Piuri, E.E., Jr. Swartzlander, "A parallel implementation of the 2-D discrete wavelet transform without interprocessor communications", in *IEEE Transactions on Signal Processing*, pp. 3179-3184, November, 1999. ISSN: 1053-587X. [DOI: 10.1109/78.796458]

IJ–35 C. Alippi, F. Casamatta, L. Furlan, A. Pelagotti, V. Piuri, "NeSS: a Simulation Environment for Behavioral Design of Neural Networks for Prediction and Control", in *Integrated Computer-Aided Engineering*, IOS Press, pp. 223-232, August, 1999. ISSN: 1069-2509.

IJ–36 C. Citterio, A. Pelagotti, V. Piuri, L. Rocca, "Function approximation-fast-convergence neural approach based on spectral analysis", in *IEEE Transactions on Neural Networks*, pp. 725-740, July, 1999. ISSN: 1045-9227. [DOI: 10.1109/72.774207]

IJ–37 A. Ferrero, V. Piuri, "A simulation tool for virtual laboratory experiments in a WWW environment", in *IEEE Transactions on Instrumentation and Measurement*, pp. 741-746, June, 1999. ISSN: 0018-9456. [DOI: 10.1109/19.772214]

IJ–38 C. Francalanci, V. Piuri, "Designing Information Technology Architectures: a Cost-Oriented Methodology", in *Journal of Information Technology*, Palgrave Macmillan (invited paper), pp. 181192, June, 1999. ISSN: 0268-3962. [DOI: 10.1080/026839699344674]

IJ–39 C. Alippi, F. Fummi, V. Piuri, M. Sami, D. Sciuto, "Testability analysis and behavioral testing of the Hopfield neural paradigm", in *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, pp. 507-511, September, 1998. ISSN: 1063-8210. [DOI: 10.1109/92.711323]

IJ–40 S. Bettola, V. Piuri, "High performance fault-tolerant digital neural networks", in *IEEE Transactions on Computers*, pp. 357-363, March, 1998. ISSN: 0018-9340. [DOI: 10.1109/12.660173]

IJ–41 S. Wang, V. Piuri, E.E. Swartzlander, Jr., "Hybrid CORDIC algorithms", in *IEEE Transactions on Computers*, pp. 1202-1207, November, 1997. ISSN: 0018-9340. [DOI: 10.1109/12.644295]

IJ–42 A. Pelagotti, V. Piuri, "Entropic analysis and incremental synthesis of multilayered feedforward neural networks", in *International Journal of Neural Systems, World Scientific*, pp. 647-659, October, 1997. ISSN: 0129-0657. [DOI: 10.1142/S0129065797000574]

IJ–43 C. Alippi, V. Piuri, "Experimental neural networks for prediction and identification", in *IEEE Transactions on Instrumentation and Measurement*, pp. 670-676, April, 1996. ISSN: 0018-9456. [DOI: 10.1109/19.492807]

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