

## Antonio Moschitta



**Current Position:** Associate Professor at University of Perugia (Italy), Department of Engineering, scientific sector 09/E4 (Measurements)

### Affiliations

- Member of IEEE, IEEE Instrumentation and Measurement Society, IEEE Standards Association
- Member of the IEEE Technical Committee “TC-10 - Waveform Generation, Measurement & Analysis”
- Member of GMEE (Italian Group of Electric and Electronic Measurements)

### Contact Information

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### Past and present Research activities

- Past activities:
  - a. Characterization of Analog-to-Digital Converters (ADCs), Digital-to-Analogic Converters (DACs), and Time-to-Digital Converters (TDCs)
  - b. Measurements for Power Quality monitoring
  - c. Time-domain reflectometric techniques for environmental monitoring and parametric estimation
  - d. Generation of testing signals with high spectral purity
- Present activities:
  - a. Short Range Positioning Systems, based on ultrasound signaling and on use of inductively coupled wireloop antennas.
  - b. Accurate parametric characterization of waveforms using quantized data
  - c. Characterization of State of Charge and State of Health of rechargeable batteries

### Scientific Output (as of January 27, 2022)

- 68 papers on International Journals, 4 book chapters, 85 papers published in the Proceedings of International Conferences
- Scopus citations and h-index: 1597 citations (Google Scholar: 2050), h-index=20 (Google Scholar: 24)

## Biographic elements and Education

- 2022** Foreign member of **Expert teams** for the Polish National Science Centre member of panel “ST7-Systems and Communication Engineering”, calls OPUS 2022 e PRELUDIUM 2022
- 2020** Achieves **National Academic Qualification as Full Professor**, scientific sector 09/E4 (Measurements), valid from June 17, 2020, to June 17, 2029
- 2019** Foreign member of **Expert teams** for the Polish National Science Centre member of panel “ST7-Systems and Communication Engineering”, calls OPUS 2019 e PRELUDIUM 2019
- 2019** Joins University of Perugia, Department of Engineering, as **Associate Professor**, scientific sector ING-INF/07
- 2015** **Chair** of the IEEE Systems Council Italian Chapter
- 2014** Achieves **National Academic Qualification as Associate Professor**, scientific sector 09/E4 (Measurements), valid from December 4, 2014, to December 4, 2020
- 2013** Achieves **National Academic Qualification as Associate Professor**, scientific sector 09/E4 (Measurements), valid from December 20, 2013 to December 20, 2019
- 2013** **Program Chair** and **treasurer** of International Congress “**IEEE 2013 Nordic Mediterranean Workshop on Time-to-Digital Converters**” **NoMe TDC 2013, Perugia, Italia, October 3, 2013.**
- 2012** **Vice-president** of the IEEE Systems Council Italian Chapter
- 2012** **Director of Studies** of "The Bradford-Perugia Master in Business Administration (MBA)", Joint Master Programme Degree between the University of Perugia and University of Bradford-School of Management
- 2011** **Associate Lecturer** of "The Bradford-Perugia Master in Business Administration (MBA)", Joint Master Programme Degree between the University of Perugia and University of Bradford-School of Management, per il Modulo "Management of Information Systems"
- 2010** **Secretary** of the IEEE Systems Council Italian Chapter
- 2009** Associate member of the “Istituto Nazionale di Fisica Nucleare” **INFN**, Perugia Section.
- 2005** Attends and completes the final test of the **Quality Management System Auditor** course “Auditor di Sistemi di Gestione per la Qualità” (CEPAS record n. 74), organized by 3A-PTA Consortium, on December 21, 2005.
- 2004** **Assistant Professor** at University of Perugia, scientific sector ING-INF/07 (Electric and Electronic Measurements, permanently confirmed on 3/1/2008)
- 2003** **Research Assistant** at the Department of Electronic and Information Engineering of University of Perugia
- 2002** **Ph.D. Degree** in Electronic Engineering, IV Cycle, at University of Perugia. Final Dissertation Title: “*Bandpass Sigma-Delta Conversion in Digital Communication Systems*”.
- 2001** **Research Assistant** at the Department of Electronic and Information Engineering of University of Perugia
- 1999** **Master Degree in Computational Engineering**, organized by “Materials Engineering Degree Course” of University of Perugia, Department of Industrial Engineering (100/100). The final stage, was focused on non-destructive magnetic tests for identification of defects in metallic materials.
- 1998** **Degree in Electronic Engineering**, at the University of Perugia (110/110). The final dissertation, titled “*Performance Measurements for Digital Television Transmitters*”, was developed in cooperation with the ITELCO S.p.A. Orvieto

## **Organizational and Editorial Activities** (as of November 8 2022)

### *Journals*

- Section and Editorial Board Member of MDPI Sensors, ISSN 1424-8220; CODEN: SENSC9
- Guest Editor of Special Issue on “Time-to-Digital Converters, Time-Mode Approaches and Applications”, Elsevier Measurement.
- Lead Guest Editor of Special Issue on “Applications of Wireless Sensors in Localization and Tracking”, MDPI Sensors, ISSN 1424-8220; CODEN: SENSC9
- Lead Guest Editor of Special Issue “Indoor Positioning Techniques”, MDPI Electronics, ISSN 2079-9292, CODEN: ELECGJ
- Associate Editor of IEEE Journal on Miniaturization for Air and Space Systems

### *Conferences*

- Member of the Organizing Committee of IEEE International Instrumentation and Measurement Technology Conference (I<sup>2</sup>MTC) from 2010 to 2022, co-Chair for track “Signal Processing Techniques in Measurement” in I<sup>2</sup>MTC from 2017 to 2022
- Co-chair of the 3rd International Nordic-Mediterranean Workshop on Time-to-Digital Converters and Applications NoMe–TDC 2019, May, 27-29, 2019 Wien, Austria
- Program Committee Member of 1st IEEE International Conference on Human-Machine Systems, IEEE ICHMS 2020, April 6-8, 2020, Rome, Italy
- IEEE Workshop on Environmental, Energy, and Structural Monitoring Systems (IEEE EESMS): 2011 (TPC and publication co-Chair), 2012 (TPC and General co-Chair), 2013, 2014, 2015, 2016;
- IEEE 2013 Nordic Mediterranean Workshop on Time to Digital Converters (IEEE NoMe TDC 2013): TPC and Program co-Chair;
- IEEE Modeling & Simulation for Autonomous Systems (MESAS 2017);
- IMEKO 2011 International Workshop on Analog to Digital Converters (IWADC 2011).
  
- Member of the Organizing Committee of the 2019 IEEE International Symposium on Measurement and Networking” IEEE M&N 2019
- Member of the Organizing Committee and Special Session Chair of the 2017 IEEE International Workshop on Measurement and Networking” IEEE M&N 2017
- Member of the Organizing Committee and Special Session Chair of the 2015 IEEE International Workshop on Measurement and Networking” IEEE M&N 2015

### *Organizations:*

- Chair of the IEEE Systems Council Italian Chapter from 2015 to 2021

### *Reviewing*

Antonio Moschitta is a reviewer for several Journals, that include IEEE Transactions on Instrumentation and Measurements, IEEE Transactions on Circuits and Systems, IEEE Instrumentation and Measurements Magazine, IEEE Communications Letters, International Journal on Computer Standards & Interfaces, Elsevier Measurement Journal, Hindawi Journal on Mobile Information Systems, MDPI Sensors Journal, MDPI Journal on Applied Sciences, IET Journal on Radar, Sonar and Navigation, IEEE Communication Letters, IEEE Access, ACTA IMEKO.

## Research Projects

Antonio Moschitta has been involved in various research projects, including, project 2008.020.0169, "Development of Environmental Monitoring Systems Based on Time Domain Reflectometric Techniques", funded by Fondazione Cassa di Risparmio di Perugia, project 2008.021.0415, "Saw-tooth Chaotic Maps in Discretization Problems", funded by Fondazione Cassa di Risparmio di Perugia, **PRIN Project 2008TK5B55**, "Methodologies and measurement techniques for spatio-temporal localization in wireless sensor networks", project COTR09SS "Analytic Models for Supply Chain Performance Evaluation", funded by Fondazione Cassa di Risparmio di Terni (CARIT), and project 2010-011.0440 "Apparata for power quality characterization", Funded by Fondazione Cassa di Risparmio di Perugia, and **PRIN project 2015C37B25 "Six DOF scalable finger tracking system"**. On 2014 he worked on an ultrasound based indoor positioning system in cooperation with "Società delle Fucine", a company of the Acciai Speciali Terni Group.

## Teaching

Antonio Moschitta performs educational activities at the University of Perugia, holding courses since 2003. He is also member of course and degree boards of the following "Electronic and Information Engineering Degree Course" and "Industrial Engineering Degree Course", organized by the Department of Engineering, and of "Techniques of Medical Radiology, Imaging and Radiotherapy Degree Course", organized by the Department of Surgery and Biomedical Sciences. He coordinated over 40 degree theses as relator and co-relator. He was advisor of 3 Ph. D. Students.

His courses are focused on: Electric and Electronic Measurements, Electronic Instrumentation, Distributed Measurement Systems, Bioimaging.

## Software/Programming

C,C++,Matlab, Microsoft Office (Word Excel Powerpoint), Autodesk Eagle

## References

- Prof. Paolo Carbone, Dipartimento di Ingegneria, Università degli Studi di Perugia, Tel. 075-5853629, email: [paolo.carbone@unipg.it](mailto:paolo.carbone@unipg.it).
- Prof. Johan Schoukens, Electrical Engineering Department, Vrije Universiteit Brussel, Belgium, email: [Johan.Schoukens@vub.ac.be](mailto:Johan.Schoukens@vub.ac.be).
- Prof. Dario Petri, Dipartimento di Ingegneria Industriale, Università di Trento, Tel. 0461-283902, email: [dario.petri@unitn.it](mailto:dario.petri@unitn.it)