

# Curriculum Vitae

Alessio De Angelis

## Education

- Feb. 2009      PhD degree (“Dottorato di ricerca”) in Information Engineering, obtained from the University of Perugia, Italy with a dissertation entitled “Realization of a UWB-based Position Measurement System”, focused on the design and characterization of a complete radio indoor positioning system.
- Nov. 2004      MSc degree (“Laurea”) in Electronic Engineering (5 years university course), obtained from the University of Perugia, Italy.

## Research Experience

- May 2018 - pres.    Associate professor, Department of Engineering, University of Perugia, Italy. Teaching courses and working on research projects in the Instrumentation and Measurement field. He obtained the “Abilitazione Scientifica Nazionale, I fascia”, National Scientific Qualification for University professors, on June 17th, 2020.
- May 2015 - May 2018    Department of Engineering, University of Perugia, Italy. Tenure-track researcher (RTD-B). Responsible for research projects on short-range positioning systems based on inductive coupling, dissemination of time reference, and wireless power transfer. Developed parallel research activities on system identification through an international cooperation. In the context of the “Valutazione della Qualità della Ricerca (VQR) 2011-2014”, the Italian national evaluation of research quality, the research products he was required to submit for evaluation obtained a rating of 1, the highest rating. He obtained the “Abilitazione Scientifica Nazionale, II fascia”, National Scientific Qualification for University professors, on March 28th, 2017.
- Sept. 2017      Visiting researcher at Vrije Universiteit Brussel, Department ELEC, Brussels, Belgium. Research collaboration with Prof. Johan Schoukens on the topic of ternary sequences for frequency-domain system identification.
- Jul. 2013 - May 2015    Department of Engineering, University of Perugia, Italy. Researcher (RTD-A). Involved in research projects on magnetic-field localization, industrial ultrasound positioning, robust calibration methods, and synchronization.
- Jan. 2012 - Jul. 2013    Signal Processing Lab, Royal Institute of Technology (KTH), Stockholm, Sweden. Researcher. The position, starting from the Post-doc appointment in 2010, allowed for acquiring a good research independence, thanks to the involvement in the preparation of successful applications for several Swedish and international research projects, and to the responsibility in procuring research infrastructure for the lab. Furthermore, a fruitful interaction has been established with researchers in an international environment, resulting in several joint publications. Finally, experience has been obtained by creating and coordinating a research group in UWB indoor positioning, composed of two post-docs, one PhD student and five Master- and Bachelor-thesis students.

- Jan. 2010 - 2012 Signal Processing Lab, Royal Institute of Technology (KTH), Stockholm, Sweden. Post-doctoral researcher, funded by a scholarship awarded by the ACCESS Linnaeus Centre (Autonomic Complex Communication nEtworks, Signals and Systems), after a competitive selection (three positions awarded out of a total of more than 60 evaluated submissions).
- Jan. - Dec. 2009 DIEI (Department of Electronic and Information Engineering), University of Perugia, Italy. Researcher for the project: "Realization of indoor positioning systems".
- Jun. - Dec. 2008 Signal Processing Lab, Royal Institute of Technology (KTH), Stockholm, Sweden. Visiting researcher under the supervision of prof. Peter Händel. Performed research on the topic: "Ultra-Wideband Indoor Positioning and Tracking Systems". Funded by a grant for abroad research awarded by the Italian GMEE association.
- 2005 - 2008 DIEI, University of Perugia, Italy. PhD student in Information Engineering under the supervision of prof. Paolo Carbone. Performed experimental research in the Ultra-Wideband indoor positioning area. Designed, implemented and characterized several ranging and positioning devices, based on accurate measurements of the time-of-flight of Ultra-Wideband pulses. Performed a parallel activity in the Image Quality Assessment field, focusing on metrological aspects.

### **Involvement in Scientific Projects in the Instrumentation and Measurement Field**

- 2018 - 2020 Italian Ministry of Education, University and Research (MIUR). Participant in the research project "6 DOF Finger Tracking", aimed at developing a system for accurate hand and finger tracking.
- 2015 - 2018 Italian Ministry of Education, University and Research (MIUR). PI for the research project "Robust methods and systems for localization in GNSS-challenged environments", funded by the Italian national Programme for Young Researchers "Rita Levi Montalcini". One of two funded grants in the Engineering macro-area in the 2012 Call.
- 2011 - 2013 Swedish Agency for Innovation Systems (VINNOVA) and Indian Department of Science and Technology (DST). Joint Indo-Swedish project on Embedded Systems: "Development of wireless sensor based experimental prototype for estimation of position/navigation parameters of objects in a short enclosed range, using co-operative localization techniques based on multiple sensor data".
- 2010 - 2011 European Union. European Institute of Technology (EIT). ICT Labs, Stockholm.

### **Teaching and Supervision Experience**

- 2018 - pres. University of Perugia, Italy. Responsible for the graduate course "Data Science for Health Systems" (48 teaching hours) and for the undergraduate courses "Electronic Measurements with Lab Activities" (60 teaching hours) and "Measurement for Monitoring Industrial Processes" (27 teaching hours).
- 2016 - pres. University of Perugia, Italy. Responsible for the module "Measurement Systems for localization" (20 teaching hours) in the PhD Programme in Industrial and Information Engineering.
- 2014 - pres. University of Perugia, Italy. Instructor for the laboratory activity module of the Electronic Measurement course.

- 2009 University of Perugia, Italy. Instructor in the “Measurements for Information Engineering” undergraduate course, for the “Informatics and Telecommunication Engineering” program. Delivered class lectures and supervised lab exercises.
- 2006-pres. University of Perugia, Italy and KTH, Stockholm, Sweden. Supervision of Bachelor-level and Master-level Thesis activities, more than 40 students supervised.
- 2006 - pres. University of Perugia, Italy and KTH, Stockholm, Sweden. Teaching assistance by coordination of lab tutorials and development of course materials.

### **Editor and Referee Experience**

- 2021 Guest Editor for the Special Issue “Advanced Sensors and Sensing Technologies for Indoor Localization” of the journal *MDPI Applied Sciences*.
- 2019 - pres. Associate Editor for *IEEE Transactions on Instrumentation and Measurement*.
- 2007 - pres. Referee for several international technical conferences in the Measurement Technology and Signal Processing fields, as well as for several international journals, including *IEEE Transactions of Instrumentation and Measurement*, *IEEE Transactions on Vehicular Technology*, *IEEE Communication Letters*, *IEEE Signal Processing Letters*, *EURASIP Journal on Wireless Communications and Networking*, *Elsevier Measurement*, *MDPI Sensors*.

### **Scientific Associations**

- 2009 - pres. IEEE Member (Instrumentation and Measurement Society).
- 2007 - 2009 IEEE Graduate Student Member.
- 2007 - pres. GMEE (Gruppo Misure Elettriche ed Elettroniche) Member.

### **Scientific Awards**

- 2020 Recognition as one of the “Outstanding Associate Editors” of *IEEE Transactions on Instrumentation and Measurement* for the year 2020.
- 2016 Best Paper Award - Second Place, *IEEE International Instrumentation and Measurement Technology Conference, I2MTC*, Taipei, Taiwan, for the paper titled “Magnetic Field Analysis for Distance Measurement in 3D Positioning Applications”.
- 2015 - 2018 Recognition as one of the “Outstanding Reviewers” of the *IEEE Transactions on Instrumentation and Measurement* for the years 2015, 2016, and 2017.
- 2009 Recipient of one of three ACCESS Postdoc Grants at KTH, Stockholm, Sweden, selected out of more than 60 evaluated applications.
- 2008 Recipient of a scholarship for conducting research abroad, awarded by the Italian scientific association: “Associazione Italiana Gruppo di Misure Elettriche ed Elettroniche (GMEE)”.

**Publications** Co-author of 44 papers published in international peer-reviewed scientific journals, 59 papers published in the proceedings of peer-reviewed international technical conferences and one book chapter. Overall, the papers have generated about 1500 citations in Google Scholar, with an h-index of 21, [http://scholar.google.com/citations?user=DA8Q\\_YsAAAAJ](http://scholar.google.com/citations?user=DA8Q_YsAAAAJ). In the Scopus database, the total number of citations is 1083 and the h-index is 18 (Scopus Author ID: 21933861500, ORCID: 0000-0001-7953-4272)

**Current Research Interests in the Instrumentation and Measurement Field**

Position measurement (using magnetic field, ultrasound, and pulsed-UWB systems), impedance spectroscopy, battery characterization, statistical signal processing, system identification, sensors.

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Alessio De Angelis

