UNIVERSITÀ DEGLI STUDI DELL'AQUILA
Prof. Emidio Di Giampaolo
Curriculum scientifico

(Aggiornato il 30/08/2018)

He received the Laurea degree in Electronic Engineering and the Ph.D. degree in Applied Electromagnetics from the University of L'Aquila, Italy, in 1994 and 1998, respectively.

Since 1998 to 2004 he has been post doctoral researcher at the University of L?Aquila where he also taught Radio-wave propagation as substitute. From 2005 to 2009 he was researcher at the University of Rome "Tor Vergata" where he taught Industrial Microwave Applications and a laboratory course on antennas. From the end of 2009 he moved to University of L?Aquila.

In the spring of 2000 he was Visiting Researcher at the European Space Research and Technology Centre (ESTEC), Noordwijk (NL).

His research interests mainly concern numerical methods for modelling radio-wave propagation in complex environments, antennas and indoor radio localization.

RECENT SELECTED PAPERS

S. Caizzone, E. Di Giampaolo and G. Marrocco, "Setup-Independent Phase-Based Sensing by UHF RFID," in IEEE Antennas and Wireless Propagation Letters, vol. 16, no. , pp. 2408-2411, 2017. doi: 10.1109/LAWP.2017.272143

E. DiGiampaolo, A. DiCarlofelice and A. Gregori, "An RFID-Enabled Wireless Strain Gauge Sensor for Static and Dynamic Structural Monitoring," in IEEE Sensors Journal, vol. 17, no. 2, pp. 286-294, Jan.15, 15 2017. doi: 10.1109/JSEN.2016.2631259

S. Caizzone, E. DiGiampaolo and G. Marrocco, "Constrained Pole-Zero Synthesis of Phase-Oriented RFID Sensor Antennas," in IEEE Transactions on Antennas and Propagation, vol. 64, no. 2, pp. 496-503, Feb. 2016. doi: 10.1109/TAP.2015.2511788

S. Caizzone and E. DiGiampaolo, "Wireless Passive RFID Crack Width Sensor for Structural Health Monitoring," in IEEE Sensors Journal, vol. 15, no. 12, pp. 6767-6774, Dec. 2015. doi: 10.1109/JSEN.2015.2457455

Caizzone, S. ; DiGiampaolo, E. ; Marrocco, G., ?Wireless Crack Monitoring by Stationary Phase Measurements from Coupled RFID Tags?, IEEE Transactions on Antennas and Propagation, Volume: PP ,

Issue: 99, 2014, DOI: 10.1109/TAP.2014.2360553

DiCarlofelice, A., DiGiampaolo, E., Feliziani, M., Tognolatti, P., ?Experimental Characterization of Electromagnetic Propagation under Rubble of a Historic Town after Disaster?, IEEE Transactions on Vehicular Technology, Volume: PP , Issue: 99, 2014 DOI: 10.1109/TVT.2014.2346580

DiGiampaolo, E.; Martinelli, F., ?Mobile robot localization using the phase of passive UHF-RFID signals?, IEEE Transactions on Industrial Electronics, Volume: 61 , Issue:1, pp. 365-376, 2014, DOI: 10.1109/TIE.2013.2248333

DiGiampaolo E., F. Martinelli , "A Passive UHF-RFID System for the Localization of an Indoor Autonomous Vehicle", IEEE Transaction on Industrial Electronics, Vol.59, No.10, 2012, pp. 3961-3970.

Di Giampaolo E., F. Forni, G. Marrocco, ?RFID-Network Planning by Particle Swarm Optimization?, Applied Computational Electromagnetics Society Journal Vol. 25, no. 3, 2010, pp. 263-272.

G. Marrocco, Di Giampaolo E. , Aliberti R. ?Estimation of UHF RFID read-regions in real environments?, IEEE Ant. Prop. Mag. Vol. 51, no. 6, 2009, pp. 44-57.

E. Di Giampaolo and F. Bardati, "A Projective Approach to Electromagnetic Propagation in Complex Environments", Progress In Electromagnetics Research B, Vol. 13, 357-383, 2009.

E. Di Giampaolo, "A Numerical Filter to Remove the Field Scattered by the Edges of a Finite Ground Plane from Measured Data", Progress In Electromagnetics Research B, Vol. 9, 165-178, 2008.

DiGiampaolo E., "Passive RFID-based localization system for first responders", Proceedings of the 5th European Conference on Antennas and Propagation (EUCAP), 2011, pp. 3645-3649.

Di Giampaolo E. and F. Martinelli, ?Robot localization by sparse and passive RFID tags?, Proc. IEEE Int. Symp. Industrial Electronics, Bari, July 4-7, 2010.

Di Giampaolo E. , G. Marrocco, ?RFID read-region models in real environments? 3rd European Conference on Antennas and Propagation, (EuCAP 2009). 23-27 March 2009, pp.3269 ? 3273.

DETAILS:

Education

1998, PhD in Electronic Engineering (Applied Electromagnetics), University of L?Aquila, Italy, ?Non-contacting Near-Field Microwave Radiometry?.

1994, Laurea degree in Electronic Engineering, University of L?Aquila, Italy.

Professional History

2009 - Researcher at the University of L?Aquila, Italy.

2005-2009 Researcher at the University of Rome Tor Vergata, Italy.

2004-2005 Research grant at Department of Electrical Engineering, University of L?Aquila.

2003 Research contract Société d?Application Technologiques de l?Imagerie Micro-Onde, italian offices , Rome.

2002-2003 Research grant at University of L?Aquila.
2001 Research contract DISP, University of Rome, Tor Vergata.

2000 Research contract ESTEC (ESA) Noordwijk, The Netherlands.

1999-2001 Post Doc fellowship at University of L?Aquila.

1999 Research contract DISP, University of Rome, Tor Vergata.

1998 Research contract DISP, University of Rome, Tor Vergata.

Research Interests

Primary: Numerical methods for modeling radio-wave propagation in complex environments, Body Area Network, antennas and radio localization, Radio Frequency Identification.

Secondary: electromagnetic energy harvesting, antennas for terahertz applications, radiometry of human body.

Research Grants

-EAMLVII 2014, "MBSE-A REFINEMENT WITH EAML MAINTENANCE, Microwave Vision Group, ESA project, 2014

-Non Invasive Monitoring by Ultra wide band Radar of Respiratory Activity of people inside a spatial environment ASI project, 2011-2012

-MULTI-TAG: Electromagnetic technology for multiple-interrogation active and passive RFID systems (PRIN 2007)

-Processing in Onde Sferiche del Campo Elettromagnetico Irradiato da Antenne Operanti su Piano di Massa, SATIMO SA. 2005-2006.

-Galileo Test Range, Alcatel Alenia Space Italia Spa. 2006.

-Modellistica di antenne nei collegamenti punto multipunto a larga banda in scenari urbani. PRIN-2003.

-Salvaguardia dell?uomo e dell?ambiente dalle emissioni elettromagnetiche. MURST, 2001-2003.

-Analytic software for antenna coupling analysis. ESA /ESTEC-SATIMO 2002.

-Schiere di antenne riflettenti stampate per applicazioni spaziali. Progetto finanziato ASI-1999-2001.

-Sistemi di antenne a microonde e ad onde millimetriche per servizi multimediali. (PRIN-99).

-Sistemi innovativi di antenne a microonde in tecnologia planare. (PRIN-97).