

Alberto Toccafondi

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Alberto Toccafondi obtained his Laurea degree (cum laude) in Electronic Engineering from the University of Florence in 1989 and the Ph.D. degree in Telecommunications from the same University in October 1994. From 1995 to 2001 he was assistant professor of Electromagnetic Fields at the Department of Information Engineering, of the University of Siena, Italy. Since October, 2001 he is an Associate Professor of Electromagnetic Fields.

His research interests are concerned with antennas, microwave devices, electromagnetic propagation and diffraction and with numerical and asymptotic techniques in electromagnetic. His research activity is mainly focused on the incremental and asymptotics methods applied to the prediction of the electromagnetic scattering, and propagation in complex environments as well as to the analysis and design of high-performance antennas. He was a co-author of an Incremental Theory of Diffraction for the description of a wide class of electromagnetic scattering and diffraction phenomena at high frequency. He worked on the efficient representation of high-frequency Green's function for a periodic array on a multilayer substrate. Presently, his research activity is devoted to the extensions of the incremental theory of diffraction to both double diffraction mechanisms and dielectric structures and to the design of antennas and microwave devices for space applications, radar systems, and RFID applications.

He was responsible at the Department of Electronic Engineering of several industrial research projects funded by IDS (Pisa, Italia), Teknè (Roma, Italia), (Aldena Telecomunicazioni, Milano), PSC (Rome, Italia). He was responsible of two industrial research projects funded by the Tuscany Region under program Par-Fas 2014.

He has involved as a Principal Investigator and researcher in several research projects and contracts supported by the Italian Ministry of Scientific Research (Prin, 1997, 1999, 2000, 2002, 2004, 2008), the University of Siena (PAR 20 03, 2005), the Italian Space Agency (ASI, 1997, 1998, 1999, 2001) the National Research Council (CNR, 1995, 1996, 1997) the European Space Agency (ESA-ESTEC, Noordvjiik). Within the VI Framework Program, he was involved in the activities of the european networks of excellence entitled "Antenna Center of Excellence" and "Metamorphose". He is actually the scientific coordinator of a 4-year research project funded by the Italian Ministry of Scientific Research in the framework of the XXXIV Italian National Antarctic Program.

He has authored or co-authored more than 145 publications in refereed journals and international conferences. He served as invited speaker in several international symposia, and as a lecturer in PhD and master courses, hosted by Italian and foreign universities and research centres.

He served as a reviewer of several international journals, such as IEEE Transaction on antennas and propagation, IEEE Trans. on Ant and Wireless Propagation Letter, IEEE Transaction on Instrumentation and Measurements, International Journal of Microwave and Wireless Technologies and IET Microwaves, Antennas & Propagation. From 2016 to 2022 he served as an associate editor of the IEEE Transaction on Antennas and Propagation.

Since 1993 Alberto Toccafondi is member of the IEEE (www.ieee.org). Since 2008, he is senior member of the IEEE. From 2002 to 2005 he served as a secretary and treasurer of the Central and South Italy Section as well as of the AP/MTT Joint Chapter of the IEEE. He served as a Treasurer (2006-2007) and then as a Secretary (2008-2009) of the new established IEEE Italy Section. He served (2008-2013) as a member of the Executive Committee of the CNIT.