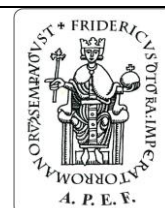


# CURRICULUM VITAE



## Personal Information

<b>Name, Surname</b>	<b>Ovidio Mario Bucci</b>
<b>Gender</b>	male
<b>Date and Place of Birth</b>	November 18, 1943 Civitaquana (PE)
<b>Nationality</b>	Italian
<b>Title / Discipline</b>	<b>Professor Emeritus University Federico II</b>
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<b>Education &amp; Training</b>	Diploma of "maturità classica", 1961. Degree on Electronic Engineering, University of Naples, 1966. Engineering professional qualification, 1967. Specialization in Theoretical and Nuclear Physics, University of Naples, 1966-68. Libera Docenza in Theory and Technique of Electromagnetic Fields, Ministry of Education, 1971.
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<b>Summary of Academic Career</b>	Assistant Professor, Naval University Institute, 1967-75. Associate Professor, University of Naples, 1971-76. Full Professor of Electromagnetic Fields, University of Naples, 1976-2014. Visiting Professor, Somalia National University, 1983.
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<b>Teaching activity</b>	<p><b>COURSES</b> Quantum Electronics, Electromagnetic Fields, Antennas, Guided Propagation, Electromagnetic Fields and Propagation, Introduction to Electromagnetic Fields (University of Naples). Statistics Applied to Natural Phenomena, Applied Statistics (Naval University Institute). Guided Propagation, Electromagnetic Fields (Air Force Academy). Electrotechnics (Somali National University). Electromagnetic Fields II (distance learning course, Consortium NETTUNO).</p> <p><b>INTERNATIONAL SHORT COURSES AND WORKSHOPS</b> Antenna Pattern Computation (Short Course on "Communication Satellite Antenna Technology", Positano, Italy, 1980). Sampling and Sampling-like Techniques (Chinese Academy of Spatial Technology, China, 1985 and 1986). Attainable Resolution in Electromagnetic Inverse Problems (workshop on 'Direct and Inverse Electromagnetic Scattering', Gebze, Turkiye, 1995). Electromagnetic Inverse Problems: quantifying, qualifying and retrieving the available information (Workshop on Optimization and Coupled Problems in Electromagnetism, Naples, Italy, 2003). Antenna Synthesis: a general and unitary perspective (European School of Antennas, Naples, Italy, 2007, 2009, 2011, 2014 and 2017). Direct Radiating Arrays for Space Telecommunications (University of Tel Aviv, Israel, 2012). Electromagnetic Fields and Nanotechnologies in Medicine and Biology (European Microwave Doctoral School, Nurnberg, Germany, 2013). A Designer Perspective; Electromagnetic Fields and Nanotechnologies in Medicine and Biology (European School of Antennas, Turin, Italy, 2013 and 2015, Naples, Italy, 2017). Magnetic Nanoparticles Contrast Enhanced Microwave Imaging (workshop on "Microwave and mm-waves Technologies for Medical Diagnostic and Imaging" London, UK, 2016).</p>
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<b>Research Fields &amp; Projects</b>	<p>Scattering from loaded Surfaces. Pulsed antennas and time domain reflectometry. Analysis and synthesis of reflector and array antennas. Efficient representations and degrees of freedom of Electromagnetic Fields. Near-Field Far-Field measurement techniques. Inverse problems and non-invasive diagnostics. Efficient numerical techniques for scattering problems. Diagnostic and clinical applications of Electromagnetic Fields. Remote control of nano-machines by electromagnetic fields. Author or co-author of about 450 scientific papers, mainly on international scientific journals or Proceedings of international Conferences, with more than 6500 citations and h index 41 (Google Scholar, 2018). Principal investigator or coordinator of tens of research programs, granted by national and international Research Organizations, as well as by leading national Companies</p>
<b>Membership and office held in Scientific Societies</b>	<p>President of the CNR National Group of Electromagnetism, 1989-1993. Member of the Management Committee of the European Microwave Conference, 1993-1995. President of the MTT-AP Chapter of the Centre-South Italy Section of IEEE, 1993-1995. Member of the Directive Board of the Società italiana di Elettromagnetismo, 2005-2009. Member of the Delegate Assembly of the European Association for Antennas and Propagation, 2007-2011. Member of the Technical Committee MTT-10 of the IEEE Microwave Theory and Techniques Society, 2014-2018. Life Fellow of the Institute of Electrical and Electronic Engineers (IEEE), member of the Italian Electrical Association (AEI) and of the Accademia Pontaniana.</p>
<b>Editorial activities in Journals and Monographs Series</b>	<p>Member of the editing Committee of 'Alta Frequenza', 1994-2000.</p>
<b>Offices held in the University</b>	<p>Member of the board of the “Commissione di Ateneo”, 1982-1985. Director of the Department of Electronic Engineering, 1984-86 and 1989-90. Member of the University Scientific Committee, 1987-1993. Member of the Enlarged Academic Senate, 1991-94. Vice Rector, 1994-2000.</p>
<b>Other Activities</b>	<p>Director of the Interuniversity Research Centre on Microwaves and Antennas (CIRMA), 1997-2003. Member of the Directive Board of the National Interuniversity Consortium for Telecommunications, 2002-2008 and 2011-2013. Director of the CNR Institute for the Electromagnetic Sensing of Environment, 2001-2010. Member of the Directive Boards of the Regional Centre of Competence on Information and Communication Technology, 2002-2006, and of the Centre of Competence ICT-Sud, 2006-2008. Member of the board of the European School of Antennas and of the Management Committees of the European Actions COST IC0603 (ASSIST), COST IC1102 (VISTA) and TD1301 (MiMed). Member of the European Science Foundation College of Expert Reviewers.</p>

**Selected Publications**

- 1) O.M. Bucci, G. Franceschetti: "Electromagnetic scattering by a half-plane with two face impedances", *Radio Science*, 11, 49-59, 1976.
- 2) O.M. Bucci, G. Franceschetti: "On the spatial bandwidth of scattered fields", *IEEE Trans. Antennas Propagat.*, AP-35, 1445-1455, 1987.
- 3) O.M. Bucci, G. Franceschetti: "On the degrees of freedom of scattered fields", *IEEE Trans. Antennas Propagat.*, AP-37, 918-926, 1989.
- 4) O.M. Bucci, G. Franceschetti, G. Mazzarella, G. Panariello: "The intersection approach to array synthesis", *Proc. IEE*, pt.H, 137, 349-357, 1990.
- 5) O.M. Bucci, G. Mazzarella, G. Panariello: "Reconfigurable arrays by phase-only control", *IEEE Trans. Antennas Propagat.*, AP-39, 919-925, 1991.
- 6) O.M. Bucci, C. Gennarelli, C. Savarese: "Optimal interpolation of radiated fields over a sphere", *IEEE Trans. Antennas Propagat.*, AP-39, 1633-1643, 1991.
- 7) O.M. Bucci, G. D'Elia, G. Mazzarella, G. Panariello: "Antenna pattern synthesis: a new general approach", *Proceedings of IEEE*, 82, 358-371, 1994.
- 8) O.M. Bucci, T. Isernia: "Electromagnetic inverse scattering: retrievable information and measurement strategies", *Radio Science*, 32, 2123-2138, 1997.
- 9) O.M. Bucci, C. Gennarelli, C. Savarese: "Representation of electromagnetic fields over arbitrary surfaces by a finite and nonredundant number of samples", *IEEE Trans. Antennas Propagat.*, 46, 351-359, 1998.
- 10) T. Isernia, F. J. Ares Pena, O. M. Bucci, M. D'Urso, J. F. Gómez, and J. A. Rodríguez, "A Hybrid Approach for the Optimal Synthesis of Pencil Beams Through Array Antennas", *IEEE Trans. Antennas and Propagation*, 52, pp. 2912-2918, 2004
- 11) O.M. Bucci, M.D. Migliore, "A New Method to Avoid the Truncation Error in Near-Field Antennas Measurements", *IEEE Trans. on Antennas and Prop.*, AP-54, n 10, pp. 2940-2952, 2006
- 12) O. M. Bucci, M. D'Urso, T. Isernia, P. Angeletti, G. Toso, "Deterministic Synthesis of Uniform Amplitude Sparse Arrays via New Density Taper Techniques", *IEEE Trans. Antennas Propagat.*, vol. 58, n. 6, pp. 1949-1958, 2010.
- 13) G. Bellizzi, O. M. Bucci, I. Catapano, "Microwave Cancer Imaging Exploiting Magnetic Nanoparticles as Contrast Agents", *IEEE Trans. on Biomedical Eng.*, vol. 58, n. 9, pp.2528-2536, 2011.
- 14) R. Scapatucci, G. Bellizzi, I. Catapano, L. Crocco and O. M. Bucci, "An Effective Procedure for MNP Enhanced Breast Cancer Microwave Imaging", *IEEE Trans. Biomedical Engineering*, vol. 61, n. 4, pp. 1071-1079, 2014.
- 15) O.M. Bucci, L. Crocco, R. Scapatucci and G. Bellizzi, "On the Design of Phased Arrays for Medical Applications", *Proceedings of IEEE*, vol. 104, n. 3, pp. 633-648, March 2016.
- 16) G. Bellizzi, G. G. Bellizzi, O. M. Bucci, L. Crocco, M. Helbig, S. Ley and J. Sachs, "Optimization of the Working Conditions for Magnetic Nanoparticle Enhanced Microwave Diagnostics of Breast Cancer", *IEEE Trans. Biomedical Eng.*, vol. 65, n.7, pp. 1607 - 1616, 2018.

