

CURRICULUM VITÆ OF DR. ANTONIO FARAONE

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Business Motorola Solutions Inc., Chief Technology Office, 8000 W. Sunrise Blvd., MS 31-9CC,
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EXPERIENCE

- 1997-present** Motorola (Solutions) Inc.
- 2014-pres. Chief EME Scientist; EME standards and product compliance; antenna R&D @ CTO.
- 2008-2013 Fellow of the Technical Staff at Motorola (Solutions), Chief Technology Office;
Antenna Center of Excellence lead and global leadership of Antenna R&D;
manager of the EME Research Lab; SAR standards and product EME compliance.
- 2000-2008 Manager of Portable Antenna Research at the Motorola Labs; Technical Manager of the
Mobile Devices SAR labs. Chair of the Motorola Antenna Steering Committee.
- 1997-2000 Corporate EME Research Lab. Antenna R&D, EMC, RF dosimetry, SAR standards.
- 1993-1996** Consultant/contractor (while pursuing the Ph.D.)
- 1996 OMNITEL S.p.A., Rome, Italy. RF field measurements of GSM cellular base stations.
- 1996 ICEMB (Institute for Research on EM fields Bio-interactions), Genoa, Italy. Italian
National Research Council (CNR) Strategic Project "Wideband Wireless LANs".
- 1993-1996 European Space Agency (ESA) project "EMC for Long Duration Missions" (jointly with
Matra Marconi Space). Teaching Assistant at the University of Rome "La Sapienza".

REFERENCES

- Available upon request.

EDUCATION

- High school degree received at *Liceo Scientifico "Innocenzo XII"* in Anzio (Rome), Italy.
- "Laurea" degree in Electronic Engineering (MSEE eq.) achieved *summa cum laude* in 1992 at the University of Rome "La Sapienza", Italy. Dissertation on full-wave modeling of microwave integrated circuits.
- Qualification to practice as a Professional Engineer (Italy), 1993.
- Ph.D. in Applied Electromagnetics achieved at the University of Rome "La Sapienza", Italy, in 1997. Dissertation on full-wave modeling of EMC/EMI in planar multi-layer integrated circuits.

LANGUAGES

- Fluent (speak/read/write) in Italian, English, and Spanish. Beginner (reading) in Portuguese and French.

CAREER HIGHLIGHTS

- Established the Motorola Labs antenna R&D program in 2000, which was later awarded US government research grants exceeding \$2M on multi-band, tunable integral antennas for the Software Defined Radio.
- Co-invented state-of-the-art integrated antenna technology for multi-band cellphones [Folded Inverted Conformal Antenna (US Patent 6,762,723) and derivatives (US Patents 6,867,736/7,423,598/7,642,964)].
- Led the Motorola Labs antenna R&D team in developing & implementing innovative cutting-edge solutions:
 - A835 (quad-band GSM/UMTS), industry-first 3G handset with internal antenna (also sold by Siemens)
 - V80 (tri-band GSM), industry-first swivel-handset with an internal antenna
 - A1000/M1000 (quad-band GSM/UMTS), first Motorola 3G phone with touch-screen & internal antenna
 - MOTOROKR E1 (tri-band GSM), the first ROKR, best Motorola phone RF-wise (AT&T, 2007)
 - XTS4000 (VHF), industry-first high-tier VHF professional radio in a clam-shell form factor
 - MOTOFOE, the first ultra-low-cost phone for emerging markets by Motorola
 - KRZR K3 (quad-band GSM/UMTS), the first 3G KRZR-style phone
 - Q9h (quad-band GSM/UMTS), the *chinless* Q-phone, best in class RF-wise (AT&T, 2009)
 - Motorola Sidekick (quad-band GSM), the first Sidekick multi-modality handset marketed by Motorola
 - MOTORIZR Z9 (quad-band GSM/UMTS), the first metal-frame slider-phone by Motorola
 - APX7000 (tri-band VHF/7-800MHz/GPS), the first multi-band professional radio by Motorola
 - CLIQ (penta-band GSM/UMTS), the first Motorola Android phone with MotoBlur
 - Droid Milestone (penta-band GSM/UMTS), the first Droid phone for GSM/UMTS markets
- Chair of the Motorola Antenna Steering Committee (2004-2010).
- Co-chair of the Motorola Antenna Technology Patent Committee (2007-2010).
- Co-editor of the IEEE Std 1528, the first-ever SAR compliance measurement standard for mobile phones.
- Developed in-vivo exposure system (Ferris Wheel) for large scale animal bioassays used in a fundamental study on mouse lymphoma and later adopted by researchers worldwide.
- Developed theoretical framework and analytical formulae yielding accurate, cost-effective RF exposure compliance assessments near radio base station antennas. Implemented corresponding compliance process.
- Established a methodology accepted by the FCC to qualify the EME compliance of Motorola vehicle-mounted mobile radio antennas using FDTD-based SAR computations. Motorola earned a FCC waiver to use it.
- Motorola and ANSI/US Technical Advisory Group representative in the IEC Project Team 62232, developing standardized guidelines for RF exposure assessment near radio base stations, WiFi access points, etc.
- Elected Convener of the IEC Technical Committee 106 (*Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure*), Working Group 4, in 2007.
- Convener of IEC TC 106 Project Team 62209 (*Human Exposure to Radio Frequency Fields from Handheld and Body-Mounted Wireless Communication Devices - Human models, Instrumentation, and Procedures*), 2009-10.
- Co-editor of the IEC 62209-2(2010), first SAR standard for body-worn products (tablets, phones, radios).
- Developed the IEC 62630(2010) technical report for SAR measurements of multi-antenna handsets.
- Proposed and co-developed, jointly with the US Federal Communications Commission Office of Engineering and Technology, the FCC KDB 643646 test-reduction protocol applicable to professional two-way radios.
- Developed state-of-the-art antenna systems for multi-band, MIMO portable radios, and RFID arrays.
- Appointed Motorola Solutions Chief EME Scientist in 2013.
- IEEE International Committee on Electromagnetic Safety (ICES) literature review coordinator since 2014.
- Development of the all-band (VHF|UHF|7-800MHz|GNSS) antenna for the first-ever Motorola all-band LMR portable APX8000 radio; key IP for the flexible all-band antenna technology in the flagship APX NEXT radio.
- Co-chair of the Regulatory Working Group, Mobile & Wireless Forum, 2016-2019.

- Appointed to serve as an Industry Representative on the US Food and Drug Administration's Technical Electronic Product Radiation Safety Standards Committee (TEPRSSC), from 2016 to 2020.
- AdCom member of the IEEE International Committee on Electromagnetic Safety (ICES), since 2017.
- Chairman of the Mobile & Wireless Forum (www.mwfai.org), since 2018.

PATENTS

- Forty-one granted US patents and six pending, plus international grants. Granted US patents:
 US Patent 5,933,115, *Planar Antenna with Patch Radiators for Wide Bandwidth*
 US Patent 5,982,335, *Antenna with Low Reluctance Material Positioned to Influence Radiation Pattern*
 US Patent 6,002,368, *Multi-Mode Pass-Band Planar Antenna*
 US Patent 6,121,932, *Microstrip Antenna and Method of Forming Same* (* divisional)
 US Patent 6,195,051, *Microstrip Antenna and Method of Forming Same* (* divisional)
 US Patent 6,762,723, *Wireless Communication Device Having Multiband Antenna*
 US Patent 6,801,164, *Broad Band and Multi-Band Antennas*
 US Patent 6,867,736, *Multi-Band Antennas*
 US Patent 7,102,577, *Multi-Antenna Handheld Wireless Communication Device*
 US Patent 7,123,198, *Electrically Small Wideband Antenna*
 US Patent 7,277,058, *Wireless Communication Device Antenna for Improved Communication with a Satellite*
 US Patent 7,330,155, *Antenna System*
 US Patent 7,342,543, *Electronic Device to Receive Radio Frequency Signals*
 US Patent 7,388,544, *Antenna with a Split Radiator Element*
 US Patent 7,423,598, *Communication Device with a Wideband Antenna*
 US Patent 7,642,964, *Low Profile Internal Antenna*
 US Patent 7,928,914, *Multi-Frequency Conductive-Strip Antenna System*
 US Patent 8,587,495, *Multiple-Input Multiple-Output (MIMO) Antenna System*
 US Patent 8,674,890, *Wideband and Multiband External Antenna for Portable Transmitters*
 US Patent 8,884,838, *Multi-Band Subscriber Antenna for Portable Two-Way Radios*
 US Patent 9,041,606, *Uninterrupted Bezel Antenna*
 US Patent 9,136,588, *System and Method for Short UHF Antenna with Floating Transmission Line*
 US Patent 9,144,028, *Method and Apparatus for Uplink Power Control in a Wireless Communication System*
 US Patent 9,361,494, *System and Method of Estimating True Bearings of Radio Frequency Identification (RFID) Tags Associated with Items Located Directly Underneath an Overhead Antenna Array in a Controlled Area*
 US Patent 9,472,842, *Low-profile, antenna structure for an RFID reader and method of making the antenna structure*
 US Patent 9,509,060, *Open Waveguide Beamforming Antenna for Radio Frequency Identification Reader*
 US Patent 9,515,708, *Context Aware Multiple-Input and Multiple-Output Antenna Systems and Methods*
 US Patent 9,711,847, *Apparatus and method for integrating a reduced-sized antenna with an accessory connector*
 US Patent 9,755,294, *Accurately Estimating True Bearings of Radio Frequency Identification (RFID) Tags Associated with Items in a Controlled Area*
 US Patent 9,847,571, *Compact, Multi-Port, MIMO Antenna with High Port Isolation and Low Pattern Correlation and Method of Making Same*
 US Patent 9,887,462, *Antenna with Embedded Wideband Matching Substrate*
 US Patent 9,899,879, *Systems and Methods for Controlling Wireless Power Transfer*
 US Patent 9,979,069, *Wireless broadband/land mobile radio antenna system*
 US Patent 10,051,413, *Method for exchanging information corresponding to a public safety incident*
 US Patent 10,111,279, *Converged communications device and method of controlling the same*
 US Patent 10,135,139, *Multiband antenna system*
 US Patent 10,158,178, *Low profile, antenna array for an RFID reader and method of making same*
 US Patent 10,243,606, *Portable communications device with tactility element*
 US Patent 10,374,311, *Antenna for a portable communication device*
 US Patent 10,622,843, *System and method for determining a microwave beam and a power setting for wireless power transfer within a volume*
 US Patent 10,825,328, *Apparatus for managing a plurality of devices in a portable communication system*

AWARDS

- Two research grant awards (1993 & 1994) by Elettronica S.p.A., Rome, Italy, and the Department of Electronics Engineering at the University of Rome “La Sapienza”, Italy.
- “Giorgio Barzilai Prize” by the IEEE *Central and South Italy Section* for “Best Laurea [MSEE] Thesis in 1992”.
- Motorola award for “Outstanding performance in global standards activities” in 2003.
- Motorola “Distinguished Innovator” Award (10+ granted US patents) in 2007.
- Motorola Scientific Advisory Board Associates (SABA) member, since 2007. SABA members constitute less than 2% of the technical staff at Motorola Solutions.
- Motorola Dan Noble Fellow, since 2012. DNF represents the highest technical achievement award at Motorola (Solutions.) DNFs constitute less than 0.3% of the technical staff at Motorola Solutions.
- International Electrotechnical Commission (IEC) “1906 Award”, which “recognizes exceptional current achievements of experts”, in 2013.
- Motorola Solutions “Master Innovator” Award (25+ granted US patents) in 2016.
- Motorola Top Invention Award in 2007 and Motorola Solutions Top Invention Award in 2018.

PROFESSIONAL MEMBERSHIPS & APPOINTMENTS

- Member of the International Union of Radio Science (URSI) since 1996.
- Member of the Institute of Electrical and Electronic Engineers (IEEE) since 1997.
- Member of the IEEE Standards Coordinating Committee 34 (now TC34) since 1997.
- Member of the IEEE Standards Coordinating Committee 28 (now TC95) since 1999.
- Member of the Bioelectromagnetics Society (BEMS) since 2003.
- Member of the IEEE Committee on Man and Radiation (COMAR) since 2015.
- Member of the Editorial Board of the *EMC Europe 2002 Symposium*.
- Member of the Editorial Board of the 2006 EMC Europe Symposium, Barcelona, Spain.
- Reviewer for the scientific journal *Bioelectromagnetics* since 1999.
- Reviewer for the *IEEE Transactions on Electromagnetic Compatibility* since 1999.
- Reviewer for the *IEEE Transactions on Microwave Theory and Techniques* since 1999.
- Reviewer for the *IEEE Electronics Letters* since 2006.
- Reviewer for the *IEEE Sensors Journal* since 2006.
- Reviewer for the *IEEE Antennas and Wireless Propagation Letters* since 2008.
- Reviewer for the scientific journal *Radiation Protection Dosimetry* since 2014.
- Reviewer for the scientific journal *Radiation Research* since 2016.
- Motorola (Solutions) representative to the Mobile & Wireless Forum (MWF) Standards & Regulatory WGs.
- Member of the US Technical Advisory Group (TAG) of the IEC Technical Committee 106 (*Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure*) since 2004.
- Convener of the IEC TC106 Project Team 62209, in 2009.
- Guest Editor, Special Yearly Issues on “Wideband, Multiband, Tunable, and Smart Antenna Systems for Mobile and UWB Wireless Applications”, *Intl. Journal of Antennas and Propagation* (2013-14-15-16).

ENGINEERING SKILLS

- Design: multi-band RF antennas, smart arrays, low-frequency Wireless Power Transfer devices, microwave devices, multi/broadband matching circuits, RF exposure systems, RF dosimetry experiments, software tools.
- Computational: Matlab, MathCAD, FORTRAN, VBA, CST MWS, xFDTD, ADS, Optenni.
- Experimental: 2D/3D antenna chambers, DASY SAR systems, SAs, NAs, sig-gens, calorimetry, thermography.
- Wireless systems: APCO P25, 3GSM, LTE, TETRA, WLAN, A4WP.
- Problem solving: effective use of information, resources, tools, skills. Rigor & relentlessness.

JOURNAL PUBLICATIONS

- [1] R. Cicchetti and A. Faraone, "An Expansion Function Suited for Fast Full-Wave Spectral Domain Analysis of Microstrip Discontinuities," *International Journal of Microwave and Millimeter-Wave Computer-Aided Engineering*, Vol. 4, No. 3, pp. 297-306, July 1994.
- [2] R. Cicchetti and A. Faraone, "A Full-Wave Spectral Domain Analysis of an Asymmetric Gap Microstrip Discontinuity," *Microwave and Optical Technology Letters*, vol. 9, No. 6, Aug. 20 1995, pp. 356-358.
- [3] P. Bernardi, R. Cicchetti, and A. Faraone, "A Full-Wave Characterization of an Interconnecting Line Printed on a Dielectric Slab Backed by a Gridded Ground Plane," *IEEE Transactions on Electromagnetic Compatibility*, Vol. 38, No. 3, pp. 237-243, Aug. 1996 (Invited Paper in Special Issue on EMC Research in Italy).
- [4] R. Cicchetti and A. Faraone, "Transient Emission from Microstrip Interconnects: Theoretical Formulation and CAD Modeling," *IEEE Transactions on Electromagnetic Compatibility*, Vol. 38, No. 3, pp. 367-375, Aug. 1996.
- [5] P. Bernardi, R. Cicchetti, and A. Faraone, "EMC-Oriented Full-Wave Modeling of Passive MMIC Structures," *Special Issue on Millimeter Waves on the Annales des Télécommunications*, vol. 52, No. 3-4, 1997
- [6] R. Cicchetti and A. Faraone, "A Full-Wave Radiation Model for a Class of Gridded Ground Interconnecting Structures," *IEEE Transactions on Antennas and Propagation*, Vol. 47, No. 1, pp. 212-213, Jan. 1999.
- [7] R. Cicchetti and A. Faraone, "Exact Surface Impedance/Admittance Boundary Conditions for Complex Geometries: Theory and Applications," *IEEE Transactions on Antennas and Propagation*, Vol. 48, No. 2, pp. 223-231, Feb. 2000.
- [8] A. Faraone, R. Tay, K. Joyner, and Q. Balzano, "Estimation of the Average Power Density in the Vicinity of Cellular Base Station Antennas," *IEEE Transactions on Vehicular Technology*, Vol. 49, No. 3, pp. 984-996, May 2000.
- [9] Q. Balzano, C. K. Chou, R. Cicchetti, and A. Faraone, "An Efficient RF Exposure System with Precise SAR Estimation for In-Vivo Animal Studies at 900 MHz," *IEEE Transactions on Microwave Theory and Techniques* (Special Issue on Bioelectromagnetics), Vol. 48, no. 11-2, pp. 2040-2049, Nov. 2000.
- [10] P. Russo and A. Faraone, "Numerical Analysis of the 'Ferris Wheel' Mice Exposure System Using an Efficient Cylindrical FDTD Scheme," *Applied Computational Electromagnetics Journal* (Special Issue on Bioelectromagnetics), vol. 16, no. 2, pp. 181-189, July 2001.
- [11] B. W. Wilson, A. Faraone, D. Sheen, M. Swicord, W. Park, J. Morrissey, J. Creim, and L. E. Anderson, "Space efficient system for small animal, whole body microwave exposure at 1.6 GHz," *Bioelectromagnetics*, vol. 23, no. 1, pp. 127-131, Jan. 2002.
- [12] M. Kanda, Q. Balzano, P. Russo, A. Faraone, and G. Bit-Babik, "Effects of ear-connection modeling on the electromagnetic-energy absorption in a human-head phantom exposed to a dipole antenna field at 835 MHz," *IEEE Transactions on Electromagnetic Compatibility*, Vol. 44, No. 1, pp. 4-10, Feb. 2002.
- [13] R. Cicchetti, A. Faraone, and Q. Balzano, "A Uniform Asymptotic Evaluation of the Field Radiated from Collinear Array Antennas," *IEEE Transactions on Antennas and Propagation*, Vol. 51, No. 1, pp. 89-102, Jan. 2003.
- [14] G. Bit-Babik, C. K. Chou, A. Faraone, A. Gessner, M. Kanda, and Q. Balzano, "Estimation of the SAR in the Human Head and Body due to Radiofrequency Radiation Exposure from Handheld Mobile Phones with Hands-Free Accessories," *Radiation Research*, Vol. 159, pp. 550-557, Apr. 2003.
- [15] R. Cicchetti and A. Faraone, "Estimation of the Peak Power Density in the Vicinity of Cellular and Radio Base Station Antennas," *IEEE Transactions on Electromagnetic Compatibility*, Vol. 46, No. 2, pp. 275-290, May 2004.
- [16] R. Cicchetti and A. Faraone, "Incomplete Hankel and Modified Bessel Functions: A Class of Special Functions for Electromagnetics," *IEEE Transactions on Antennas and Propagation*, Vol. 52, No. 12, pp. 3373-3389, Dec. 2004.
- [17] G. Bit-Babik, A. W. Guy, C-K. Chou, A. Faraone, M. Kanda, A. Gessner, J. Wang, and O. Fujiwara, "Simulation of Exposure and SAR Estimation for Adult and Child Heads Exposed to RF Energy from Portable Communication Devices," *Radiation Research*, Vol. 163, pp. 580-590, 2005.
- [18] C. Di Nallo and A. Faraone, "Multi-band internal antenna for mobile phones," *IEE Electronics Letters*, Vol. 41, No. 9, pp. 514-515, Apr. 2005.
- [19] R. Cicchetti and A. Faraone, "On the Optical Behavior of the Electromagnetic Field Excited by a Semi-Infinite Electric Traveling-Wave Current," *IEEE Transactions on Antennas and Propagation*, Vol. 53, No. 12, pp. 4015-4025, Dec. 2005.
- [20] A. Faraone, W. Luengas, S. Chebrolu, M. Ballen, G. Bit-Babik, A. Gessner, M. Kanda, T. Babij, M. Swicord, and C. K. Chou, "Dosimetry of the Ferris-Wheel Mouse Exposure System," *Radiation Research*, Vol. 165, pp. 105-112, 2006.
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- [22] D. Caratelli, R. Cicchetti, G. Bit-Babik, and A. Faraone, "A Perturbed E-Shaped Patch Antenna for Wide-Band WLAN Applications," *IEEE Transactions on Antennas and Propagation*, Vol. 54, No. 6, pp. 1871-1874, June 2006.
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- [24] D. Caratelli, R. Cicchetti, G. Bit-Babik, and A. Faraone, "Near-Field and Circuit Model of a Novel Patch Antenna for WWLAN Applications," *Microwave and Optical Technology Letters*, Vol. 49, No. 1, pp. 97-100, Jan. 2007.
- [25] M. Ali, M. G. Douglas, A. T. M. Sayem, A. Faraone, and C-K. Chou,, "Threshold Power of Canonical Antennas for Inducing SAR at Compliance Limits in the 300-3000 MHz Frequency Range," *IEEE Transactions on Electromagnetic Compatibility*, Vol. 49, No. 1, pp. 143-152, Feb. 2007.
- [26] R. Cicchetti and A. Faraone, "Analysis of the Field Excited in Semi-Infinite Open-Ended Circular Waveguides Using Physical Optics and Incomplete Hankel Functions Formulation," *IEEE Transactions on Antennas and Propagation*, Vol. 55, No. 6, pp. 1887-1892, June 2007.
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- [28] R. Cicchetti and A. Faraone, "Radiation from Open-Ended Circular Waveguides: A Formulation Based on the Incomplete Hankel Functions," *Progress in Electromagnetics Research*, PIER 78, pp. 285-300, 2008.
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- [30] R. Cicchetti and A. Faraone, "Exact Closed-Form Solution of the Electromagnetic Field Excited by Pulse-Shaped and Triangular Line Currents," *IEEE Transactions on Antennas and Propagation*, Vol. 56, No. 6, pp. 1706-1716, June 2008.
- [31] A. Razmadze, L. Shoshiashvili, D. Kakulia, R. Zaridze, G. Bit-Babik, and A. Faraone, "Influence of Specific Absorption Rate Averaging Schemes on Correlation between Mass-Averaged Specific Absorption Rate and Temperature Rise," *Electromagnetics*, Vol. 29, pp. 77-90, Jan. 2009.
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- [33] N. Perentos, S. Iskra, A. Faraone, R. J. McKenzie, G. Bit-Babik, and V. Anderson, "Exposure Compliance Methodologies for Multiple Input Multiple Output (MIMO) Enabled Networks and Terminals," *IEEE Transactions on Electromagnetic Compatibility*, Vol. 60, No. 2, pp. 644-653, Feb. 2012.
- [34] P. S. Hall, P. Gardner, and A. Faraone, "Antenna Requirements for Software Defined and Cognitive Radios," *Proceedings of the IEEE*, Vol. 100, No. 7, pp. 2262-2270, July 2012.
- [35] D. Caratelli, R. Cicchetti, and A. Faraone, "Exact Closed-Form Expression of the Electromagnetic Field Excited by a Uniform Current Distribution Lying on a Cartesian Quadrant," *IEEE Transactions on Antennas and Propagation*, Vol. 61, No. 4, pp. 2142-2155, April 2013.
- [35] R. Cicchetti, A. Faraone, G. Orlandi, and D. Caratelli, "Real-Argument Incomplete Hankel Functions: Accurate and Computationally Efficient Integral Representations and Their Asymptotic Approximants," *IEEE Transactions on Antennas and Propagation*, Vol. 63, No. 6, pp. 2751-2756, June 2015.
- [36] R. Cicchetti, A. Faraone, E. Miozzi, R. Ravanelli, and O. Testa, and D. Caratelli, "A High-Gain Mushroom-Shaped Dielectric Resonator Antenna for Wideband Wireless Applications," *IEEE Transactions on Antennas and Propagation*, Vol. 64, No. 7, pp. 2848-2861, July 2016.
- [37] R. Cicchetti, A. Faraone and O. Testa, "Energy-Based Representation of Multiport Circuits and Antennas Suitable for Near- and Far-Field Syntheses," in *IEEE Transactions on Antennas and Propagation*, vol. 67, no. 1, pp. 85-98, Jan. 2019, doi: 10.1109/TAP.2018.2876728.
- [38] R. Cicchetti, A. Faraone and O. Testa, "Near Field Synthesis Based on Multi-Port Antenna Radiation Matrix Eigenfields," in *IEEE Access*, vol. 7, pp. 62184-62197, 2019, doi: 10.1109/ACCESS.2019.2912305.
- [39] D. Caratelli, R. Cicchetti, V. Cicchetti, O. Testa and A. Faraone, "Electromagnetic Scattering from Truncated Thin Cylinders: An Approach Based on the Incomplete Hankel Functions and Surface Impedance Boundary Conditions," 2019 Photonics & Electromagnetics Research Symposium - Spring (PIERS-Spring), Rome, Italy, 2019, pp. 1739-1742, doi: 10.1109/PIERS-Spring46901.2019.9017281.
- [40] R. Cicchetti, V. Cicchetti, A. Faraone and O. Testa, "Analysis of Thin Truncated Cylinder Scatterers Using Incomplete Hankel Functions and Surface Impedance Boundary Conditions," in *IEEE Access*, vol. 8, pp. 72997-73004, 2020, doi: 10.1109/ACCESS.2020.2986930.

TECHNICAL REPORTS

- [1] P. Baradat, P. Bernardi, R. Cicchetti, P. Cossard, A. Faraone, J. Y. Fourniols, N. Fragnol, C. Garres, J. Seillé, "European Space Agency study on EMC for Long Duration Missions," European Space Agency (ESA) Contract # 9777/92/NL/PB, *Tech. Note 1* (Sept. 1994), *Tech. Note 2* (Dec. 1994), *Final Report* (June 1995). **ESA CONFIDENTIAL**.
- [2] C. Di Nallo, A. Faraone, and G. Bit-Babik, "Electrically small antenna with switched reactive loads", Technical Report for Antenna Initiative Research Contract, May 2004. **MOTOROLA CONFIDENTIAL**.
- [3] C. Di Nallo, J. Svigelj, A. Faraone, and G. Bit-Babik, "Trade study report on tunable antenna technologies," Technical Report for Antenna Initiative Research Contract, November 2004. **MOTOROLA CONFIDENTIAL**.
- [4] A. Faraone (*ad-hoc team convener*), G. Bit-Babik, T. Harrington, H. Heinrich, J. Keshvari, T. Onishi, J-K. Pack, J. Pledl, J. Prats, M. Wood, P. Zollman, "IEC 62630 Ed.1: Guidance for evaluating exposure from multiple EM sources," Technical Report issued by the International Electrotechnical Commission, Technical Committee 106 (*Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure*), Working Group 4.

CONFERENCE PRESENTATIONS

- [1] P. Bernardi, R. Cicchetti, and A. Faraone, "Analisi Full-Wave di un Gap Asimmetrico tra Linee a Microstriscia Troncate," *Atti della X Riunione Nazionale di Elettromagnetismo*, pp. 313-316, Cesena, Italy, Sept. 21-24, 1994 (*in Italian*).
- [2] P. Bernardi, R. Cicchetti, and A. Faraone, "EMC/EMI Modelling in Planar Structures Using the Spectral Domain Approach," *Proc. COST 243 Workshop*, pp. 78-84, Hamburg, Germany, June 8-9, 1995.
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