MINISTERIO DE CIENCIA E INNOVACIÓN
MINISTERIO DE UNIVERSIDADES

Curriculum vitae

Number of pages: 117 (including this one)

Name: Magdalena Salazar Palma

Date: 22 May 2024

Signature:

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I. Personal Data Family name: Salazar Palma Name: Magdalena
Sex: Female Date of Birh: 15 June 1949 Place of Birth: Granada, Spain

II. Current Professional Situation

Institution: Universidad Carlos III de Madrid (Charles the Third University of Madrid) (UC3M)

Faculty, School or Institute: Escuela Politécnica Superior (College of Engineering)

Department: Department of Signal Theory and Communications

Research Group: Radiofrequency, Electromagnetics, Microwaves & Antennas (GREMA) (Co-responsible)

Others: Institute for Gender Studies (UC3M) (Founder member)

Postal address: Avenida de la Universidad, 30, Leganés, 28911 Madrid, Spain

Telephone: +34-91-624-8860; Fax: +34-91-624-6221; E-mail: salazar@tsc.uc3m.es, m.salazar-palma@ieee.org

Specialization (UNESCO nomenclature): 3307

Professional category: Emeritus Full Prof. (Teaching & Research duties)

Starting date as Emeritus Prof.: 1 September 2020; Starting date as Full Professor (Tenure): 21 November 2005 Dedication: Full time

III. Research Lines

1. Simulation, design, implementation and experimental characterization of passive devices and antennas in microwave and millimeter wave bands using planar (hybrid and monolithic) and waveguide technologies.
2. Advanced numerical and computational methods and signal processing techniques applied to the development of software packages for the analysis and design of electromagnetic structures, e.g., passive devices and antennas.
3. Advanced synthesis methods for the design of self-equalized filters with complex amplitude response and compact multiplexers for the new generation of communication systems and satellite communications.
4. Antenna array and adaptive/smart antennas design using deterministic algorithms based on a single snapshot and considering mutual coupling, scattering from interfering objects, and other effects, through electromagnetic techniques.
5. Metamaterials and new materials for the design of multi-band and miniaturized passive devices and antennas.
6. Passive and active devices and antennas for millimeter wave, submillimeter wave and THz frequency bands.
7. Radio waves propagation.
8. History of Telecommunications.

IV. Academic Education

Degree	Center/Institution	Date
Telecommunication (equivalent to Electrical & Electronic) Engineer	Escuela Técnica Superior Ingenieros de Telecomunicación (ETSIT), Technical University of Madrid (UPM)	December 1973
PhD Electrical & Electronic Engineering	ETSIT, UPM	June 1995
Honorary Doctor Science & Technology	Aalto University (previously Helsinki University of Technology), Espoo, Finland	December 2015

V. Previous Activities of Scientific or Professional Nature

Category. Dedication	Center/Institution	Dates
Assistant Professor. Full time	ETSIT, UPM	1/10/72-30/09/76
Research Assistant (Fellowship). Full time	ETSIT, UPM	1/1/74-31/12/76 [1]
Assistant Professor. Full time	ETSIT, UPM	1/11/84-31/12/95
Interim Associate Professor. Full time	ETSIT, UPM	1/1/96-10/6/96
Associate Professor. Full time	ETSIT, UPM	11/6/96-9/2/2004
Associate Professor. Full time. Leave of absence from UPM	College of Enginering (EPS), Universidad Carlos III de Madrid (UC3M)	10/2/2004-20/11/2005
Full Professor	EPS, UC3M	21/11/2005-31/8/2019

VI. Languages (A = Average, W = Well, C = Correctly)

Language	Speaks	Reads	Writes
English	C	C	C
French	A	C	W
Italian	C	C	W
Spanish (mother tongue)	C	C	C

[1] From January 1, 1977, until October 31, 1984, she was not connected to any University and lived out of Spain for personal reasons.

VII. Research Projects Financed through Competitive Calls (National and/or International)

She has participated in a total of **47 Research Projects funded by Public Institutions** through competitive calls: 38 financed by Spanish National, Regional or Local Public Institutions, 6 by the European Union, EU, and 3 by USA Public Institutions, with total funding of **7 M€.** These, added to the **50 Research and Development Contracts** financed by Spanish and USA companies and institutions (see detailed information in Section IX of this CV) gives a **total** of **97 Research Projects and Contracts** with total funding of **9.5 M€**.

With respect to the type of project, out of the total of 47, 33 were Research and Development Projects (Principal Investigator, PI, in 9 cases) while the rest of the 14 projects may be classified as: 2 professors and students mobility projects (PI in both), 1 satellite tele-education project, 8 dealing with international technical meetings organization (PI in one case) and 3 special grants (PI in one case).

With respect to funding, from the total of 47 projects, 9 were funded by international institutions: 6 by the EU (one of them by *Fondo Europeo de Desarrollo Regional*, FEDER, European Regional Development Fund) and 3 by USA institutions (one by the National Science Foundation, NSF, Washington, DC; one by the Office of Naval Research, ONR, Washington, DC, and the Air Force Research Laboratories, AFRL, Rome, NY; and one by the European Office of Aerospace Research & Development, EOARD, of the Air Force Office of Scientific Research, AFOSR, an AFRL directorate); 24 were funded by Spanish National institutions (*Comisión Interministerial de Ciencia y Tecnología*, CICYT, Spain Interministry Commission of Science and Technology: 16 projects; *Ministerio de Educación y Cultura*, MEC, Spain Ministry of Education and Culture: 3 projects; *Ministerio de Ciencia e Innovación*, MICINN, Spain Ministry of Science and Innovation: 2 projects; *Agencia Española de Cooperación Internacional*, AECI, Spanish Agency of International Cooperation, *Ministerio de Asuntos Exteriores y Cooperación*, MAEC, Spain Ministry of Foreign Affairs and Cooperation: 1 project; *Ministerio de Economía, Industria y Competitividad*, MEICN, Spain Ministry of Economy, Industry and Competitiveness: 1 project; *Ministerio de Economía y Empresa*, MINECO, Spain Ministry of Economy and Business: 1 project); 7 projects were funded by regional institutions (*Consejería de Educación*, Regional Ministry of Education, Comunidad de Madrid, CAM, Regional Government of Madrid); and 7 projects, by local institutions (UC3M).

She has been PI of a total of 13 projects: 5 funded by international institutions (3 by the EU: one of research and development and two mobility projects; and 2 by USA institutions: one by NSF, one by ONR and AFRL, both of them of research and development); 6 funded by Spanish National institutions: 5 of research and development by CICYT (1), MICINN (1), MEC (2), and AECI-MAEC (1); 1 for the organization of an international technical meeting by MEC; 1 funded by a regional institution (CAM), of research and development; and 1 funded by a local institution, UC3M, consisting of a special grant.

1. **Project title**: *ANÁLISIS, MODELIZACIÓN Y DISEÑO ASISTIDO POR ORDENADOR DE CIRCUITOS NO LINEALES DE MICROONDAS Y MILIMÉTRICAS. APLICACIÓN A RADIOENLACES.* (Analysis, Modeling and Computer Aided Design of Microwave and Millimeter Wave Non Linear Circuits. Application to Radiolinks)
   Funding institution: CICYT.
   Participating institutions: UPM, *Universidad de Cantabria* (UC).
   Duration, from: January 1988, up to: December 1991
   Funding: 34,800,000 pts.
   Principal investigator: Jorge Pérez Martínez (UPM).
   Number of participating researchers: 12.

2. **Project title**: *DISEÑO DE CIRCUITOS MONOLÍTICOS DE MICROONDAS SOBRE ARSENIURO DE GALIO* (TIC89 – 0023 – C02 – 01) (Design of Gallium Arsenide Microwave Monolithic Circuits).
   Funding institution: *CICYT, Programa Nacional en Tecnologías de la Información y las Comunicaciones, PRONTIC* (Information and Communication Technologies National Program).
   Participating institutions: UPM, UC.
   Duration, from: December 1989, up to: December 1992.
   Funding: 53,940,000 pts.
   Principal investigator: Jorge Pérez Martínez (UPM).
   Number of participating researchers: 12.

3. **Project title**: GaAs MONOLITHIC ANALOG CIRCUITS FOR MICROWAVE COMMUNICATIONS SYSTEMS UP TO 23 GHz (ESPRIT 5018 – COSMIC).
Funding institution: EU (ESPRIT, European Commission Program for Information Technologies).
Participating institutions: UPM and over 20 European universities and companies.
Duration, from: January 1990, up to: March 1993.
Key Person: First year: José Luis Cáceres Armendáriz (UPM). Rest: **Magdalena Salazar Palma** (UPM)**.**
Funding: 20,300,000 pts.
Principal investigator: First year: Jorge Pérez Martínez (UPM). Rest: Pablo Dorta Naranjo (UPM).
Number of participating researchers: 5 (UPM).

4. **Project title**: GaAs MONOLITHIC ANALOG CIRCUITS FOR MICROWAVE COMMUNICATIONS SYSTEMS UP TO 23 GHz.
Funding institution: CICYT.
Participating institutions: UPM.
Duration, from: January 1990, up to: December 1992.
Funding: 7,540,000 pts.
Principal investigator: First year: Jorge Pérez Martínez. Rest: Pablo Dorta Naranjo.
Number of participating researchers: 5.

5. **Project title**: *PLAN DE FORMACIÓN DE TECNÓLOGOS: DISEÑO ASISTIDO POR ORDENADOR* (CAD) *DE CIRCUITOS INTEGRADOS MONOLÍTICOS DE MICROONDAS* (MMIC). (Training of Technical Staff Program: Computer Aided Design, CAD, of Microwave Monolithic Integrated Circuits, MMIC)
Funding institution: Regional Ministry of Education, CAM.
Participating institutions: UPM.
Duration, from: September 1990, up to: September 1993.
Funding: 2,320,000 pts.
Principal investigator: First year: Jorge Pérez Martínez. Rest: Félix Pérez Martínez.
Number of participating researchers: 8.

6. **Project title**: *HIGH FREQUENCY ELECTRONICS* (ICP-E-2107-06).
Funding institution: EU (ERASMUS Program, EuRopean community Action Scheme for the Mobility of University Students).
Participating institutions: UPM and other five Spanish and European universities.
Duration, from: September 1992, up to: July 1995.
Principal investigator: First year: **Magdalena Salazar Palma** (UPM). Rest: Mateo Burgos García (UPM).
Number of participating researchers: 8 (UPM).

7. **Project title**: EUROPEAN MICROWAVE CONFERENCE.
Funding institution: CICYT.
Participating institutions: UPM.
Duration, from: January 1993, up to: December 1993.
Funding: 1,000,000 pts.
Principal investigator: Jesús Sánchez Miñana.
Number of participating researchers: 3.

8. **Project title**: MICROWAVE TECHNOLOGY FOR TELECOMMUNICATIONS (ERRCHRXCT 930214).
Funding institution: EU (HCM Program, Human Capital and Mobility).
Participating institutions: UPM and other five Spanish and Europeans universities.
Duration, from: 1993, up to: 1995.
Funding: 3,666,300 pts.
Principal investigator: First year: **Magdalena Salazar Palma** (UPM). Rest: Mateo Burgos García (UPM).
Number of participating researchers: 5 (UPM).

9. **Project title**: *ANTENA ADAPTATIVA EN TECNOLOGÍA MONOLÍTICA PARA COMUNICACIONES MÓVILES POR SATÉLITE* (TIC93 – 0055 – C03 – 01) (Monolithic Smart Antenna for Mobile Satellite Communications).
Funding institution: CICYT.

Participating institutions: UPM, *Universidad Politécnica de Cataluña* (UPC), *Universidad de Las Palmas de Gran Canaria* (ULPGC).
Duration, from: March 1993, up to: March 1996.
Funding: 24,420,000 pts
Principal investigator: Félix Pérez Martínez (UPM).
Number of participating researchers: 10 (UPM).

10. **Project title**: *ACCIÓN ESPECIAL: REALIZACIÓN DE CIRCUITOS HÍBRIDOS Y MONOLÍTICOS DE MICROONDAS*. (Special Action: Implementation of Microwave Hybrid and Monolithic Circuits)
Funding institution: Regional Ministry of Education, CAM.
Participating institutions: UPM.
Duration, from: July 1993, up to: December 1993.
Funding: 5,800,000 pts.
Principal investigator: Félix Pérez Martínez.
Number of participating researchers: 8.

11. **Project title**: *ACCIÓN ESPECIAL: ANTENA ADAPTATIVA PARA COMUNICACIONES MÓVILES POR SATÉLITE: PROYECTO DE INFRAESTRUCTURA*. (Special Action: Smart Antenna for Mobile Satellite Communications. Infrastructure Project)
Funding institution: Regional Ministry of Education, CAM.
Participating institutions: UPM.
Duration, from: July 1995, up to: December 1995.
Funding: 2,320,000 pts.
Principal investigator: Félix Pérez Martínez (UPM).
Number of participating researchers: 8.

12. **Project title**: TELE-EDUCATION NETWORK (TEN).
Funding institution: EU.
Participating institutions: UPM, Spain Official Association of Telecommunication Engineers, COIT/AEIT and other National Institutions and European Universities.
Duration, from: January 1996, up to: March 1999.
Funding: 56,260,000 pts.
Principal investigator: Luis Castejón (UPM, COIT/AEIT).
Number of participating researchers: 6 (UPM).

13. **Project title**: *ANTENA ADAPTATIVA PARA SEÑALES DE ESPECTRO ENSANCHADO Y SECUENCIA DIRECTA* (TIC96 – 0724 – C06 - 01) (Smart Antenna for Direct Sequence Spread Spectrum Signals).
Funding institution: CICYT.
Participating institutions: UPM, UPC, ULPGC, *Universidad de Sevilla* (US).
Duration, from: June 1996, up to: June 1999.
Funding: 45,000,000 pts.
Principal investigator: Félix Pérez Martínez (UPM).
Number of participating researchers: 12 (UPM).

14. **Project title**: *ANÁLISIS DE ALIMENTADORES DE ANTENAS REFLECTORAS DE ALTAS PRESTACIONES PARA COMUNICACIONES POR SATÉLITE* (HI 1996 - 0022). (Analysis of High Efficiency Feeders for Reflective Antennas for Satellite Communications)
Funding institution: MEC.
Participating institutions: UPM, University of Florence, Italy.
Funding: 570,000 pts.
Duration, from: January 1997, up to: December 1997.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 3 (UPM).

15. **Project title**: TWIN CARRIER SINGLE TRANSCEIVER BASE STATION FOR PCS (ESPRIT 24137 - TWIST).
Funding institution: EU (ESPRIT).
Participating institutions: UPM, ALCATEL SESA (ALCATEL STANDARD ELÉCTRICA, SA), MIETEC ALCATEL and other European Companies.

Duration, from: March 1997, up to: June 1999.
Funding: 566,432 ECUs.
Principal investigator: José Manuel Páez Borrallo (UPM).
Principal investigator of the subproject: Mateo Burgos García (UPM).
Number of participating researchers: 7 of *Grupo de Microondas and Radar,* GMR, Microwaves and Radar Group (UPM).

16. **Project title**: *ANÁLISIS DE ALIMENTADORES DE ANTENAS REFLECTORAS DE ALTAS PRESTACIONES PARA COMUNICACIONES POR SATÉLITE* (HI 1997 - 0067). (Analysis of High Efficiency Reflective Antennas Feeders for Satellite Communications)
Funding institution: MEC.
Participating institutions: UPM, University of Florence, Italy.
Duration, from: January 1998, up to: December 1999.
Funding: 1,320,000 pts.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 5 (UPM).

17. **Project title**: *COMUNICACIONES AVANZADAS DE ALTA EFICIENCIA ESPECTRAL. APLICACIÓN AL SISTEMA* LMDS (TIC99 – 1172 – C02 – 01) (High Spectral Efficiency Advanced Communications. Application to LMDS System).
Funding institution: CICYT.
Participating institutions: UPM, ULPGC, US.
Duration, from: November 1999, up to: November 2002.
Funding: 47,328,000 pts.
Principal investigator: José Ignacio Alonso Montes (UPM).
Number of participating researchers: 10 (UPM).

18. **Project title**: ADAPTIVE ANTENNAS AND DIVERSITY TECHNIQUES FOR WIRELESS COMMUNICATION.
Funding institution: NSF, Washington DC, USA.
Participating institutions: UPM, *Universidad de Alcalá de Henares* (UAH), Syracuse University (SU), New York, USA.
Duration, from: 2000, up to: 2004.
Funding: 307,000 $ (USD).
Principal investigator of the Spanish team: **Magdalena Salazar Palma** (UPM-UC3M).
Number of participating researchers in the Spanish team: 5 (UPM-UC3M).

19. **Project title**: IEEE REGION 8 COMMITTEE MEETING (TIC – 00 – 2956 – E)
Funding institution: CICYT.
Participating institutions: UPM, IEEE (The Institute of Electrical and Electronics Engineers) Spain Section.
Duration, from: March 2001, up to: March 2002.
Funding: 1,000,000 pts.
Principal investigator: Manuel Sierra Pérez (UPM).
Number of participating researchers: 2 (UPM).

20. **Project title**: MÉTODOS AVANZADOS DE DISEÑO DE COMPONENTES PASIVOS PARA LAS NUEVAS GENERACIONES DE SISTEMAS DE COMUNICACIONES EN BANDAS MILIMÉTRICAS (TIC2002 – 02657) (Passive Components Advanced Synthesis Methods for the New Generation of Millimeter Wave Band Communication Systems).
Funding institution: CICYT.
Participating institutions: UPM, UC3M.
Duration, from: November 2002, up to: May 2006.
Funding: 127,345 €.
Principal investigator: **Magdalena Salazar Palma** (UPM-UC3M).
Number of participating researchers: 5 (UPM-UC3M).

21. **Project title**: *ACCIÓN ESPECIAL: DISEÑO Y ESTUDIO DE VIABILIDAD DE LA CONTRIBUCIÓN (EN ESPECIE) A LA CONSTRUCCIÓN DE* ATACAMA LARGE MILLIMETER ARRAY (ALMA). (Special

Action: Design and Feasibility Study of the Contribution to the Construction of the Atacama Large Millimeter Array, ALMA)
Funding institution: CICYT.
Participating institutions: *Consejo Superior de Investigaciones Científicas* (CSIC), Spanish National Research Council, UPM.
Duration, from: March 2003, up to: July 2004.
Funding: 194,092 €.
Principal investigator: Jesús Martín Pintado (CSIC).
Number of participating researchers: 4 (UPM).

22. **Project title**: *INTELLIGENT CONFORMAL ARRAYS*
Funding institution: ONR, Washington, DC, USA, and AFRL, Rome, NY, USA.
Participating institutions: UPM, UC3M, UAH, SU.
Duration, from: January 2004, up to: December 2006
Funding: 113,276 $ USD.
Principal investigator of Spanish team: **Magdalena Salazar Palma** (UPM-UC3M).
Number of participating researchers in the Spanish team: 6 (UPM-UC3M).

23. **Project title**: *ACCIÓN ESPECIAL*: 7th INTERNATIONAL WORKSHOP ON FINITE ELEMENTS FOR MICROWAVE ENGINEERING. (Special Action: 7th International Workshop on Finite Elements for Microwave Engineering)
Funding institution: MEC.
Participating institutions: UPM, *Universidad de Alcalá de Henares* (UAH).
Duration, from: May 2004, up to: May 2005.
Funding: 9,000 €.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 4 (UPM), 1 (UAH).

24. **Project title**: *EQUIPAMIENTO DE UNA CÁMARA ANECOICA PARA LA MEDIDA DE ANTENAS Y PARA EL ESTUDIO DE LA DISTRIBUCIÓN ÓPTICA DE SEÑALES DE MICROONDAS A ARRAYS*. (Anechoic Chamber Equipment for Antenna Experimental Characterization and the Study of Array Microwave Signals Optical Distribution)
Funding institution: FEDER: 50%, UC3M: 25%, *Grupo de Radiofrecuencia* (GRF), Radiofrequency Group, *Dpto. Teoría de la Señal y Comunicaciones* (TSC) Department of Signal Theory and Communications: 25%
Participating institutions: UC3M.
Duration, from: April 2005, up to: December 2007
Funding: 397,195 €.
Principal investigator: Daniel Segovia Vargas (UC3M).
Number of participating researchers: 16.

25. **Project title**: SENSOR ISAR INTERFEROMÉTRICO DE SUPERRESOLUCIÓN EN MILIMÉTRICAS (TEC2005 – 07010 – C02 – 01/TCM) (Millimeter Wave Super-resolution Interferometric ISAR Sensor).
Funding institution: CICYT.
Participating institutions: UPM, ULPGC, UC3M.
Duration, from: December 2005, up to: December 2006.
Funding: 311,500 €.
Principal investigator: Mateo Burgos García (UPM).
Number of participating researchers: 6.5 (UPM).

26. **Project title**: NUEVOS MATERIALES, DISPOSITIVOS Y SISTEMAS RADIANTES PARA MINIATURIZAR Y MEJORAR LAS PRESTACIONES DE CABECERAS DE RADIOFRECUENCIA (TEC2006 – 13248 – C04 – 04) (New Materials, Devices and Antennas for the Improvement of Radiofrequency Front End Features).
Funding institution: CICYT.
Participating institutions: *Universidad Autónoma de Barcelona* (UAB), UPC, *Universidad Pública de Navarra* (UPNA), UC3M.
Duration, from: October 2006, up to: December 2009.
Funding for subproject 4: 158,389 €.

Principal investigator of subproject 4: Daniel Segovia Vargas (UC3M).
Number of participating researchers: 12 (UC3M).

27. **Project title**: DESARROLLO DE ANTENAS MULTIFUNCIONALES COMPACTAS DE ALTA EFICIENCIA BASADAS EN EBGS Y METAMATERIALES (CCG06-UC3M/TIC-0803). (Development of Highly Efficient Multifunction Compact Antennas Based on EBGs and Metamaterials).
Funding institution: CAM, UC3M. *Programa de Creación y Consolidación de Grupos del IV PRICIT* (*Plan Regional de Investigación Científica e Innovación Tecnológica*). Program for the Creation and Consolidation of Research Groups of the 4th Regional Plan of Scientific Research and Technological Innovation.
Participating institutions: UC3M.
Duration, from: January 2007, up to: February 2008.
Funding: 15,000 €.
Principal investigator: Eva Rajo Iglesias (UC3M).
Number of participating researchers: 11 (UC3M).

28. **Project title**: *ANÁLISIS Y DISEÑO DE ANTENAS MULTIFRECUENCIAS Y/O MINIATURIZADAS BASADAS EN METAMATERIALES* (A/7422/06). (Analysis and Design of Multifrequency and/or Miniaturized Antennas Based on Metamaterials).
Funding institution: AECI, MAEC.
Participating institutions: UC3M, University of Tetouan (UT), Morocco.
Duration, from: January 2007, up to: December 2007.
Funding: 9,965.14 €.
Principal investigator: **Magdalena Salazar Palma** (UC3M).
Number of participating researchers: 3 (UC3M), 4 (UT).

29. **Project title**: SELF-ADAPTIVE ELECTROMAGNETIC SOLVER USING *hp*-FINITE ELEMENTS FOR THE ANALYSIS OF THE SCATTERING AND RADIATION OF ELECTROMAGNETIC WAVES (FA8655-07-1-3041).
Funding institution: EOARD (AFOSR, AFRL), USA.
Participating institutions: UC3M, UPM.
Duration, from: April 2007, up to: March 2008.
Funding: 25.000 $ USD.
Principal investigator: Luis Emilio García Castillo (UC3M).
Number of participating researchers: 5 (UC3M), 1(UPM).

30. **Project title**: *ADAPTATIVIDAD AUTOMÁTICA hp EN TRES DIMENSIONES PARA EL ANÁLISIS DE DISPOSITIVOS PASIVOS Y RADIANTES DE MICROONDAS* (TEC2007 – 65214/TCM) (*hp* Automatic Adaptivity in Three Dimensions for the Analysis of Microwave Passive Devices and Antennas).
Funding institution: CICYT.
Participating institutions: UC3M, UPM; UAH, University of Texas at Austin (UTA), USA, University of Florida (UF), USA.
Duration, from: October 2007, up to: December 2010.
Funding: 85,063 €.
Principal investigator: Luis Emilio García Castillo (UC3M).
Number of participating researchers: 6 (UC3M), 2(UPM), 2 (UAH), 2 (UTA), 1 (UF).

31. **Project title**: *DESARROLLO DE NUEVAS ANTENAS DE BANDA ULTRAANCHA*. (Development of New Ultrawideband Antennas).
Funding institution: CAM – UC3M
Participating institutions: UC3M.
Duration, from: January 2008, up to: February 2009.
Funding: 17,648 €.
Principal investigator: José Luis Vázquez Roy.
Number of participating researchers: 12.

32. **Project title**: *WEB GRUPO DE RADIOFRECUENCIA* (Radiofrequency Group WEB).
Funding institution: UC3M.
Participating institutions: UC3M.

Duration, from: May 2008, up to: April 2009.
Funding: 1,000 €.
Principal investigator: Daniel Segovia Vargas.
Number of participating researchers: 8.

33. **Project title**: *CARGOS CIENTÍFICOS* (Scientific Positions).
Funding institution: UC3M
Participating institutions: UC3M.
Duration, from: September 2008, up to: September 2009.
Funding: 1,400 €.
Principal investigator: **Magdalena Salazar Palma**
Number of participating researchers: 1.

34. **Project title**: TERAHERTZ TECHNOLOGY FOR ELECTROMAGNETIC SENSING APPLICATIONS (TERASENSE).
Funding institution: MICINN, *Consolider-Ingenio* Program. (Consolider CSD2008-0068)
Participating institutions: UPC, UC3M and other 14 Spanish universities and institutions.
Duration, from: December 2008, up to: December 2013.
Funding: 3,500,000 €.
Funding for UC3M subproject: 158,389 €.
Principal investigator: Lluis Jofre Roca (UPC).
Principal investigator of the UC3M subproject: Daniel Segovia Vargas.
Number of participating researchers: 125 (total), 8 (UC3M).

35. **Project title**: *NUEVAS TÉCNICAS ELECTRÓNICAS Y ÓPTICAS PARA EL DESARROLLO DE IMAGING ARRAYS (CÁMARAS) EN ONDAS MILIMÉTRICAS Y TERAHERCIOS (THz). APLICACIONES* (TEC2009 – 14525 – C02 – 01) (New Electronic and Optical Techniques for the Development of Imaging Arrays in Millimeter and Teraherz (THz) Frequency Bands. Applications).
Funding institution: CICYT.
Participating institutions: UC3M: Radiofrequency Group (GRF) and Optoeletronic and Laser Technology Group (GOTL).
Duration, from: January 2010, up to: December 2012.
Funding for subproject 1: 525,382.01 €.
Principal investigator: Daniel Segovia Vargas (GRF).
Number of participating researchers: 12 (GRF)

36. **Project title**: *ANÁLISIS DE ESTRUCTURAS PERIÓDICAS FINITAS REGULARES E IRREGULARES MEDIANTE TÉCNICAS DE DESCOMPOSICIÓN DE DOMINIOS EN PARALELO CON ADAPTATIVIDAD hp AUTOMÁTICA* (Analysis of Regular and Irregular Finite Periodic Structures Using Parallel Domain Decomposition Techniques with Automatic *hp* Adaptivity).
Funding institution: MICINN.
Participating institutions: *UC3M, UPM*; Xidian University, China (XU); *Università degli Studi di Udine* (USU*),* Italy.
Duration, from: January 2011, up to: December 2014.
Funding: 168,432 €.
Principal investigator: Luis Emilio García Castillo (UC3M).
Number of participating researchers: 8 (UC3M), 2 (UPM), 1 (XU), 1 (USU).

37. **Project title**: *XXVI SIMPOSIUM DE LA UNIÓN CIENTÍFICA INTERNACIONAL DE RADIO, URSI 2011* (26th National Symposium of the International Radio Scientific Union, URSI 2011).
Funding institution: UC3M.
Participating institutions: UC3M.
Duration, from: January 2011, up to: December 2011.
Funding: 5,000 €.
Principal investigator: Daniel Segovia Vargas (UC3M).
Number of participating researchers: 13.

38. **Project title**: INTERNATIONAL WORKSHOP ON THz TECHNOLOGY AND APPLICATIONS.
Funding institution: UC3M.

Participating institutions: UC3M.
Duration, from: January 2011, up to: December 2011.
Funding: 1,200 €.
Principal investigator: Luis Emilio García Castillo (UC3M).
Number of participating researchers: 4.

39. **Project title**: *XXVI SIMPOSIUM DE LA UNIÓN CIENTÍFICA INTERNACIONAL DE RADIO, URSI 2011* (26th National Symposium of the International Radio Scientific Union, URSI 2011).
Funding institution: CICYT, MICINN.
Participating institutions: UC3M.
Duración, from: May 2011, up to: May 2012.
Funding: 10,000 €.
Principal investigator: Daniel Segovia Vargas (UC3M).
Number of participating researchers: 4.

40. **Project title**: FUNDAMENTALS ON ANTENNAS: THE ANTENNA AS A COMMUNICATION SYSTEM BLOCK (European School on Antennas, ESoA, Course).
Funding institution: UC3M.
Participating institutions: UC3M.
Duration, from: January 2013, up to: December 2013.
Funding: 2,000 €
Principal investigator: Daniel Segovia Vargas (UC3M).
Number of participating researchers: 7.

41. **Project title**: *DESARROLLO DE UN SISTEMA INTEGRADO DE COMUNICACIONES DE ALTA TASA DE DATOS EN FRECUENCIA DE THz* (TEC2013 – 47753 – C3 – 02) (Development of a Data High Rate Integrated Communications System in the THz Frequency Band).
Funding institution: MEICN..
Participating institutions: UPNA, UC3M.
Duration, from: January 2014, up to: December 2016
Funding: 238,854 €
Principal investigator of subproject 2: Daniel Segovia Vargas (UC3M).
Number of participating researchers: 6 (UC3M).

42. **Project title**: *DESARROLLOS INSTRUMENTALS FOTÓNICOS Y DE RADIOFRECUENCIA Y APLICACIÓN A TÉCNICAS EXPERIMENTALES DE GEODESIA ESPACIAL* (Development of Photonic and Radiofrequency Instrumentations and Application to Space Geodesy Experimental Techniques) (DIFRAGEOS-CM).
Funding institution: Regional Ministry of Education, CAM.
Participating institutions: UC3M, Instituto Geográfico Nacional (National Geographic Institute), UPM, UAM, *Instituto Nacional de Técnica Aeroespacial Esteban Terradas* (Spain National Institute of Aerospatial Techniques Esteban Terradas).
Duration, from: October 2014, up to December 2018.
Funding for UC3M subproject: 600,000 €.
Principal investigator: **Magdalena Salazar Palma** (UC3M).
Number of participating researchers: 18 (UC3M).

43. **Project title**: FUNDAMENTALS ON ANTENNAS: THE ANTENNA AS A COMMUNICATION SYSTEM BLOCK. SECOND EDITION (European School on Antennas, ESoA, Course).
Funding institution: UC3M.
Participating institutions: UC3M.
Duration, from: January 2015, up to: December 2015.
Funding: 2,000 €.
Principal investigator: Daniel Segovia Vargas (UC3M).
Number of participating researchers: 8.

44. **Project title**: *SIMULADOR ELECTROMAGNÉTICO PARA ENTORNO HPC* (Electromagnetic Simulator for HPC Environment).
Funding institution: MEICN.

Participating institutions: UC3M.
Duration, from: January 2017, up to: December 2019.
Funding: 119,427 €.
Principal investigator: Luis Emilio García Castillo, **Magdalena Salazar Palma**.
Number of participating researchers: 6.

45. **Project title**: 21ST EUROPEAN MICROWAVE WEEK
Funding institution: UC3M.
Participating institutions: UC3M.
Duration, from: 1 January 2018, up to: 31 December 2018.
Funding: 2,000 €.
Principal investigator: Daniel Segovia Vargas (UC3M).
Number of participating researchers: 3.

46. **Project title**: ANTENA DE ESTACIÓN BASE PARA SOPORTAR NUEVOS SERVICIOS 5G CARRIER AGGREGATION (ANABANTA-5G)
Funding institution: MINECO – Proyecto Cooperativo – Retos-Colaboración
Participating institutions: UC3M.
Duration, from: 2018, up to 2021.
Funding: 415,465.36 €.
Principal investigator: Daniel Segovia Vargas.
Number of participating researchers: 10.

47. **Project title**: MILLIMETER WAVE ARRAY AT ROOM TEMPERATURE FOR INSTRUMENTS IN LEO ALTITUDE RADIO ASTRONOMY (MARTINLARA-CM).
Funding institution: Regional Ministry of Education, CAM.
Participating institutions: UC3M, UPM, *Universidad Complutense de Madrid* (UCM), IGN, INTA.
Duration, from: January 2019, up to December 2022.
Funding: 987,468.34 €.
Principal investigator: Luis Enrique García Muñoz (UC3M).
Number of participating researchers: 15 (UC3M), 32 (total).

VIII. Scientific and Technical Publications

Author or co-author of 754 scientific publications: Books (23) and book contributions (30), articles in international (121) and national (1) scientific journals, contributions for international (406) and national symposia (78), projects and contracts technical reports (53), courses and seminars notes (30), and other publications (12). According to Google Scholar she has accumulated **7,107 citations**, with a **h index** of **38** and **i10 index** of **111** (see https://scholar.google.es/citations?user=xD5iWiUAAAAJ&hl=es&oi=ao). An incomplete search through the Web of Science, WOS, of the *Institute for Scientific Information* (ISI) gives over **2,500 citations** by other authors with an **h index** of **24**.

The list of the scientific books and book contributions is given first. The articles in scientific journals follow. Finally, the technical reports of research projects and contracts are listed, as well as other publications. The courses and seminars notes are not listed. Contributions for symposia are listed in section XII of this Curriculum Vitae.

A. Books and Book Contributions

She has authored 9 scientific books and 27 contributions for scientific books (20 of them as invited contributions): 17 book chapters, 3 book chapter sections, and 7 book articles. She has also authored 14 academic books and 3 other (invited) works in electronic format attached to scientific books, which are not listed here.

A1. Books

The following 9 books have sold a total of over **7,250 copies**.

1. M. Salazar-Palma, T. K. Sarkar, L. E. García-Castillo, T. Roy, A. Djordjević, *Iterative and Self-Adaptive Finite Elements in Electromagnetic Modeling*, ISBN 0-89006-895-X, 816 pages, 1998, Ed. Artech House, Inc., Norwood, MA, USA.
   No. of citations by other authors (Google Scholar): 215.
   Over 900 copies sold.

2. T. K. Sarkar, M. Salazar-Palma, M. C. Wicks (with contributions by L.-E. García-Castillo, Y. Hua, Z. Ji, K. Kim, J. Koh, W. Lee, S. Llorente-Romano, R. Rodríguez-Boix, C. Su, and W. Zhang), *Wavelet Application in Engineering Electromagnetics*, ISBN 1-58053-267-5, 374 pages, 2002, Ed. Artech House, Inc., Norwood, MA, USA.
   No. of citations by other authors (Google Scholar): 105.
   Over 750 copies sold.

3. T. K. Sarkar, M. C. Wicks, M. Salazar-Palma, R. J. Bonneau (with contributions by R. Adve, P. Antonik, R. D. Brown, J. Carlo, Y. Chung, T. B. Hale, B. Himed, Z. Ji, K. Kim, R. E. Kohler, E. Mokole, R. Fernández-Recio, R. A. Schneible, D. Sengupta, and H. Wang), *Smart Antennas*, ISBN 0-471-21010-2, 472 pages, 2003, Ed. John Wiley & Sons, Inc., Wiley – Interscience, IEEE Press, Hoboken, NJ, USA.
   No. of citations by other authors (Google Scholar): 362.
   Over 1,700 copies sold

4. T. K. Sarkar, R. J. Mailloux, A. A. Oliner, M. Salazar-Palma, D. L. Sengupta (with contributions by D. C. Baker, J. S. Belrose, I. Boyd, O. M. Bucci, P. F. Goldsmith, H. Griffiths, A. A. Kostenko, I. V. Lindell, A. Marincic, A. I. Nosich, J. Mitchell, G. Sato, M. Sato and M. Thumm), *History of Wireless*, ISBN 0-471-21010-2, 675 pages, 2006, Ed. John Wiley & Sons, Inc., Wiley – Interscience, IEEE Press, Hoboken, NJ, USA.
   No. of citations by other authors (Google Scholar): 174/45.
   Over 1,700 copies sold.

5. T. K. Sarkar, M. Salazar-Palma, E. L. Mokole (with contributions by S. Burintramart, W. Choi, A. De, D. Ghosh, S. Hwang, R. Fernández-Recio, N. Yilmazer), *Physics of Multiantenna Systems and Broadband Processing*, ISBN: 978-0-470-19040-1, 562 pages, July 2008, Ed. John Wiley & Sons, Inc., Wiley – Interscience, IEEE Press, Hoboken, NJ, USA.
   No. of citations by other authors (Google Scholar): 36.
   Over 700 copies sold.

6. B. H. Jung, T. K. Sarkar, S. W. Ting, Y. Zhang, Z. Mei, Z. Ji, M. Yuan, A. De, M. Salazar-Palma, S. M. Rao, *Time and Frequency Domain Solutions of EM Problems Using Integral Equations and a Hybrid Approach*, ISBN: 978-0-470-48767-9, 516 pages, November 2010, Ed. John Wiley & Sons, Inc., Wiley – Interscience, IEEE Press, Hoboken, NJ, USA.
   No. of citations by other authors (Google Scholar): 41.
   Over 500 copies sold.

7. Y. Zhang, T. K. Sarkar, X.-W. Zhao, D. García-Doñoro, W. Zhao, M. Salazar-Palma, S. Ting, *Higher Order Basis Based Integral Equation Solver (HOBBIES)*, 550 pages, May 2012, Ed. John Wiley & Sons, Inc., Wiley – Interscience, IEEE Press, Hoboken, NJ, USA.
   No. of citations by other authors (Google Scholar): 59.
   Over 500 copies sold.

8. T. K. Sarkar, M. Salazar-Palma, M. N. Abdallah (with contributions by A. De, W. M. G. Diab, M. A. Lagunas, E. L. Mokole, H. Moon, A. I. Perez-Neira), *The Physics and Mathematics of Electromagnetic Wave Propagation in Cellular Wireless Communication*, 416 pages, 2018, Ed. John Wiley & Sons, Inc., Wiley – Interscience, IEEE Press, Hoboken, NJ, USA.
   No. of citations by other authors (Google Scholar): 9.
   Over 300 copies sold.

9. T. K. Sarkar, M. Salazar-Palma, M. D. Zhu, H. Chen, *Modern Characterization of Electromagnetic Systems and its Associated Metrology*, ISBN: 9781119076469, 722 pages, 2021, Ed. John Wiley & Sons, Inc., Wiley – Interscience, IEEE Press, Hoboken, NJ, USA.
   Over 200 copies sold.

A2. Book Chapters

Author and co-author of 17 chapters in scientific books, all of them as **invited** contributions.

1. M. Salazar-Palma, L. E. García-Castillo, "Self-Adaptive Procedures for Waveguiding Structures Analysis", Chapter 16 in *Finite Element Software for Microwave Engineering*, Editors: T. Itoh, G. Pelosi, P. Silvester, ISBN: 0-471-12636-5, pp. 401-434, 1996, Ed. John Wiley & Sons, New York, USA.
   (**Invited contribution**)
   No. of citations of the book (Google Scholar): 93.

2. T. K. Sarkar, T. Roy, M. Salazar-Palma, A. R. Djordjević, "Finite-Element Time Domain Method", Chapter 8 in *Time Domain Electromagnetics*, Editor: S. M. Rao, ISBN: 0-12-580190-4, pp. 279-305, 1999, Ed. Academic Press, San Diego, CA, USA.
   (**Invited contribution**)
   No. of citations of the book (Google Scholar): 421.

3. T. K. Sarkar, R. S. Adve, M. Salazar-Palma, "Telecommunications Cables", in *Wiley Encyclopedia of Electrical and Electronics Engineering*, Editor: J. G. Webster, ISBN: 0-471-39052-6, vol. 21, pp. 391-397, 1999, Ed. John Wiley & Sons, Inc., New York, NY, USA.
   (**Invited contribution**)
   No. of citations of the book (Google Scholar): 218.

4. T. K. Sarkar, R. S. Adve, M. Salazar-Palma, "Phased Array Antennas", in *Wiley Encyclopedia of Electrical and Electronics Engineering*, Editor: J. G. Webster, ISBN: 0-471-39052-6, vol.21, 20 pages, 2001. Ed. John Wiley & Sons, Inc., New York, NY, USA.
   (**Invited contribution**)
   No. of citations of the chapter (Google Scholar): 4.
   No. of citations of the book (Google Scholar): 218.

5. K. Kim, T. K. Sarkar, M. Salazar-Palma, "Adaptive Antenna Arrays", in *Wiley Encyclopedia of Telecommunications*, Editor: J. G. Proakis, ISBN: 0-471-36972-1, vol. 1, pp. 68-75, 2003, Ed. John Wiley & Sons, Inc., New York, NY, USA.
   (**Invited contribution**)

No. of citations of the book (Google Scholar): 60.

6. J. T. Carlo, T. K. Sarkar, M. C. Wicks, M. Salazar-Palma, "Application of Deterministic Techniques to STAP", Chapter 12, in *Applications of Space-Time Adaptive Processing*, Editor: R. Klemm, ISBN: 0-852-96924-4, pp. 375-411, 2004, Ed. The IEE, London, UK.
(**Invited contribution**)
No. of citations of the chapter (Google Scholar): 5.
No. of citations of the book (Google Scholar): 195.

7. R. M. Barrio-Garrido, M. Salazar-Palma, T. K. Sarkar, R. S. Adve, "Stripline Components", in *Encyclopedia of RF and Microwave Engineering*, Editor: K. Chang, ISBN: 0-471-27053-9, 12 pages, 2005, Ed. John Wiley & Sons, Inc., New York, NY, USA.
(**Invited contribution**)
No. of citations of the chapter (Google Scholar): 5.
No. of citations of the book (Google Scholar): 147.

8. T. K. Sarkar, M. Salazar-Palma, "Direction of Arrival Estimation and Adaptive Processing Using a Conformal Phased Array", in *Encyclopedia of RF and Microwave Engineering*, Editor: K. Chang, ISBN: 0-471-27053-9, 19 pages, 2005, Ed. John Wiley & Sons, Inc., New York, NY, USA.
(**Invited contribution**)
No. of citations of the book (Google Scholar): 147.

9. T. K. Sarkar, B. Kolundzija, M. Salazar-Palma, "Use of Higher Order Basis in Solution of Electromagnetic Field Problems", in *Ultra-Wideband, Short-Pulse Electromagnetics 7*, Editor: F. Sabath, ISBN-10: 038737728X, Part 2, Chapter 18, pp. 150-158, April 2007, Springer, Berlin, Germany.
(**Invited contribution**, with review)
No. of citations of the book (Google Scholar): 38.

10. Z. Ji, T. K. Sarkar, B. H. Jung, M. Salazar-Palma, "Solving Time Domain Electric Field Integral Equation for Thin-Wire Antennas Using the Laguerre Polynomials", in *Ultra-Wideband, Short-Pulse Electromagnetics 7*, Editor: F. Sabath, ISBN-10: 038737728X, Part 2, Chapter 19, pp. 159-171, April 2007, Springer, Berlin, Germany.
(**Invited contribution**, with review)
No. of citations of the chapter (Google Scholar): 1.
No. of citations of the book (Google Scholar): 38.

11. S. Jang, T. K. Sarkar, M. Salazar-Palma, C. E. Baum, "Exploiting Noisy Early Time Response Using the Half Fourier Transform", in *Ultra-Wideband, Short-Pulse Electromagnetics 7*, Editor: F. Sabath, ISBN-10: 038737728X, Part 8, Chapter 71, pp. 667-680, April 2007, Springer, Berlin, Germany.
(**Invited contribution**, with review)
No. of citations of the book (Google Scholar): 38.

12. S. Burintramart, N. Yilmazer, T. K. Sarkar, M. Salazar-Palma, "Physics of Multi-Antenna Communication Systems", in *Handbook on Advancements in Smart Antenna Technologies for Wireless Networks*, Editors: C. Sun, J. Cheng, T. Ohira, ISBN: 978-1-59904-988-5, Section 2: Performances Issues, Chapter XI, 29 pages, August 2008, Information Science Reference, IGI Global, Hershey, Pennsylvania, USA.
(**Invited contribution**, with review).
No. of citations of the chapter (Google Scholar): 1.
No. of citations of the book (Google Scholar): 63.

13. S. Burintramat, N. Yilmazer, T. K. Sarkar, M. Salazar-Palma, K. W. Leung, "Multiple-Input-Multiple-Output (MIMO) Systems", in *Mobile Antenna Systems Handbook*, 3rd Edition, Editor: K. Fujimoto, Chapter 14, pp. 619-646, 2008, Ed. Artech House, Boston, MA, USA.
(**Invited contribution**)
Over 670 copies sold.
No. of citations of the book (Google Scholar): 547.

14. N. Yilmazer , S. Burintramat, T. K. Sarkar, M. Salazar-Palma, K. W. Leung, "Smart Antennas", in *Mobile Antenna Systems Handbook*, 3rd Edition, Editor: K. Fujimoto, Chapter 15, pp. 647-674, 2008, Ed. Artech House, Boston, MA, USA.
(**Invited contribution**)
No. of citations of the book (Google Scholar): 547.

15. T. K. Sarkar, S. Burintramart, N. Yilmazer, Y. Zhang, A. De, M. Salazar-Palma, M. A. Lagunas, E. L. Mokole, M. C. Wicks, "Implications of Diversity from a Sensing Point of View", in *Principles of Waveform Diversity and Design*, Editors: M. C. Wicks, E. L. Mokole, S. D. Blunt, R. S. Schneible, V. J. Amuso, ISBN: 978-1-891121-95-1, Section A: Waveform Diversity Paradigms, Chapter 4, pp. 71-106, 2010, SciTech Publishing, Inc., Raleigh, NC, USA.
(**Invited contribution**, with review).
No. of citations of the book (Google Scholar): 99.

16. S. Llorente-Romano, A. García Lampérez, S. H. Yeung, T. K. Sarkar, M. Salazar-Palma, S. W. Ting, "Characterization of Microwave Circuits: S-Parameters", in *Wiley Encyclopedia of Electrical and Electronics Engineering*, Editor: J. G. Webster, ISBN: 0-471-39052-6, 27 pp., Sept. 2015, Ed. John Wiley & Sons, Inc., New York, NY, USA.
(**Invited contribution**)
No. of citations of the book (Google Scholar): 218.

17. H. Hartnagel, A. V. Räisänen, M. Salazar-Palma, "General Introduction", Chapter 1 in *Semiconductor TeraHertz Technology: Devices and Systems for Room Temperature Operation*, Editor: G. Carpintero, L. E. García-Muñoz, H. H. Hartnagel, S. Preu, ISBN: 978-1-118-92042-8, 408 pages, September 2015, Ed. John Wiley & Sons, Inc., New York, NY, USA.
(**Invited contribution**)
No. of citations of the book (Google Scholar): 69.

A3. Sections of Book Chapters

Author and co-author of 3 chapter sections in scientific books.

1. J. L. Conesa, J. M. Hernández, M. Salazar-Palma, "Optical Communication", Section 2.7, Chapter 2, "Impact on Major Community Application", in *Gallium Arsenide Technology in Europe*, Editors: J. Mun, A. A. M'baye, ISBN: 0-387-57906-0, pp. 85-93, 1994, Ed. Springer-Verlag, New York, NY, USA.

2. T. K. Sarkar, S. M. Narayana, H. Wang, M. Wicks, M. Salazar-Palma, "Design of the 'Mother Wavelet' - A Zero Mean Pulse of Finite Support in Time-Frequency Plane", Section 17.1, Chapter 17, "Transient Radar", in *Electromagnetic Environments and Consequences*, Editors: J. Serafin, P. Dupouy, J. C. Bolomey, Part 2, pp. 1591-1603, 1995, Ed. Centre d'Etudes de Gramat, Gramat, France.

3. T. K. Sarkar, L. E. García-Castillo, M. Salazar-Palma, T. Roy, R. Adve, "Solution of Maxwell´s Equations by Using Wavelet Concepts", Section 17.2, Chapter 17, "Transient Radar", in *Electromagnetic Environments and Consequences*, Editors: J. Serafin, P. Dupouy, J. C. Bolomey, Part 2, pp. 1604-1612, 1995, Ed. Centre d'Etudes de Gramat, Gramat, France.

A4. Book Articles

Author and coauthor of 7 book articles, 3 of them by invitation.

1. T. K. Sarkar, L. E. García-Castillo, M. Salazar-Palma, T. Roy, R. Adve, "Utilization of Wavelet Concepts for an Efficient Solution of Maxwell´s Equations", in *Ultra-Wideband, Short Pulse Electromagnetics 2*, Editors: L. Carin, L. B. Felsen, ISBN: 030645002X, vol. 2, pp. 465-473, 1995, Ed. Plenum Press, New York, USA.
No. of citations of the book (Google Scholar): 53.

2. T. K. Sarkar, S. M. Narayana, H. Wang, M. Wicks, M. Salazar-Palma, "Wavelets and T-Pulses", in *Ultra-Wideband, Short-Pulse Electromagnetics 2*, Editors: L. Carin, L. B. Felsen, ISBN: 030645002X, vol. 2, pp. 475-485, 1995, Ed. Plenum Press, New York, USA.
No. of citations of the book (Google Scholar): 53.

3. M. Salazar-Palma, J.-M. Recio-Peláez, "A Convergence Study of a Self Adaptive Mesh Algorithm", in *Software for Electrical Engineering Analysis and Design*, Editor: P. P. Silvester, ISBN: 1-85312-395-1**,** pp. 385-394, 1996, Computational Mechanics Publications, Southampton, UK.

4. T. K. Sarkar, M. Salazar-Palma, "Ondelettes et Théorie des Filtres", in *Les Techniques de l'Ingénieur. Mesures et Contrôle*, ISSN: 0399-4147, pp. R 309-1-15, Dec. 2003, Ed. Techniques de l'Ingénieur, SA, Paris, France.
(**Invited contribution**)

5. Z. Ji, T. K. Sarkar, B. H. Jung, Y. Chung, M. Salazar-Palma, "Stable Solutions of Time-Domain Integral Equation for Conducting Bodies Using Method of Moments", in *Recent Research Developments on Microwave Theory and Techniques*, vol. 2, 27 pages, 2004, ISBN: 81-7895-150-9, Ed. Transworld Research Network, Kerala, India.

6. T. K. Sarkar, M. Salazar-Palma, "Maxwell's Original Presentation of Electromagnetic Theory and Its Evolution", Chapter in *Handbook of Antenna Technologies*, Editor in Chief: Z. N. Chen, Ed.: D. Liu, H. Nakano, X. Qing, T. Zwick, Vol. 1, Part I, pp. 3-30, October 2016, Ed. Springer, Singapore.
(**Invited contribution**)
No. of citations of the book (Google Scholar): 29.

7. M. Salazar-Palma, T. K. Sarkar, M. N. Abdallah, W. Dyab, M. V. S. N. Prasad, S. W. Ting, "Physics and Mathematics of RadioWave Propagation in CellularWireless Communications", Chapter in *Handbook of Antenna Technologies*, Editor in Chief: Z. N. Chen, Ed.: D. Liu, H. Nakano, X. Qing, T. Zwick, Vol. 1, Part I, pp. 31-66, October 2016, Ed. Springer, Singapore.
(**Invited contribution**)
No. of citations of the book (Google Scholar): 29.

B. Articles in Scientific Journals

Author or co-author of 121 articles published in international scientific journals, 106 of them in journals indexed in Journal Citation Reports (JCR), Institute for Scientific Information (ISI), Inc., Philadelphia, PA, USA. Out of those 106 articles, 53 have been published in journals in the first quart (Q) of their category, 28 in journals on the second quart, 19 in the third quart, and 6 in the fourth quart. Out of the 121 articles, 93 are long papers and 28 are short. Out of the 121 papers, 11 were **invited** contributions.

Author of a long article in a national journal by **invitation**.

B1. International Journals[2]

1. J. Sánchez-Miñana, M. Salazar-Palma, "European Microwave Conference: A Technical Preview", *Microwave Engineering Europe*, ISSN: 0960-667X, pp. 27-28, 31-32, June-July 1993, European Business Press, Brussels, Belgium.
(**Invited contribution**)

2. T. K. Sarkar, M. Salazar, "An Alternate Interpretation of Complex Modes in Closed Perfectly Conducting (Lossless) Structures", *AEÜ – International Journal of Electronics and Communications*, ISSN: 1434-8411, vol. 48, no. 3, pp. 123-129, 1994, Ed. S. Hirzel Verlag GmbH & Co., Stuttgart, Germany.
Quality indicators:
Impact factor: 0.374. Cited half-life: 7.3.
Order: 73 out of 138 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar): 6/4.

3. T. K. Sarkar, R. S. Adve, L. E. García-Castillo, M. Salazar-Palma, "Utilization of Wavelet Concepts in Finite Elements for Efficient Solution of Differential Form of Maxwell´s Equations", *Radio Science*, ISSN: 0048-6604, vol. 29, no. 4, pp. 965-977, July-Aug. 1994, Ed. American Geophysical Union, Washington, DC, USA.

[2] Invited contributions are highlighted. Quality indicators of each journal are provided according to the edition of the corresponding year of Journal Citation Reports (JCR), Institute for Scientific Information (ISI), Philadelphia, PA, USA.

(**Invited contribution** for the Special Section of that issue: "Fast Forward and Inverse Scattering Methods").
Quality indicators:
Impact factor: 0.753. Cited half-life: 9.7.
Order: 6 out of 34 in Telecommunications (1st Q.); 36 out of 138 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 17/9.

4. L. E. García-Castillo, T. K. Sarkar, M. Salazar-Palma, "An Efficient Finite Element Method Employing Wavelet Type Basis Functions", *COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering*, ISSN: 0332-1649, vol. 13, sup. A, pp. 287-292, May 1994, James & James Science Publishing, Ltd., Bradford, W. Yorkshire, England.
Quality indicators:
Impact factor: 0.101. Cited half-life: 9.7.
Order: 147 out of 171 in Engineering, Electrical & Electronic (4th Q.); 91 out of 95 in Mathematics, Applied (4th Q.).
No. of citations by other authors (Google Scholar/JCR): 1.

5. G. G. Gentili, M. Salazar-Palma, "The Definition and Computation of Modal Characteristic Impedance in the Area of Quasi-TEM Coupled Transmission Lines", *IEEE Transactions on Microwave Theory and Techniques*, ISSN: 0018-9480, vol. MTT-43, no. 2, pp. 338-343, Feb. 1995, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.914. Cited half-life: 7.1.
Order: 24 out of 144 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 27/14.

6. A. R. Djordjević, T. K. Sarkar, T. Roy, S. M. Rao, M. Salazar, "An Exact Method for Simulating Boundary Conditions for Mesh Termination in Finite-Difference Techniques", *Microwave and Optical Technology Letters*, ISSN: 0895-2477, vol. 8, no. 2, pp. 88-90, Feb. 5, 1995, and no. 6, pp. 319-321, April 20, 1995, Ed. John Wiley & Sons Inc., Hoboken, NJ, USA. [3]
Quality indicators:
Impact factor: 0.322. Cited half-life: 2.9.
Order: 77 out of 144 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 9/3.

7. L. E. García-Castillo, M. Salazar-Palma, T. K. Sarkar, R. S. Adve, "Efficient Solution of the Differential Form of Maxwell´s Equations in Rectangular Regions", *IEEE Transactions on Microwave Theory and Techniques*, ISSN: 0018-9480, vol. MTT-43, no. 3, pp. 647-654, March 1995, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.914. Cited half-life: 7.1.
Order: 24 out of 144 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 2/1.

8. T. Roy, T. K. Sarkar, A. R. Djordjević, M. Salazar-Palma, "A Hybrid Method for Terminating the Finite-Element Mesh (Electrostatic Case)", *Microwave and Optical Technology Letters*, ISSN: 0895-2477, vol. 8, no. 6, pp. 282-287, April 20, 1995, Ed. John Wiley & Sons Inc., Hoboken, NJ, USA.
Quality indicators:
Impact factor: 0.322. Cited half-life: 2.9.
Order: 77 out of 144 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 29/18.

9. G. K. Gothard, S. M. Rao, T. K. Sarkar, M. Salazar-Palma, "Finite Element Solution of Open Region Electrostatic Problems Incorporating the Measured Equation of Invariance", *IEEE Microwave and Guided*

[3] This paper was published a second time in the same journal due to an editorial error, in vol. 8, no. 6, pp. 319-321, April 20, 1995. This second publication has not been listed as a different paper. However, the second date is included because there are references to this second publication.

Wave Letters, ISSN: 1531-1309, vol. 5, no. 8, pp. 252-254, Aug. 1995, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
No. of citations by other authors (Google Scholar/JCR): 17/11.

10. A. R. Djordjević, T. K. Sarkar, T. Roy, M. Salazar, "Finite-Difference Solution of Scattering by a Rectangular Cylinder (TM) Using Exact Mesh Termination", *Microwave and Optical Technology Letters*, ISSN: 0895-2477, vol. 10, no. 3, pp. 186-189, Oct. 20, 1995, Ed. John Wiley & Sons Inc., Hoboken, NJ, USA
Quality indicators:
Impact factor: 0.322. Cited half-life: 2.9.
Order: 77 out of 144 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar): 1.

11. T. Roy, T. K. Sarkar, A. R. Djordjević, M. Salazar-Palma, "A Hybrid Method Solution of Scattering by Conducting Cylinders (TM Case)", *IEEE Transactions on Microwave Theory and Techniques*, ISSN: 0018-9480, vol. MTT-44, no. 12, pp. 2145-2151, Dec. 1996, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.08. Cited half-life: 7.2.
Order: 23 out of 171 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 32/18.

12. G. G. Gentili, L. E. García-Castillo, M. Salazar-Palma, F. Pérez-Martínez, "Green's Function Analysis of Single and Stacked Rectangular Microstrip Patch Antennas Enclosed in a Cavity", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-45, no. 4, pp. 573-579, April 1997, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.011. Cited half-life: 9.3.
Order: 32 out of 193 in Engineering, Electrical & Electronic (1st Q.); 7 out of 38 in Telecommunications (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 27/12.

13. S. Uckun, T. K. Sarkar, S. M. Rao, M. Salazar-Palma, "A Novel Technique for Analysis of Electromagnetic Scattering from Microstrip Antennas of Arbitrary Shape", *IEEE Transactions on Microwave Theory and Techniques*, ISSN: 0018-9480, vol. MTT-45, no. 4, pp. 485-491, April 1997, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.24. Cited half-life: 7.2.
Order: 31 out of 193 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 24/5.

14. T. Roy, T. K. Sarkar, A. R. Djordjević, M. Salazar-Palma, "Time-Domain Analysis of TM Scattering from Conducting Cylinders Using a Hybrid Method", *IEEE Transactions on Microwave Theory and Techniques*, ISSN: 0018-9480, vol. MTT-46, no. 10, pp. 1471-1477, Oct. 1998, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.076. Cited half-life: 7.7.
Order: 35 out of 208 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 8/8.

15. T. K. Sarkar, C. Su, R. Adve, M. Salazar-Palma, L. E. García-Castillo, R. Rodríguez-Boix, "A Tutorial on Wavelets from an Electrical Engineering Perspective, Part 1: Discrete Wavelet Techniques", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 40, no. 5, pp. 49-70, Oct. 1998, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
(**Invited contribution** with review)
Quality indicators:
Impact factor: 0.588. Cited half-life: 3.8.
Order: 73 out of 208 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 149/51.

16. T. K. Sarkar, C. Su, M. Salazar-Palma, "Solution of Large Dense Complex Matrix Equations Utilizing Wavelet-Like Transforms", *Annales des Télécommunications*, ISSN: 0003-4347, Tome 54, no. 1-2, pp. 56-67, Janvier-Février 1999, Ed. Presses Polytechniques et Universitaires Romandes, Lausanne, Switzerland.
Quality indicators:
Impact factor: 0.289. Cited half-life: 7.
Order: 26 out of 45 in Telecommunications (3rd Q.).
No. of citations by other authors (Google Scholar): 29.

17. T. K. Sarkar, J. Koh, R. Adve, R. A. Schneible, M. C. Wicks, S. Choi, M. Salazar-Palma, "A Pragmatic Approach to Adaptive Antennas", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 42, no. 2, pp. 39-55, April 2000, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
(**Invited contribution** with review)
Quality indicators:
Impact factor: 0.717. Cited half-life: 4.7.
Order: 66 out of 204 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 105/59.

18. L. E. García-Castillo, M. Salazar-Palma, "Second-Order Nédélec Tetrahedral Element for Computational Electromagnetics", *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, ISSN: 0894-3370, vol. 13, nos. 2-3, pp. 261-287, March-June 2000, Ed. John Wiley & Sons, Ltd., Chichester, W. Sussex, England.
Quality indicators:
Impact factor: 0.302. Cited half-life: 5.
Order: 145 out of 204 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Sholar/JCR): 36/22.

19. T. K. Sarkar, J. Koh, W. Lee, M. Salazar-Palma, "Analysis of Electromagnetic Systems Irradiated by Ultra-Short Ultra-Wideband Pulse", *Measurement Science & Technology* (formerly, *Journal of Physics E: Scientific Instruments*), Special Issue on "Ultra-Short Electromagnetic Pulse Science, Technology and Measurement", vol. 12, no. 11, pp. 1757-1768, Nov. 2001, Institute of Physics (IOP) Publishing, Ltd, UK.
(**Invited contribution** with review)
Quality indicators:
No. of citations by other authors (Google Scholar/JCR): 13/9.

20. K. Kim, T. K. Sarkar, M. Salazar-Palma, S. Llorente-Romano, "Solution of Large Dense Complex Matrix Equations Using Fast Fourier Transform (FFT)-Based Wavelet-Like Methodology", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-50, no. 3, pp. 277-283, March 2002, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.944. Cited half-life: > 10.
Order: 10 out of 53 in Telecommunications (1st Q.); 63 out of 203 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 7/3.

21. R. Sorrentino, T. Oxley, G. Salmer, A. V. Vorst, L. P. Ligthart, P. Russer, G. Gerosa, G. Pelosi, J. B. Andersen, A. V. Raisanen, E. Kollberg, J. Modelski, O. G. Vendik, I. B. Vendik, T. Berceli, M. Salazar-Palma, J. Costa Freire, N. Uzunoglu, A. Madjar, "Microwaves in Europe", *IEEE Transactions on Microwave Theory and Techniques*, ISSN: 0018-9480, vol. MTT-50, no. 3, pp. 1056-1072, March 2002, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
(**Invited contribution**)
Quality indicators:
Impact factor: 1.511. Cited half-life: 7.7.
Order: 33 out of 203 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR):12/7.

22. K. Kim, T. K. Sarkar, M. Salazar-Palma, "Adaptive Processing Using a Single Snapshot for a Nonuniformly Spaced Array in the Presence of Mutual Coupling and Near Field Scatterers", *IEEE Transactions on*

Antennas and Propagation, ISSN: 0018-926X, Special Issue on "Wireless Communications", vol. AP-50, no. 5, pp. 582-590, May 2002, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.944. Cited half-life: > 10.
Order: 10 out of 53 in Telecommunications (1st Q.); 63 out of 203 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scolar/JCR): 68/29.

23. T. K. Sarkar, H. Schwarzlander, S. Choi, M. Salazar-Palma, M. C. Wicks, "Stochastic versus Deterministic Models in the Analysis of Communication Systems", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 44, no. 4, pp. 40-50, Aug. 2002, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
(**Invited contribution** with review)
Quality indicators:
Impact factor: 0.625. Cited half-life: 5.
Order: 93 out of 203 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scolar/JCR): 10/4.

24. L. E. García-Castillo, A. J. Ruiz-Genovés, I. Gómez-Revuelto, M. Salazar-Palma, T. K. Sarkar, "Third-order Nédélec Curl-Conforming Finite Element", *IEEE Transactions on Magnetics*, ISSN: 0018-9464, vol. MAG-38, no. 5, Part 1, pp. 2370-2372, Sept. 2002, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.016. Cited half-life: 6.7.
Order: 59 out of 203 in Engineering, Electrical & Electronic (2nd Q.); 34 out of 71 in Physics, Applied (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 20/12.

25. T. K. Sarkar, Y. Chung. M. Salazar-Palma, "Solution of the General Helmholtz Equation Starting from Lapace´s Equation", *Applied Computational Electromagnetics Society (ACES) Journal*, ISSN 1054-4887, vol. 17, no. 3, pp. 187-197, Nov. 2002, Ed. Applied Computational Electromagnetics Society, Monterey, CA, USA.
Quality indicators:
No. of citations by other authors (Google Scholar): 5.

26. Y.-S. Chung, T. K. Sarkar, B. H. Jung, M. Salazar-Palma, "An Unconditionally Stable Scheme for the Finite-Difference Time-Domain Method", , ISSN: 0018-9480, vol. MTT-51, no. 3, pp. 697-704, March 2003, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.584. Cited half-life: 7.7.
Order: 40 out of 205 in Engineering, Electrical & Electronic (1st Q.)
No. of citations by other authors (Google Scholar/JCR): 228/181.

27. T. K. Sarkar, Z. Ji, K. Kim, A. Medouri, M. Salazar-Palma, "A Survey of Various Propagation Models for Mobile Communication", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 45, no. 3, pp. 51-82, June 2003, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
(**Invited contribution** with review)
Quality indicators:
Impact factor: 0.831. Cited half-life: 5.4.
Order: 77 out of 205 in Engineering, Electrical & Electronic (2nd Q.)
No. of citations by other authors (Google Scholar/JCR): 973/409.

28. A. Pérez-Yuste, M. Salazar-Palma, "Scanning our Past from Madrid – The Introduction of Automatic Telephone Service in Madrid", *Proceedings of the IEEE*, ISSN: 0018-9219, vol. 91, no. 7, pp. 1141-1144, July 2003, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.738. Cited half-life: > 10.
Order: 9 out of 205 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar): 1.

29. A. Pérez-Yuste, M. Salazar-Palma, "Scanning our Past from Madrid – Celebrating 75 years of Madrid-Washington Telephone Service", *Proceedings of the IEEE*, ISSN: 0018-9219, vol. 91, no. 10, pp. 1738-1742, Oct. 2003, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.738. Cited half-life: > 10.
Order: 9 out of 205 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar): 1.

30. A. García-Lampérez, S. Llorente-Romano, M. Salazar-Palma, T. K. Sarkar, "Efficient Electromagnetic Optimization of Microwave Filters and Multiplexers Using Rational Models", *IEEE Transactions on Microwave Theory and Techniques*, ISSN: 0018-9480, vol. MTT-52, no. 2, pp. 508-521, Feb. 2004, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.543. Cited half-life: 8.1.
Order: 37 out of 209 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 99/38.

31. K. Kim, T. K. Sarkar, H. Wang, M. Salazar-Palma, "Direction of Arrival Estimation Based on Temporal and Spatial Processing Using a Direct Data Domain (D^3) Approach", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-52, no. 2, pp. 533-541, Feb. 2004, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.921. Cited half-life: > 10.
Order: 16 out of 57 in Telecommunications (2nd Q.); 75 out of 209 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 37/22.

32. B. H. Jung, T. K. Sarkar, Y.-S. Chung, Z. Ji, M. Salazar-Palma, "Analysis of Transient Electromagnetic Scattering from Dielectric Objects Using a Combined-Field Integral Equation", *Microwave and Optical Technology Letters*, ISSN: 0895-2477, vol. 40, no. 6, pp. 476-481, March 20, 2004, Ed. John Wiley & Sons Inc., Hoboken, NJ, USA.
Quality indicators:
Impact factor: 0.456. Cited half-life: 4.
Order: 16 out of 57 in Telecommunications (2nd Q.); 124 out of 209 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 5/4.

33. B. H. Jung, T. K. Sarkar, M. Salazar-Palma, "Combined Field Integral Equation for the Analysis of Scattering from 3D Conducting Bodies Coated with a Dielectric Material", *Microwave and Optical Technology Letters*, ISSN: 0895-2477, vol. 40, no. 6, pp. 511-516, March 20, 2004, Ed. John Wiley & Sons Inc., Hoboken, NJ, USA.
Quality indicators:
Impact factor: 0.456. Cited half-life: 4.
Order: 16 out of 57 in Telecommunications (2nd Q.); 124 out of 209 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 5/2.

34. B. H. Jung, T. K. Sarkar, Y.-S. Chung, M. Salazar-Palma, Z. Ji, "Time-Domain Combined Field Integral Equation Using Laguerre Polynomials as Temporal Basis Functions", *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, ISSN: 0894-3370, vol. 17, no.3, pp. 251-268, May-June 2004, Ed. John Wiley & Sons, Ltd., Chichester, W. Sussex, England.
Quality indicators:
Impact factor: 0.455. Cited half-life: 5.6.
Order: 125 out of 209 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 16/11.

35. M. Yuan, T. K. Sarkar, B. H. Jung, Z. Ji, M. Salazar-Palma, "Use of Discrete Laguerre Sequences to Extrapolate Wide-Band Response from Early-Time and Low-Frequency Data", *IEEE Transactions on*

Microwave Theory and Techniques, ISSN: 0018-9480, vol. MTT-52, no. 7, pp. 1740-1750, July 2004, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.543. Cited half-life: 8.1.
Order: 37 out of 209 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 20/12.

36. I. Gómez-Revuelto, L. E. García-Castillo, F. Sáez-de-Adana, M. Salazar-Palma, T. K. Sarkar, "A Novel Hybrid FEM High-Frequency Technique for the Analysis of Scattering and Radiation Problems", *Journal of Electromagnetic Waves and Applications*, ISSN: 0920-571, vol. 18, no. 7, pp. 939-956, July 2004, Ed. VSP BV, Zeist, Netherlands.
Quality indicators:
Impact factor: 0.284. Cited half-life: 7.
Order: 162 out of 209 in Engineering, Electrical & Electronic (4th Q.).
No. of citations by other authors (Google Scholar/JCR): 9/4.

37. B. H. Jung, M. Yuan, T. K. Sarkar, Z. Ji, Y. Chung, M. Salazar-Palma, "Solving the Time-Domain Magnetic Field Integral Equation for Dielectric Bodies without the Time Variable through the Use of Entire Domain Laguerre Polynomials", *Electromagnetics*, ISSN: 0272-6343, vol. 24, no. 6, pp. 385-408, Aug.-Sept. 2004, Taylor & Francis, Philadelphia, PA, USA.
Quality indicators:
Impact factor: 0.415. Cited half-life: 8.4.
Order: 134 out of 209 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 4/2.

38. B. H. Jung, T. K. Sarkar, M. Salazar-Palma, "Time-Domain EFIE and MFIE Formulations for Analysis of Transient Electromagnetic Scattering from 3-D Dielectric Objects", *Progress in Electromagnetics Research (PIER)*, ISSN: 1070-4698, E-ISSN: 1559-8985, vol. PIER-49, pp. 113-142, 2004, Ed. The University of Hong Kong, China.
Quality indicators:
No. of citations by other authors (Google Scholar/JCR): 24/16.

39. Y.-S. Chung, T. K. Sarkar, B. H. Jung, M. Salazar-Palma, Z. Ji, S. Jang, K. Kim, "Solution of Time Domain Electric Field Integral Equation Using the Laguerre Polynomials", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-52, no. 9, pp. 2319-2328, Sept. 2004, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.921. Cited half-life: > 10.
Order: 16 out of 57 in Telecommunications (2nd Q.); 75 out of 209 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 156/114.

40. B. H. Jung, T. K. Sarkar, Y. Chung, M. Salazar-Palma, Z. Ji, S. Jang, K. Kim, "Transient Electromagnetic Scattering from Dielectric Objects Using the Electric Field Integral Equation with Laguerre Polynomials as Temporal Basis Functions", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-52, no. 9, pp. 2329-2340, Sept. 2004, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.921. Cited half-life: >10.
Order: 16 out of 57 in Telecommunications (2nd Q.); 75 out of 209 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 53/36.

41. A. García-Lampérez, T. K. Sarkar, M. Salazar-Palma, "Generation of Accurate Rational Models of Lossy Systems Using the Cauchy Method", *IEEE Microwave and Wireless Components Letters*, ISSN: 1531-1309, vol. 14, no. 10, pp. 490-492, Oct. 2004, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.003. Cited half-life: 2.7.

Order: 66 out of 209 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 69/31.

42. Z. Ji, T. K. Sarkar, B. H. Jung, Y.-S Chung, M. Salazar-Palma, M. Yuan, "A Stable Solution of Time Domain Electric Field Integral Equation for Thin-Wire Antennas Using the Laguerre Polynomials", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-52, no. 10, pp. 2641-2649, Oct. 2004, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.921. Cited half-life: >10.
Order: 16 out of 57 in Telecommunications (2nd Q.); 75 out of 209 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 91/58.

43. S. Jang, W. Choi, T. K. Sarkar, M. Salazar-Palma, K. Kim, C. E. Baum, "Exploiting Early Time Response Using the Fractional Fourier Transform for Analyzing Transient Radar Returns", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-52, no. 11, pp. 3109-3121, Nov. 2004, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.921. Cited half-life: >10.
Order: 16 out of 57 in Telecommunications (2nd Q.); 75 out of 209 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 33/22.

44. L. E. Garcia-Castillo, I. Gómez-Revuelto, F. Sáez-de-Adana, M. Salazar-Palma, "A Finite Element Method for the Analysis of Radiation and Scattering of Electromagnetic Waves on Complex Environments", *Computer Methods in Applied Mechanics and Engineering*, ISSN: 0045-7825, vol. 194, nos. 2-5, pp. 637-655, Feb. 2005, Elsevier Science SA, Lausanne, Switzerland.
On-line version: http://www.sciencedirect.com/science/article/pii/S004578250400355X
Quality indicators:
Impact factor: 1.553. Cited half-life: 8.3.
Order: 5 out of 65 in Engineering, Multidisciplinary (1st Q.); 16 out of 76 in Mathematics, Interdisciplinary Applications (1st Q.); 14 out of 110 in Mechanics (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 43/22.

45. M. Yuan, J. Koh, T. K. Sarkar, W. Lee, M. Salazar-Palma, "A Comparison of Performance of Three Orthogonal Polynomials in Extraction of Wide-Band Response Using Early Time and Low Frequency Data", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-53, no. 2, pp. 785-792, Feb. 2005, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.452. Cited half-life: >10.
Order: 46 out of 208 in Engineering, Electrical & Electronic (1st Q.); 11 out of 59 in Telecommunications (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 37/24.

46. A. Pérez-Yuste, M. Salazar-Palma, "Scanning our Past from Madrid – Leonardo Torres Quevedo", *Proceedings of the IEEE*, ISSN: 0018-9219, vol. 93, no. 7, pp. 1379-1382, July 2005, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 3.887. Cited half-life: >10.
Order: 3 out of 208 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 2/3.

47. I. Gómez-Revuelto, L. E. García-Castillo, M. Salazar-Palma, T. K. Sarkar, "Fully Coupled Hybrid Method FEM/High-Frequency Technique for the Analysis of 3D Scattering and Radiation Problems", *Microwave and Optical Technology Letters*, ISSN: 0895-2477, vol. 47, no. 2, pp. 104-107, October 20, 2005, Ed. John Wiley & Sons Inc., Hoboken, NJ, USA.
Quality indicators:
Impact factor: 0.467. Cited half-life: 4.
Order: 135 out of 208 in Engineering, Electrical & Electronic (3rd Q.); 42 out of 55 in Optics (4th Q.).

No. of citations by other authors (Google Scholar/JCR): 34/19.

48. Z. Ji, T. K. Sarkar, B. H. Jung, M. Yuan, M. Salazar-Palma, "Solving Time Domain Electric Field Integral Equation without the Time Variable", *IEEE Transactions Antennas and Propagation*, ISSN: 0018-926X, vol. AP-54, no. 1, pp. 258-262, Jan. 2006, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.48. Cited half-life: 9.9.
Order: 42 out of 206 in Engineering, Electrical & Electronic (1st Q.); 9 out of 59 in Telecommunications (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 59/50.

49. M. Yuan, T. K. Sarkar, M. Salazar-Palma, "A Direct Discrete Complex Image Method from the Closed-Form Green's Functions in Multi-Layered Media", *IEEE Transactions on Microwave Theory and Techniques*, ISSN: 0018-9480, vol. MTT-54, no. 3, pp. 1025-1032, March 2006, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.027. Cited half-life: 7.8.
Order: 24 out of 206 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 112/76.

50. T. K. Sarkar, S. Burintramat, N. Yilmazer, M. Salazar-Palma, "A Discussion About Some of the Principles/Practices of Wireless Communication Under a Maxwellian Framework", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-54, no. 12, pp. 3727-3745, December 2006, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.48. Cited half-life: 9.9.
Order: 42 out of 206 in Engineering, Electrical & Electronic (1st Q.); 9 out of 59 in Telecommunications (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 37/22.

51. S. Burintramart, T. K. Sarkar, M. Salazar-Palma, Y. Zhang, "Non-Conventional Least Squares Optimization for DOA Estimation", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-55, no. 3, Part 1, pp. 707-714, March 2007, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.636. Cited half-life: 9.7.
Order: 46 out of 227 in Engineering, Electrical & Electronic (1st Q.); 8 out of 66 in Telecommunications (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 19/5.

52. R. Fernández-Recio, L. E. García-Castillo, I. Gómez-Revuelto, M. Salazar-Palma, "Fully Coupled Multi-Hybrid FEM-PO/PTD-UTD Method for the Analysis of Radiation Problems", *IEEE Transactions on Magnetics*, ISSN: 0018-9464, vol. MAG-43, no. 4, pp. 1341-1344, April 2007, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.959. Cited half-life: 7.9.
Order: 90 out of 227 in Engineering, Electrical & Electronic (2nd Q.); 60 out of 94 in Physics, Applied (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 21/13.

53. B. H. Jung, Z. Ji, T. K. Sarkar, M. Salazar-Palma, M. Yuan, "A Comparison of Marching-on in Time Method with Marching-on in Degree Method for the TDIE Solver", *Progress in Electromagnetics Research (PIER)*, ISSN: 1070-4698, E-ISSN: 1559-8985, vol. PIER-70, pp. 281-296, 2007, Ed. The University of Hong Kong, China.
Quality indicators:
Impact factor: 3.32. Cited half-life: 1.9.
Order: 1 out of 66 in Telecommunications (1st Q.); 3 out of 227 in Engineering, Electrical & Electronic (1st Q.); 9 out of 94 in Physics, Applied (1st Q.).

No. of citations by other authors (Google Scholar/JCR): 27/21.

54. R. Fernández-Recio, L. E. García-Castillo, I. Gómez-Revuelto, M. Salazar-Palma, "Fully Coupled Hybrid FEM-UTD Method Using NURBS for the Analysis of Radiation Problems", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X,vol. AP-56, no. 3, pp. 774-783, March 2008, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.479. Cited half-life: 9.1.
Order: 36 out of 229 in Engineering, Electrical & Electronic (1st Q.); 9 out of 67 in Telecommunications (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 33/21.

55. T. K. Sarkar, S. Burintramart, N. Yilmazer, Y. Zhang, A. De, M. Salazar-Palma, M. A. Lagunas, E. Mokole, M. Wicks, "A Look at the Concept of Channel Capacity from a Maxwellian Viewpoint", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 50, no. 3, pp. 21-50, June 2008, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
(**Invited contribution** with review)
Quality indicators:
Impact factor: 1.312. Cited half-life: 6.7.
Order: 89 out of 229 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 27/13.

56. T. K. Sarkar, S. Burintramart, N. Yilmazer, Y. Zhang, A. De, M. Salazar-Palma, M. A. Lagunas, E. Mokole, M. Wicks, "Reply by the Authors (for "A Look at the Concept of Channel Capacity from a Maxwellian Viewpoint")", *IEEE Antennas and Propagation Magazine,* ISSN: 1045-9243, pp. 164-166, vol. 51, no.1, Feb. 2009, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.193. Cited half-life: 7.2.
Order: 101 out of 249 in Engineering, Electrical & Electronic (2nd Q.).

57. O. García-Pérez, A. García-Lampérez, V. González-Posadas, M. Salazar-Palma, D. Segovia-Vargas, "Dual-Band Recursive Active Filters with Composite Right/Left-Handed Transmission Lines", *IEEE Transactions on Microwave Theory and Techniques*, ISSN: 0018-9480, vol. MTT-57, no. 5, Part I, pp. 1180-1187, May 2009, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.076. Cited half-life: 8.6.
Order: 39 out of 246 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 21/14.

58. T. Sarkar, M. Salazar-Palma, D. L. Sengupta, "Who Was James Clerk Maxwell and What Was and Is His Electromagnetic Theory", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 51, no. 4, pp. 97-116, August 2009, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.193. Cited half-life: 7.2.
Order: 101 out of 249 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 13/4.

59. J. Álvarez, I. Gómez-Revuelto, J. M. Alonso, L. E. García-Castillo, M. Salazar-Palma, "Fully Coupled Multi-Hybrid FEM-MoM-PO Method for Scattering and Radiation Problems", *Electromagnetics*, ISSN: 0272-6343, vol. 30, nos. 1-2, pp. 3-22, 2010, Ed. Taylor & Francis, Philadelphia, PA, USA.
Quality indicators:
Impact factor: 0.844. Cited half-life: 7.2.
Order: 141 out of 247 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 5/1.

60. A. De, T. K. Sarkar, M. Salazar-Palma, "Characterization of the Far-Field Environment of Antennas Located Over a Ground Plane and its Implications for Cellular Communication Systems", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 52, no. 6, pp. 19-40, Dec. 2010, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.

Quality indicators:
Impact factor: 1.312. Cited half-life: 7.8.
Order: 140 out of 247 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 31/24.

61. Z. Mei, Y. Zhang, T. K. Sarkar, M. Salazar-Palma, B. H. Jung, "Analysis of Arbitrary Frequency-Dependent Losses Associated with Conducting Structures in a Time-Domain Electric Field Integral Equation", *IEEE Antennas and Wireless Propagation Letters*, ISSN: 1536-1225, vol. 10, pp. 678-681, Jan. 2011, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.374. Cited half-life: 3.7.
Order: 26 out of 79 in Telecommunications (2nd Q.); 93 out of 245 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 3/3.

62. Z. Mei, T. K. Sarkar, M. Salazar-Palma, "The Design of an Ultrawideband T-Pulse with a Linear Phase Fitting the FCC Mask", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-59, no. 4, pp. 1432-1436, April 2011, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.151. Cited half-life: 8.1.
Order: 11 out of 79 in Telecommunications (1st Q.); 44 out of 245 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 6/3.

63. Z. Mei, Y. Zhang, T. K. Sarkar, B. H. Jung, A. García-Lampérez, M. Salazar-Palma, "An Improved Marching-on-in-Degree Method Using a New Temporal Basis" *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-59, no. 12, pp. 4643-4650, December 2011, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.151. Cited half-life: 8.1.
Order: 11 out of 79 in Telecommunications (1st Q.); 44 out of 245 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 17/15.

64. A. García-Lampérez, M. Salazar-Palma, "Single-Band to Multiband Frequency Transformation for Multiband Filters", *IEEE Transactions on Microwave Theory and Techniques*, vol. MTT-59, no. 12, Part I, pp. 3048-3058, December 2011, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.853. Cited half-life: 9.
Order: 55 out of 245 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 46/32.

65. M. Salazar-Palma, A. García-Lampérez, T. L. Sarkar, D. L. Sengupta; "The Father of Radio: A Brief Chronology of the Origin and Developments of Wireless Communications", *IEEE Antennas and Propagation Magazine,* ISSN: 1045-9243, vol. 53, no. 6, pp. 83-114, Dec. 2011, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.968. Cited half-life: 7.8.
Order: 129 out of 245 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 5/1.

66. J. Koh, A. De, T. K. Sarkar, H. Moon, W. Zhao, M. Salazar-Palma, "Free Space Radiation Pattern Reconstruction from Non-Anechoic Data Using an Impulse Response of the Environment", *IEEE Transactions on Antennas and Propagation,* ISSN: 0018-926X, vol. AP-60, no. 2, pp. 821-831, Feb. 2012, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.332. Cited half-life: 8.
Order: 9 out of 77 in Telecommunications (1st Q.); 37 out of 242 in Engineering, Electrical & Electronic (1st Q.).

No. of citations by other authors (Google Scholar/JCR): 22/10.

67. B. H. Jung, Z. Mei, T. K. Sarkar, M. Salazar-Palma, "Analysis of Transient Wave Propagation in an Arbitrary Frequency-dispersive Media Using the Associated Laguerre Functions in the FDTD-MOD Method", *Microwave and Optical Technology Letters*, ISSN: 0895-2477, vol. 54, no. 4, pp. 925-930, April 2012, Ed. John Wiley & Sons Inc., Hoboken, NJ, USA.
Quality indicators:
Impact factor: 0.585. Cited half-life: 5.6.
Order: 179 out of 242 in Engineering, Electrical & Electronic (3rd Q.); 62 out of 79 in Optics (4th Q.).
No. of citations by other authors (Google Scholar/JCR): 4/4.

68. T. K. Sarkar, M. Salazar-Palma, D. L. Sengupta; "Response to Comment on 'The Father of Radio'" *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 54, no. 2, pp. 204-206, April. 2012, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.180. Cited half-life: 7.5.
Order: 115 out of 242 in Engineering, Electrical & Electronic (2nd Q.).

69. I. Gómez-Revuelto, L. E. García-Castillo, M. Salazar-Palma, "Goal-Oriented Self-Adaptive *hp*-Strategies for Finite Element Analysis of Electromagnetic Scattering and Radiation Problems", *Progress in Electromagnetics Research* (*PIER*), E-ISSN: 1559-8985, vol. PIER-125, pp. 459-482, 2012, EMW Publishing, Cambridge, MA, USA.
Quality indicators:
No. of citations by other authors (Google Scholar/JCR): 13/8.

70. W. Lee, T. K. Sarkar, J. Koh, H. Moon, and M. Salazar-Palma, "Generation of a Wide-band Response Using Early-time and Middle-frequency Data through the Use of Orthogonal Functions", *Progress In Electromagnetics Research* (*PIER*) *M*, ISSN: 1937-8726, vol. PIERM-25, pp. 115-126, 2012, EMW Publishing, Cambridge, MA, USA.
Quality indicators:
No. of citations by other authors (Google Scholar): 1.

71. W. Lee, T. K. Sarkar, J. Koh, H. Moon, and M. Salazar-Palma, "Generation of a Wide-band Response Using Early-time and Middle-frequency Data through the Laguerre functions", *Progress In Electromagnetics Research* (*PIER*) *Letters*, ISSN: 1937-6480, vol. PIERL-30, 115-123, 2012, EMW Publishing, Cambridge, MA, USA.
Quality indicators:
No. of citations by other authors (Google Scholar/JCR): 1/1.

72. Z. Mei, Y. Zhang, X. Zhao, B. H. Jung, T. K. Sarkar, M. Salazar-Palma, "Choice of the Scaling Factor in a Marching-on-in-Degree Time Domain Technique Based on the Associated Laguerre Functions", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-60, no. 9, pp. 4463-4467, September 2012, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.332. Cited half-life: 8.
Order: 9 out of 77 in Telecommunications (1st Q.); 37 out of 242 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 16/14.

73. W. Lee, T. K. Sarkar, H. Moon, and M. Salazar-Palma, "Computation of the Natural Poles of an Object in the Frequency Domain Using the Cauchy Method", *IEEE Antennas and Wireless Propagation Letters*, ISSN: 1536-1225, vol. 11, pp. 1137-1140, November 2012, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.667. Cited half-life: 3.7.
Order: 16 out of 77 in Telecommunications (1st Q.); 75 out of 242 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 35/25.

74. T. K. Sarkar, W. Dyab, M. N. Abdallah, M. Salazar-Palma, M. V. S. N. Prasad, S. W. Ting, S. Barbin, "Electromagnetic Macro Modeling of Propagation in Mobile Wireless Communication: Theory and Experiment", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 54, no. 6, pp. 17-43, December 2012, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.180. Cited half-life: 7.5.
Order: 115 out of 242 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 41/24.

75. T. K. Sarkar, W. Dyab, M. N. Abdallah, M. Salazar-Palma, M. V. S. N. Prasad, S. Barbin, S. W. Ting, "Physics of Propagation in a Cellular Wireless Communication Environment", *The Radio Science Bulletin*, ISSN: 1024-4530, vol., no. 343, pp. 5-21, December 2012, Ed. Radio Science Press, Belgium.
Quality indicators:
Journal indexed in INSPEC.
No. of citations by other authors (Google Scholar): 31.

76. W. Dyab, T. K. Sarkar, M. Salazar-Palma, "Time Reversal Applied to the Time Domain Response of a CRLH Transmission Line", *IEEE Microwave and Wireless Components Letters*, ISSN: 1531-1309, vol. 22, no. 12, pp. 609-611, December 2012, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.784. Cited half-life: 5.2.
Order: 66 out of 242 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar): 1.

77. S. H. Yeung, Z. Mei, T. K. Sarkar, M. Salazar-Palma, "An Ultrawideband T-pulse Fitting the FCC Mask Using a Multiobjective Genetic Algorithm", *IEEE Microwave and Wireless Components Letters*, ISSN: 1531-1309, vol. 22, no. 12, pp. 615-617, December 2012, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.784. Cited half-life: 5.2.
Order: 66 out of 242 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar): 3.

78. W. Lee, T. K. Sarkar, H. Moon, M. Salazar-Palma, "Identification of Multiple Objects Using their Natural Resonant Frequencies", *IEEE Antennas and Wireless Propagation Letters*, ISSN: 1536-1225, vol. 12, pp. 54-57, January 2013, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.948. Cited half-life: 3.9.
Order: 15 out of 78 in Telecommunications (1st Q.); 65 out of 248 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 16/9.

79. C. Shin, J. Ju, D. Kang, S. Choi, C. Lee, C. Cheong, J. Seo, T. K. Sarkar, M. Salazar-Palma, "Implementation of an Antenna Array for Satellite Communications with Capability for Cancelling Jammers", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 55, no. 1, pp. 32-48, February 2013, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.152. Cited half-life: 7.3.
Order: 134 out of 248 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 32/7.

80. S. H. Yeung, Z. Mei, T. K. Sarkar, M. Salazar-Palma, "Design and Testing of a Single-Layer Microstrip Ultrawideband 90º Differential Phase Shifter", *IEEE Microwave and Wireless Components Letters*, ISSN: 1531-1309, vol. 23, no. 3, pp. 122-124, March 2013, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.236. Cited half-life: 5.6.
Order: 52 out of 248 in Engineering, Electrical & Electronic (1st Q.).

No. of citations by other authors (Google Scholar/JCR): 38/32.

81. A. García-Lampérez, S. Llorente-Romano, M. Salazar-Palma, "Analytical Coupled Resonator Filter Synthesis Method by Extraction of Fully Canonical Second Order Blocks", *IEEE Microwave and Wireless Components Letters*, ISSN: 1531-1309, vol. 23, no. 3, pp. 137-139, March 2013, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.236. Cited half-life: 5.6.
Order: 52 out of 248 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 3/3.

82. E. P. Caspers, S. H. Yeung, T. K. Sarkar, A. García-Lampérez, M. Salazar-Palma, M. A. Lagunas, A. Pérez-Neira, "Analysis of Information and Power Transfer in Wireless Communications", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 55, no. 3, pp. 82-95, June 2013, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.152. Cited half-life: 5.9.
Order: 134 out of 248 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 14/9.

83. Z. Mei, T. K. Sarkar, M. Salazar-Palma, "A Study of Wideband Pulse Shape Distortion Due to Presence of Obstacles", *Microwave and Optical Technology Letters*, ISSN: 0895-2477, vol. 55, no. 7, pp. 1618-1622, July 2013, Ed. John Wiley & Sons Inc., Hoboken, NJ, USA.
Quality indicators:
Impact factor: 0.623. Cited half-life: 7.3.
Order: 188 out of 248 in Engineering, Electrical & Electronic (4th Q.), 69 out of 83 in Optics (4th Q.).
No. of citations by other authors (Google Scholar/JCR): 2/1.

84. W. M. Dyab, T. K. Sarkar, M. Salazar-Palma, "A Physics-Based Green's Function for Analysis of Vertical Electric Dipole Radiation over an Imperfect Ground Plane", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-61, no. 8, pp. 4148-4157, August 2013, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.459. Cited half-life: 8.2.
Order: 11 out of 78 in Telecommunications (1st Q.); 43 out of 248 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 22/15.

85. S. Llorente-Romano, A. García-Lampérez, T. K. Sarkar, M. Salazar-Palma, "An Exposition on the Choice of Proper S Parameters in Characterizing Devices Including Transmission Lines with a Complex Reference Impedance and a General Methodology to Compute Them", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 55, no. 4, pp. 94-112, August 2013, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.152. Cited half-life: 7.3.
Order: 134 out of 248 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 11/9.

86. Z. Mei, T. K. Sarkar, M. Salazar-Palma, "A Study of Negative Permittivity and Permeability for Small Sphere", *IEEE Antennas and Wireless Propagation Letters*, ISSN: 1536-1225, vol. 12, pp. 1228-1231, September 2013, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.948. Cited half-life: 3.9.
Order: 15 out of 78 in Telecommunications (1st Q.); 65 out of 248 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 13/8.

87. S. H. Yeung, T. K. Sarkar, M. Salazar-Palma, A. García-Lampérez, "A Multisection Phase Correcting Network for Broadband Quadrature Power Splitter Design", *IEEE Microwave and Wireless Components*

Letters, ISSN: 1531-1309, vol. 23, no. 9, pp. 468-470, September 2013, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.236. Cited half-life: 5.6.
Order: 52 out of 248 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 5/4.

88. W. Lee, T. K. Sarkar, H. Moon, A. García-Lampérez, M. Salazar-Palma, "Effect of Material Parameters on the Resonant Frequencies of a Dielectric Object", *IEEE Antennas and Wireless Propagation Letters*, ISSN: 1536-1225, vol. 12, pp. 1311-1314, October 2013, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.948. Cited half-life: 3.9.
Order: 15 out of 78 in Telecommunications (1st Q.); 65 out of 248 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 14/10.

89. W. M. Dyab, T. K. Sarkar, A. García Lampérez, M. Salazar-Palma, M. A. Lagunas, "A Critical Look at the Principles of Electromagnetic Time Reversal and Its Consequences", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 55, no. 5, pp. 28-62, October 2013, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.152. Cited half-life: 7.3.
Order: 134 out of 248 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 19/5.

90. Z. Mei, B. H. Jung, Y. Zhang, X. Zhao, T. K. Sarkar, M. Salazar-Palma, "A Study on the Numerical Accuracy of the Matrix Elements in a Time Domain MOD Methodology", *Progress In Electromagnetics Research* (*PIER*) *M*, ISSN: 1937-8726, vol. PIERM-33, pp. 185-196, 2013, EMW Publishing, Cambridge, MA, USA.
Quality indicators:
No. of citations by other authors (Google Scholar): 1.

91. Z. Mei, S. H. Yeung, T. K. Sarkar, M. Salazar-Palma, "A Study of Transmission of RF Signal with Single Conductor Wire", *Microwave and Optical Technology Letters*, ISSN: 0895-2477, vol. 56, no. 1, pp. 124-127, January 2014, Ed. John Wiley & Sons Inc., Hoboken, NJ, USA.
Quality indicators:
Impact factor: 0.568. Cited half-life: 6.4.
Order: 190 out of 249 in Engineering, Electrical & Electronic (4th Q.), 74 out of 87 in Optics (4th Q.).
No. of citations by other authors (JCR): 1.

92. S. H. Yeung, T. K. Sarkar, A. García-Lampérez, M. Salazar-Palma, "Thin and Compact Dual-Band Four-Element Broadside Patch Antenna Arrays", *IEEE Antennas and Wireless Propagation Letters*, ISSN: 1536-1225, vol. 13, pp. 567-570, March 2014, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.579. Cited half-life: 4.2.
Order: 22 out of 77 in Telecommunications (2nd Q.); 97 out of 249 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 12/7.

93. Z. Mei, W. Lee, T. K. Sarkar, M. Salazar-Palma, "The Natural Resonant Singularity Expansion Method (SEM) Poles for a Dielectric Sphere in Various Environments", *Microwave and Optical Technology Letters*, ISSN: 0895-2477, vol. 56, no. 3, pp. 690-694, March 2014, Ed. John Wiley & Sons Inc., Hoboken, NJ, USA.
Quality indicators:
Impact factor: 0.568. Cited half-life: 6.4.
Order: 190 out of 249 in Engineering, Electrical & Electronic (4th Q.), 74 out of 87 in Optics (4th Q.).
No. of citations by other authors (Google Scholar): 1.

94. J. Koh, W. Lee, T. K. Sarkar, M. Salazar-Palma, "Calculation of Far-Field Radiation Pattern Using Nonuniformly Spaced Antennas by a Least Square Method", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-62, no. 4, Part I, pp. 1572-1578, April 2014, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.181. Cited half-life: 8.3.
Order: 10 out of 77 in Telecommunications (1st Q.); 53 out of 249 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 6/2.

95. S. H. Yeung, T. K. Sarkar, A. García-Lampérez, M. Salazar-Palma, S. W. Ting, "A Course Proposal on Pareto-based Multiobjective Microwave Circuit Optimization Using Genetic Algorithm", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 56, no. 2, pp. 176-190, April 2014, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.319. Cited half-life: 7.6.
Order: 116 out of 249 in Engineering, Electrical & Electronic (2nd Q.).

96. S. H. Yeung, T. K. Sarkar, A. García-Lampérez, M. Salazar-Palma, "Comparison of the Performance Between a Parasitically Coupled and a Direct Coupled Feed for a Microstrip Antenna Array", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-62, no. 5, pp. 2813-2818, May 2014, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.181. Cited half-life: 8.3.
Order: 10 out of 77 in Telecommunications (1st Q.); 53 out of 249 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 17/7.

97. T. K. Sarkar, W. M. Dyab, M. N. Abdallah, M. Salazar-Palma, M. V. S. N. Prasad, S. W. Ting, "Application of the Schelkunoff Formulation to the Sommerfeld Problem of a Vertical Electric Dipole Radiating over an Imperfect Ground", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-62, no.8, pp. 4162-4170, August 2014, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.181. Cited half-life: 8.3.
Order: 10 out of 77 in Telecommunications (1st Q.); 53 out of 249 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 14/7.

98. M. N. Abdallah, W. Dyab, T. K. Sarkar, M. V. S. N. Prasad, C. S. Mishra, A. García Lampérez, M. Salazar-Palma, S. W. Ting, "Further Validation of an Electromagnetic Macro Model for Analysis of Propagation Path Loss in Cellular Networks Using Measured Drive Test Data", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 56, pp. 108-129, August 2014, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.319. Cited half-life: 7.6.
Order: 116 out of 249 in Engineering, Electrical & Electronic (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 20/14.

99. W. M. Dyab, T. K. Sarkar, M. Salazar-Palma, "Reply to "Comments on a 'A Physics-Based Green's Function for Analysis of Vertical Electric Dipole Radiation over an Imperfect Ground Plain'", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-62, no. 9, pp. 4910-4913, September 2014, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.181. Cited half-life: 8.3.
Order: 10 out of 77 in Telecommunications (1st Q.); 53 out of 249 in Engineering, Electrical & Electronic (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 8/6.

100. S. H. Yeung, T. K. Sarkar, M. Salazar-Palma, M. A. Lagunas, A. Pérez-Neira, "The Effect of Broadband Matching in Simultaneous Information and Power Transfer", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 57, pp. 192-203, February 2015, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.896. Cited half-life: 8.2.
Order: 165 out of 257 in Engineering, Electrical & Electronic (3rd Q.).
No. of citations by other authors (Google Scholar/JCR): 4/2.

101. W. M. Dyab, T. K. Sarkar, M. N. Abdallah, M. Salazar-Palma, "Green's Function Using Schelkunoff Integrals for Horizontal Electric Dipoles over an Imperfect Ground Plane", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-64, no. 4, pp. 1342-1355, April 2016, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.957. Cited half-life: 8.2.
Order: 61 out of 262 in Engineering, Electrical & Electronic (1st Q.); 26 out of 89 in Telecommunications (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 7/4.

102. R. M. Barrio Garrido, L. E. García Castillo, I. Gómez Revuelto, M. Salazar-Palma, "Self-adaptive *hp* Finite Element Method with Iterative Mesh Truncation Technique Accelerated with Adaptive Cross Approximation", *Computers & Mathematics with Applications*, ISSN: 0898-1221, no. 7, 22 pages, April 2016, Ed. Pergamon-Elsevier Science Ltd., Oxford, UK.
Available online: http://www.sciencedirect.com/science/article/pii/S0898122116300840 .
Quality indicators:
Impact factor: 1.531. Cited half-life: 6.7.
Order: 54 out of 255 in Mathematics, Applied (1st Q.).
No. of citations by other authors (Google Scholar): 1.

103. T. K. Sarkar, M. Salazar-Palma, E. L. Mokole, "Application of the Principle of Analytic Continuation to Interpolate/Extrapolate System Responses Resulting in Reduced Computations—Part A: Parametric Methods", *IEEE Journal on Multiscale and Multiphysics Computational Techniques*, ISSN: 2379-8793, vol. 1, pp. 48-59, Sept. 2016, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.

104. T. K. Sarkar, M. Salazar-Palma, E. L. Mokole, "Application of the Principle of Analytic Continuation to Interpolate/Extrapolate System Responses Resulting in Reduced Computations—Part B: Nonparametric Methods", *IEEE Journal on Multiscale and Multiphysics Computational Techniques*, ISSN: 2379-8793, vol. 1, pp. 60-72, Oct. 2016, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
No. of citations by other authors (Google Scholar): 3.

105. M. N. Abdallah, T. K. Sarkar, M. Salazar-Palma, V. Monebhurrun, "Where Does the Far Field of an Antenna Start? [Stand on Standards]", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 58, no. 5, pp. 1779-1787, October 2016, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 1.747. Cited half-life: 8.1.
Order: 122 out of 262 in Engineering, Electrical & Electronic (2nd Q.), 42 out of 89 in Telecommunications (2nd Q.).

106. T. K. Sarkar, M. Salazar Palma, E. L. Mokole, "Echoing Across the Years: A History of Early Radar Evolution", *IEEE Microwave Magazine*, ISSN:, vol. 17, no. 10, pp. 46-60, October 2016, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 3.029. Cited half-life: 6.0.
Order: 60 out of 262 in Engineering, Electrical & Electronic (1st Q.); 25 out of 89 in Telecommunications (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 7/2.

107. T. K. Sarkar, E. L. Mokole, M. Salazar Palma, "Relevance of Electromagnetics in Wireless Systems Design*", IEEE Aerospace and Electronic Systems Magazine*, ISSN: 0885-8985, vol. 31, no. 10, pp. 8-19, October 2016, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.771. Cited half-life: >10.0.
Order: 21 out of 249 in Emgineering Aerospace (3rd Q.); 210 out of 262 in Engineering, Electrical & Electronic (4th Q.).
No. of citations by other authors (Google Scholar): 3.

108. T. K. Sarkar, E. L. Mokole, M. Salazar-Palma, "An Expose on Internal Resonance, External Resonance, and Characteristic Modes", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-64, no. 11, pp. 4695-4702, November 2016, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.957. Cited half-life: 8.2.
Order: 61 out of 262 in Engineering, Electrical & Electronic (1st Q.); 26 out of 89 in Telecommunications (2º Q.).
No. of citations by other authors (Google Scholar): 13.

109. T. K. Sarkar, M. N. Abdallah, M. Salazar-Palma, W. M. Dyab, "Surface Plasmons-Polaritons, Surface Waves, and Zenneck Waves: Clarification of the Terms and a Description of the Concepts and their Evolution", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 59, no. 3, pp. 77-93, June 2017, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 3.007. Cited half-life: 8.9.
Order: 66 out of 260 in Engineering, Electrical & Electronic (2nd Q.); 26 out of 87 in Telecommunications (2nd Q.).
No. of citations by other authors (Google Scholar/JCR): 15/7.

110. H. Moon, T. K. Sarkar, M. Salazar Palma, "Broadband Cloaking Obtained Using HOBBIES Optimization", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 60, no. 1, pp. 112-117, February 2018, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 3.804. Cited half-life: 8.6.
Order: 60 out of 265 in Engineering, Electrical & Electronic (1st Q.); 22 out of 88 in Telecommunications (1st Q.).

111. M. Salazar Palma, J. I. Alonso Montes, I. Bazzy, "Welcome to EuMW 2018: Find your Passion for Microwaves in Madrid", *Microwave Journal*, ISSN: 0192-6225, vol. 61, no. 8, p. 56, Aug. 2018, Ed. Horizon House, Inc., Norwood, MA, USA.
Quality indicators:
Impact factor: 0.35. Cited half-life: 13.9.
Order: 259 out of 265 in Engineering, Electrical & Electronic (4th Q.); 88 out of 88 in Telecommunications (4th Q.).
(**Invited contribution**)

112. M. Salazar Palma, J. I. Alonso Montes, "The 21st European Microwave Week", *IEEE Microwave Magazine*, ISSN: 1527-3342, vol. 19, no. 6, pp. 124-128, Sept./Oct. 2018, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.949. Cited half-life: 5.9.
Order: 97 out of 265 in *Engineering, Electrical & Electronic* (2nd Q.); 33 out of 88 in *Telecommunications* (2nd Q.).
(**Invited contribution**)

113. H. Chen. T. K. Sarkar, M. Zhu. M. Salazar Palma, "Use of Computational Electromagnetics to Enhance the Accuracy and Efficiency of Antenna Pattern Measurements", *IEEE Journal on Multiscale and Multiphysics Computational Techniques*, ISSN: 2379-8793, vol. 3, pp. 214-224, December 2018, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.

Quality indicators:
No. of citations by other authors (Google Scholar): 2

114. T. K. Sarkar, M. N. Abdallah, M. Salazar Palma, "Survey of Available Experimental Data of Radio Wave Propagation for Wireless Transmission", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-66, no. 12, pp. 6665-6672, December 2018, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 4.435. Cited half-life: 7.4.
Order: 45 out of 265 in Engineering, Electrical & Electronic (1st Q.); 15 out of 88 in Telecommunications (1st Q.).

115. T. K. Sarkar, H. Chen, M. Salazar Palma, M. Zhu, "Physics Based Modeling of Experimental Data Encountered in Cellular Wireless Communication", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-66, no. 12, pp. 6673-6682, December 2018, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 4.435. Cited half-life: 7.4.
Order: 45 out of 265 in Engineering, Electrical & Electronic (1st Q.); 15 out of 88 in Telecommunications (1st Q.).
No. of citations by other authors (Google Scholar/JCR): 4/1

116. E. L. Mokole, T. K. Sarkar, M. A. Lagunas, M. Salazar Palma, "Spectrum use, congestion, issues, and research areas at radio-frequencies", *Radar and Communication Spectrum Sharing*, p. 135, 2018, Ed. SciTech Publishing, UK.

117. D. Salama, T. K. Sarkar, M. N. Abdallah, X. Yang, M. Salazar Palma, "Adaptive Processing at Multiple Frequencies Using the Same Antenna Array Consisting of Dissimilar Nonuniformly Spaced Elements over an Imperfectly Conducting Ground", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-67, no. 1, pp. 622-625, January 2019, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 4.371. Cited half-life: 7.2.
Order: 46 out of 266 in Engineering, Electrical & Electronic (1st Q.); 21 out of 90 in Telecommunications (1st Q.).

118. T. K. Sarkar, H. Chen, M. Salazar Palma, M. Zhu, "Lessons Learned Using a Physics-Based Macromodel for Analysis of Radio Wave Propagation in Wireless Transmission", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-67, no. 4, pp. 2150-2157, April 2019, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 4.371. Cited half-life: 7.2.
Order: 46 out of 266 in Engineering, Electrical & Electronic (1st Q.); 21 out of 90 in Telecommunications (1st Q.).

119. T. K. Sarkar, M. Salazar-Palma, "MIMO: Does It Make Sense From an Electromagnetic Perspective and Illustrated Using Computational Electromagnetics?", *IEEE Journal on Multiscale and Multiphysics Computational Techniques*, ISSN: 2379-8793, vol. 4, pp. 269-281, Nov. 2019, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.

120. T. K. Sarkar, M. Salazar Palma, "The Demise of the Hundred Year Old Mythology of the Famous Sommerfeld Sign Error Along with a Realization of the Zenneck Wave and Its Relationship with Surface, Lateral and Leaky Waves", *Fermat*, 24 December 2019, vol. 31, 44 pages.

121. M. D. Zhu, T. K. Sarkar, Y. Zhang, M. Salazar Palma, "A Novel Framework of Singularity Cancellation Transformations for Strongly Near-Singular Integrals", *IEEE Transactions on Antennas and Propagation*, ISSN: 0018-926X, vol. AP-69, no. 12, pp. 8539-8550, Dec. 2021, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Indicios de calidad:

Impact factor: 4.388. Cited half life: 7.2.
Order: 52 out of 273 in *Engineering, Electrical & Electronic* (1st Q.); 19 ouy of 91 in *Telecommunications* (1st Q.).

B2. National Journal

1. M. Salazar-Palma, J. F. Hernández-Gil, "Self-Adaptive Mesh Scheme for the Finite Element Analysis of Anisotropic Multiconductor Transmission Lines", *Comunicaciones de Telefónica I+D*, vol. 1, no. 2, June-December 1990, pp. 23-34.
(**Invited contribution**)

C. Technical Reports of Projects and Contracts

1. J. Pérez, P. Dorta, M. Salazar-Palma. J. A. Casao, G. Halkias, C. Papavassiliou, "CIR 3, 6 Monthly Report on Task A (January-June 1991)", July 1991, 3rd Period Report on ESPRIT 5018-COSMIC Project, pp. 42-47.

2. J. Pérez, P. Dorta, M. Salazar-Palma, J. A. Casao, "CIR 4, 6 Monthly Report on Task A (July-December 1991)", January 1992, 4th Period Report on ESPRIT 5018-COSMIC Project, pp. 35-41.

3. J. Pérez, P. Dorta, M. Salazar-Palma, J. A. Casao, J. L. Cáceres, F. Giannini, C. Paoloni, G. Orengo, G. Halkias, C. Papavassiliou, "Report on FORTH Transimpedance Amplifier", March 1992, Report on ESPRIT 5018-COSMIC Project up to March 1992, 30 pages.

4. P. Dorta M. Salazar-Palma, "CIR 5, 6 Monthly Report on Task A (January-June 1992)", July 1992, 5th Period Report on ESPRIT 5018-COSMIC Project, pp. 29-32.

5. P. Dorta, M. Salazar, F. Pérez, J. A. Casao, Z. Hatzopoulos, C. Papavassiliou, "CIR 6, 6 Monthly Report on Task A (July-December 1992)", January 1993, 6th Period Report on ESPRIT 5018-COSMIC Project, pp 29-36.

6. P. Dorta, M. Salazar, F. Pérez, J. A. Casao, Z. Hatzopoulos, C. Papavassiliou, "CIREP-A. Extended Period Report on Task A (January-March 1993)", April 1993, Extended Period Report on ESPRIT 5018-COSMIC Project, pp. 34-45.

7. P. Dorta, M. Salazar, F. Pérez, "CIREP-C Extended Period Report on Task C (January-March 1993)", April 1993, Extended Period Report on ESPRIT 5018-COSMIC Project, pp. 105-110.

8. P. Dorta, M. Salazar, F. Pérez, "Report on FORTH Transimpedance Amplifier Packaging Characterization", April 1993, Report on ESPRIT 5018-COSMIC Project, 2 pages.

9. J. M. Recio-Peláez, M. Salazar-Palma, "GMR-MEF, Finite Element Analysis of Transmission Lines for the CAEME Project", Report on CAEME Project, 1995, 5 pages.

10. R. Ramírez García, L. E. García Castillo, M. Salazar Palma, M. Burgos García, J. I. Alonso Montes, "*Informe 1: Manual de usuario. Proyecto: Desarrollo de tecnologías avanzadas de multiplexores de radiofrecuencia espaciales. Desarrollo de un programa para el diseño de filtros con respuesta asimétrica*", ("Report 1: User Manual. Project: Development of Advanced Technologies for Spatial Radiofrequency Multiplexers. Development of a Software Program for the Design of Filters with Asymmetric Response"), Sept. 1996, Report on UPM - OTT / Alcatel Espacio Contract, 100 pages.

11. R. Ramírez García, L. E. García Castillo, M. Salazar Palma, M. Burgos García, J. I. Alonso Montes, "*Informe 3: Manual de referencia. Proyecto: Desarrollo de tecnologías avanzadas de multiplexores de radiofrecuencia espaciales. Desarrollo de un programa para el diseño de filtros con respuesta asimétrica*", ("Report 3: Reference Manual. Project: Development of Advanced Technologies for Spatial Radiofrequency Multiplexers. Development of a Software Program for the Design of Filters with Asymmetric Response"), Sept. 1996, Report on UPM - OTT / Alcatel Espacio Contract, 227 pages.

12. M. Salazar Palma, F. Pérez Martínez, M. Burgos García, A. Asensio López, "*2º Informe sobre modelos para la simulación de los radares para guiado semiactivo de un misil-antimisil*", ("2nd Report on Models for the

Simulation of Radar for Semi-active Guidance of an Antimisil-misil"), December 1996, Report on the Contract "*Técnicas de simulación de sensores radar para sistemas de guiado*" ("Simulation Techniques for Radar Sensors of Guidance Systems") for GMV, S.A. Contract, 30 pages.

13. M. Salazar Palma, R. Ramírez García, L. E. García Castillo, M. Burgos García, J. I. Alonso Montes, "*Informe 2: Informe técnico. Proyecto: Desarrollo de tecnologías avanzadas de multiplexores de radiofrecuencia espaciales. Desarrollo de un programa para el diseño de filtros con respuesta asimétrica*", ("Report 2: Technical Report. Project: Development of Advanced Technologies for Spatial Radiofrequency Multiplexers. Development of a Software Program for the Design of Filters with Asymmetric Response"), May 1997, Report on UPM - OTT / Alcatel Espacio Contract, 70 pages.

14. M. Salazar Palma, L. E. García Castillo, J. C. Cáceres Casero, "*Informe 1: Hito 1. Proyecto: Desarrollo de herramientas de CAD para la síntesis de filtros a resonadores*", ("Report 1: Milestone 1. Project: Development of CAD Tools for the Synthesis of Resonator Filters"), November 1997, Report on AEO-UPM/000/97.0002 Contract, 13 pages.

15. M. Salazar Palma, J. C. Cáceres Casero, L. E. García Castillo, "*Informe 2: Hito 2. Proyecto: Desarrollo de herramientas de CAD para la síntesis de filtros a resonadores*", ("Report 2: Milestone 2. Project: Development of CAD Tools for the Synthesis of Resonator Filters"), December 1997, Report on AEO-UPM/000/97.0002 Contract, 134 pages.

16. M. Salazar Palma, J. C. Cáceres Casero, L. E. García Castillo, "*Informe 3: Hito 3. Proyecto: Desarrollo de herramientas de CAD para la síntesis de filtros a resonadores*", ("Report 3: Milestone 3. Project: Development of CAD Tools for the Synthesis of Resonator Filters"), July 1998, Report on AEO-UPM/000/97.0002 Contract, 129 pages.

17. J. Herrero Velasco, M. Salazar Palma, F. Pérez Martínez, "*Informe técnico. Proyecto: Desarrollo de modelos de banda ancha para el diseño de filtros a resonadores dieléctricos*", ("Technical Report. Project: Development of Wideband Models for the Design of Dielectric Resonator Filters"), May 1999, Report on AEO-UPM/000/98.004 Contract, 136 pages.

18. A. García Lampérez, M. Salazar Palma, F. Pérez Martínez, "*Ampliación del programa ChebAsCW. Informe técnico*", ("Extension of the Software Tool ChebAsCW. Technical Report"), July 2000, Report on phase B of Contract AEO-UPM/000/98.004, 108 pages.

19. A. García Lampérez, M. Salazar Palma, F. Pérez Martínez, "*Ampliación del programa ChebAsCW. Manual de usuario*", ("Extension of the Software Tool ChebAsCW. User Manual"), July 2000, Report on phase B of Contract AEO-UPM/000/98.004, 95 pages.

20. A. García Lampérez, M. Salazar Palma, F. Pérez Martínez, "*Ampliación del programa ChebAsCW. Manual de referencia*", ("Extension of the Software Tool ChebAsCW. Reference Manual"), July 2000, Report on phase B of Contract AEO-UPM/000/98.004, 75 pages.

21. S. Llorente Romano, M. Salazar Palma, "*Informe sobre diplexores en la banda 24-26 GHz para sistemas LMDS*", ("Report: Diplexers in the 24-26 GHz Frequency Band for LMDS Systems"), November 2000, Report on IKUSI S.A. Project, 30 pages.

22. S. Llorente Romano, M. Salazar Palma, "*Informe: Filtro en guía de ondas* (*banda X*)", ("Report: Waveguide Filter (X Band)"), November 2000, Report on INDRA Sistemas Contract, 8 pages.

23. A. Gutiérrez Molina, M. Salazar Palma, F. Pérez Martínez, "*Diseño de un filtro paso banda de frecuencia central 455 MHz*", ("Design of a Band Pass Filter with 455 MHz Central Frequency"), January 2001, Report on IKUSI Contract, 16 pages.

24. S. Llorente Romano, M. Salazar Palma, "*Informe OMT-diplexor para una estación VSAT en bandas Ku and Ka*", ("Report on OMT-diplexer for Ku and Ka Bands VSAT Station"), October 2001, Report on IKUSI

Contract, 10 pages.

25. A. Gutiérrez Molina, M. Salazar Palma, F. Pérez Martínez, "*Sección de entrada de IMUXES en banda Ku en tecnología microstrip. Estudio preliminar*", ("Input Section for Ku Band Microstrip IMUXES. Preliminary Study"), October 2001, Report on Phase C of Contract AEO-UPM/00/98.0004, 87 pages.

26. S. Llorente Romano, A. García Lampérez, M. Salazar Palma, F. Pérez Martínez, "*Sección de entrada de IMUXES en banda Ku en tecnología microstrip. Segundo estudio*", ("Input Section for Ku Band Microstrip IMUXES. Second Study"), December 2001, Report on Phase C of Contract AEO-UPM/00/98.0004, 32 pages.

27. S. Llorente Romano, C. San Segundo Santos, M. Salazar Palma, F. Pérez Martínez, "*Sección de entrada de IMUXES en banda Ku en tecnología microstrip. Estudio final*", ("Input Section for Ku Band Microstrip IMUXES. Final Study"), January 2002, Report on Phase C of Contract AEO-UPM/00/98.0004, 11 pages.

28. S. Llorente Romano, M. Salazar Palma, "*Informe sobre diplexores para las nuevas bandas de frecuencia de la CPE de un sistema LMDS*", ("Report on Diplexers for the New Frequency Bands of CPE LMDS Systems"), May 2002, Report on IKUSI S.A. Contract, 40 pages.

29. A. García Lampérez, M. Salazar Palma, F. Pérez Martínez, "*Mantenimiento del programa ChebAsCW. Informe técnico*", ("ChebAsCW Program Maintenance. Technical Report"), July 2002, Report on AEO-UPM/0F220/02.0017 Contract, 108 pages.

30. A. García Lampérez, M. Salazar Palma, F. Pérez Martínez, "*Mantenimiento del programa ChebAsCW. Manual de usuario*", ("ChebAsCW Program Maintenance. User Manual"), July 2002, Report on AEO-UPM/0F220/02.0017 Contract, 107 pages.

31. A. García Lampérez, M. Salazar Palma, F. Pérez Martínez, "*Mantenimiento del programa ChebAsCW. Manual de referencia*", ("ChebAsCW Program Maintenance. Reference Manual"), July 2002, Report on AEO-UPM/0F220/02.0017 Contract, 75 pages.

32. A. García Lampérez, M. Salazar Palma, "*ChebAsCW: Informe de modificaciones*", ("ChebAsCW: Report on Modifications"), July 2002, Report on AEO-UPM/0F220/02.0017 Contract, 13 pages.

33. A. García Lampérez, M. Salazar Palma, F. Pérez Martínez, "*Programa de síntesis mediante optimización de filtros paso banda de banda estrecha*", ("Software Tool for Narrow Band Band Pass Filter Optimization-based Synthesis"), July 2002, Report on AEO/S/UPM-GMR/02.0050 Contract, 31 pages.

34. F. Pérez Martínez, R. Bascuñana Blasco, J. de Juan Martín, I. González Hervás, J. Grajal de la Fuente, A. Asensio López, J. I. Alonso Montes, M. Salazar Palma, "*Análisis de las aplicaciones de los radares de alta resolución. Informe final*", ("Report on High Resolution Radar Applications. Final Report"), December 2002, Report on INDRA Contract, 98 pages.

35. M. Salazar Palma, "*Informe de seguimiento de primer año. Métodos avanzados de diseño de componentes pasivos para las nuevas generaciones de sistemas de comunicaciones en bandas milimétricas (TIC2002 – 02657)*", ("First Year Report. Passive Components Advanced Synthesis Methods for the New Generation of Millimeter Wave Band Communication Systems (TIC2002 – 02657)"), July 2003, 6 pages.

36. A. García Lampérez, M. Salazar Palma, "*Sección de entrada en banda X. Estudio preliminar*", ("X Band Input Section. Preliminary Study"), October 2003, Report on AEO-S/UPM-GMR/02.0050 Contract, 5 pages.

37. R. Fernández Recio, S. Llorente Romano, R. M. Barrio Garrido, E. Montoya Álvarez, M. Salazar Palma, F. Pérez Martínez, "*CAD de dispositivos de milimétricas. CavMil*", ("CAD of Millimeter Devices. CavMil"), November 2003, Report on AEO-S/UPM-GMR/02.0052 Contract.

38. R. Fernández Recio, S. Llorente Romano, R. M. Barrio Garrido, E. Montoya Álvarez, M. Salazar Palma, F. Pérez Martínez, "*Desarrollo de filtros y diplexores en guía rectangular. Manual de usuario*", ("Development of Rectangular Waveguide Filters and Diplexers. User Manual"), April 2004, Report on AEO-UPM/A04/02.0052 Contract and AEO-S/UPM-GMR/02.0050 Contract, 60 pages.

39. R. M. Barrio Garrido, S. Llorente Romano, E. Montoya Álvarez, R. Fernández Recio, M. Salazar Palma, F. Pérez Martínez, "*Desarrollo de filtros y diplexores en guía rectangular. Manual de referencia*", ("Development of Rectangular Waveguide Filters and Diplexers. Reference Manual"), May 2004, Report on AEO-UPM/A04/02.0052 Contract and AEO-S/UPM-GMR/02.0050 Contract, 136 pages.

40. S. Llorente Romano, R. M. Barrio Garrido, E. Montoya Álvarez, R. Fernández Recio, M. Salazar Palma, F. Pérez Martínez, "*Desarrollo de filtros y diplexores en guía rectangular. Manual técnico*", ("Development of Rectangular Waveguide Filters and Diplexers. Technical Report"), May 2004, Report on AEO-UPM/A04/02.0052 Contract and AEO-S/UPM-GMR/02.0050 Contract, 126 pages.

41. R. M. Barrio Garrido, S. Llorente Romano, M. Salazar Palma, "*Diseño de un filtro de iris resonantes en banda Ka*", ("Design of a Ka Band Resonant Iris Filter"), June 2004, Report on a particular design in the frame of AEO-UPM/A04/02.0052 Contract, 52 pages.

42. M. Salazar Palma, "*Informe de seguimiento de segundo año. Métodos avanzados de diseño de componentes pasivos para las nuevas generaciones de sistemas de comunicaciones en bandas milimétricas (TIC2002 – 02657)*", ("Second Year Report. Passive Components Advanced Synthesis Methods for the New Generation of Millimeter Wave Band Communication Systems (TIC2002 – 02657)"), September 2004, 12 pages.

43. A. García Lampérez, M. Salazar Palma, "*Sección de entrada coaxial en banda Ku (banda baja). Comparación de simulación y medidas de prototipos*", ("Ku Band (Low Band) Coaxial Input Section. Comparison between Simulations and Prototypes Measurements"), January 2005, Report on Alcatel Espacio S.A. Contract, 49 pages.

44. A. García Lampérez, M. Salazar Palma, "*Sección de entrada coaxial en banda X. Comparación de simulación y medidas de prototipos*", ("X Band Coaxial Input Section. Comparison between Simulations and Prototypes Measurements"), January 2005, Report on Alcatel Espacio S.A. Report, 113 pages.

45. A. García Lampérez, M. Salazar Palma, "*Sección de entrada coaxial en banda Ku (banda alta). Resultados de medidas y conclusiones*", ("Ku Band (High band) Coaxial Input Section. Comparison between Simulations and Prototypes Measurements"), February 2005, Report on Alcatel Espacio S.A. Contract, 13 pages.

46. A. García Lampérez, M. Salazar Palma, "*Sección de entrada coaxial en banda X. Resultados de medidas y conclusiones*", ("Coaxial Input Section. Measured Results and Conclusions"), February 2005, Report on Alcatel Espacio S.A. Contract, 15 pages.

47. A. García Lampérez, M. Salazar Palma, "*Sección de entrada coaxial en banda X. Comparación de simulación y medidas de prototipos*", ("X Band Coaxial Input Section. Comparison between Simulations and Prototypes Measurements"), Report on Alcatel Espacio S.A. Contract, March 2005, 113 pages.

48. A. García Lampérez, M. Salazar Palma, "*Sección de entrada coaxial en banda Ku (11,7 – 12,75 GHz). Análisis de sensibilidad respecto a tolerancias*", ("Ku Band (11.7 – 12.75 GHz) Coaxial Input Section. Tolerances Sensitivity Analysis"), April 2005, Report on Alcatel Espacio S.A. Contract, 18 pages.

49. A. García Lampérez, M. Salazar Palma, "*Sección de entrada coaxial en banda X (7,9 – 8,9 GHz). Análisis de sensibilidad respecto a tolerancias*", ("X Band (7.9 – 8.9 GHz) Coaxial Input Section. Tolerances Sensitivity Analysis"), April 2005, Report on Alcatel Espacio S.A. Contract, 18 pages.

50. R. M. Barrio Garrido, S. Llorente Romano, R. Fernández Recio, M. Salazar Palma, F. Pérez Martínez, "*Modificaciones al programa CavMil. Filtros de iris resonantes: dimensiones de los puertos de entrada/salida. Extensiones al manual de referencia*", ("CavMil Software Tool Modifications. Resonant Irises Filters: Input/Output Port Dimensions. Extensions to the Reference Manual"), May 2005, Report on AEO-UPM/A04/02.0052 and AEO-S/UPM-GMR/02.0050 Contracts, 26 pages.

51. R. Fernández Recio, S. Llorente Romano, R. M. Barrio Garrido, E. Montoya Álvarez, M. Salazar Palma, F. Pérez Martínez, "*Desarrollo de filtros y diplexores en guía rectangular. Manual de usuario, segunda versión*",

("Development of Rectangular Waveguide Based Filters and Diplexers. User Manual, Second Version"), June 2005, Report on AEO-UPM/A04/02.0052 and AEO-S/UPM-GMR/02.0050 Contracts, 65 pages.

52. A. García Lampérez, M. Salazar Palma, "*Programa de diseño de multiplexores generalizados. Manual de referencia*", ("Software Tool for the Design of Generalized Multiplexers. Reference Manual"), November 2006, Report on Alcatel Alenia Space, S.A. Contract, 15 pages.

53. M. Salazar Palma, "*Informe final. Métodos avanzados de diseño de componentes pasivos para las nuevas generaciones de sistemas de comunicaciones en bandas milimétricas (TIC2002–02657)*", ("Final Report. Passive Components Advanced Synthesis Methods for the New Generation of Millimeter Wave Band Communication Systems (TIC2002 – 02657)"), December 2006, 100 pages.

D. Other Scientific Publications

1. **Master Thesis Project**: Magdalena Salazar Palma, *"Campo de Prueba para Medidas Electromagnéticas de Antenas de Microondas"*, ("Open Field Range for the Electromagmetic Experimental Characterization of Microwave Antennas"), ETSI Telecomunicación, Universidad Politécnica de Madrid, December 1973, 350 pages.

2. **Doctoral Thesis**: Magdalena Salazar Palma, *"Aplicación del Método de los Elementos Finitos al Análisis de Estructuras de Microondas y Ondas Milimétricas Empleando un Algoritmo de Mallado Autoadaptativo"*, ("Application of the Finite Element Method to the Analysis of Microwave and Millimeter Wave Structures Using a Self Adaptive Mesh Algorithm"), ETSI Telecomunicación, Universidad Politécnica de Madrid, June 1995, 694 pages.

3. T. K. Sarkar, M. Salazar-Palma, D. Sengupta, "Who Was James Clerk Maxwell and What Was/Is His Electromagnetic Theory", *IEEE Antennas and Propagation Sopciety Web Page, Feature Article*, pp. 1-35, 2012.

E. Other Publicactions

1. M. Salazar-Palma, P. Molina-Gaudó, "IEEE Women in Engineering", *Region 8 Newsletter*, February 2003, 1 page.

2. M. Salazar-Palma, "President's Message", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 53, no. 1, pp. 8-9, Feb. 2011, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators [4]:
Impact factor: 0.968. Cited half-life: 7.8.
Order: 129 out of 245 in Engineering, Electrical & Electronic (3rd Q.).

3. M. Salazar-Palma, "President's Message", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 53, no. 3, pp. 8-10, Feb. 2011, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.968. Cited half-life: 7.8.
Order: 129 out of 245 in Engineering, Electrical & Electronic (3rd Q.).

4. M. Salazar-Palma, "President's Message", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 53, no. 4, pp. 8-11, Aug. 2011, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.968. Cited half-life: 7.8.
Order: 129 out of 245 in Engineering, Electrical & Electronic (3rd Q.).

5. M. Salazar-Palma, "President's Message", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 53, no. 5, pp. 8-11, Oct. 2011, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:

[4] This article and the following 7 articles are listed under *Other Publications* because they are not scientific papers although they have been published in indexed scientific journals..

Impact factor: 0.968. Cited half-life: 7.8.
Order: 129 out of 245 in Engineering, Electrical & Electronic (3rd Q.).

6. M. Salazar-Palma, "President's Message", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 53, no. 6, Dec. 2011, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 0.968. Cited half-life: 7.8.
Order: 129 out of 245 in Engineering, Electrical & Electronic (3rd Q.).

7. G. Oltman, M. Salazar Palma, "Kenneth Kwai-Hsiang Mei", *IEEE Microwave Magazine*, ISSN: 1527-3342, vol. 18, no. 5, p. 124, July/August 2017, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 3.007. Cited half-life: 6.2.
Order: 67 out of 260 in Engineering, Electrical & Electronic (2nd Q.); 28 out of 87 in Telecommunications (2nd Q.).

8. H. G Oltman, M. Salazar Palma, "Kenneth Kwai-Hsiang Mei [In Memoriam]", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 59, no. 4, p. 120, August 2017, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 3.962. Cited half-life: 8.9.
Order: 66 out of 260 in Engineering, Electrical & Electronic (2nd Q.); 26 out of 87 in Telecommunications (2nd Q.).

9. M. Moghaddam, M. Salazar-Palma, R. Graglia, C. Pichot, "Remembering Tapan Sarkar", *IEEE Antennas and Propagation Magazine*, ISSN: 1045-9243, vol. 63, no. 3, pp. 156-157, June 2021, Ed. Institute Electrical Electronics Engineers Inc., Piscataway, NJ, USA.
Quality indicators:
Impact factor: 2.593. Cited half life: 8.7.
Order: 128 out of 273 in *Engineering, Electrical & Electronic* (2nd Q.); 53 out of 91 in *Telecommunications* (3rd Q.).

IX. Research Contracts with Industries and/or Institutions (National and/or International)

Contract/Project title:
Contract/Project type:
Funding company/institution:
Participating institutions:
Duration, from: up to:
Principal investigator:
Number of participating researchers:
Funding:

She has participated in a total of **50 Research and Development Contracts or Collaboration Agreements** funded by Spanish Companies and Institutions as well as USA Companies and Institutions. The funding of these 50 projects has been **of 2.5 M€**. These contracts, added to the **47 Research Projects financed by Public Institutions** through Competitive Calls (see detailed information in section VII of this CV) give a **total** of **97 Research Projects and Contracts** for a total **of 9.5 M€**.

The 39 contracts funded by Spanish institutions are listed first, indicating the title, funding company or institution, duration, and role as Principal Investigator, PI (20 cases), or Researcher (19 cases).

The 11 contracts or agreements funded by USA institutions follow next, indicating the title, funding company or institution, duration, and role (PI in all 11 cases).

A. Contracts Financed by Spanish Industries and Institutions

She has participated in 39 contracts funded by Spanish Industries and Institutions. In 20 of them (19 contracts with companies and 1 collaboration agreement with CAM) she has acted as Principal Investigator (PI).

1. **Contract title**: *CAMPO DE PRUEBA PARA MEDIDAS ELECTROMAGNÉTICAS DE ANTENAS DE MICROONDAS* ("Open Field Range for the Electromagnetic Characterization of Microwave Antennas").
   Funding institution: *Laboratorio de Antenas de la Cátedra de Electromagnetismo* (Antenna Laboratory of the Electromagnetic Dept.), ETSIT, UPM.
   Participating institutions: UPM.
   Duration, from: October 1972, up to: December 1973.
   Principal investigator: Jesús Sánchez Miñana (UPM).
   Number of participating researchers: 4.

2. **Contract title**: *RECEPTOR DE ONDAS MILIMÉTRICAS PARA RADIOASTRONOMÍA* ("Radioastronomy Millimeter Wave Receiver").
   Contract type: Collaboration.
   Funding company: *Instituto Geográfico Nacional* (IGN) (National Geographic Institute).
   Participating institutions: UPM.
   Duration, from: July 1974, up to: December 1976.
   Principal investigator: Jesús Sánchez Miñana (UPM).
   Number of participating researchers: 7.

3. **Contract title**: *DISEÑO Y DESARROLLO DE RADARES DOPPLER* ("Design and Development of Doppler Radars").
   Contract type: Collaboration.
   Funding company: AMPER, S.A.
   Participating institutions: UPM.
   Duration, from: July 1985, up to**:** December 1986.
   Principal investigator: Félix Pérez Martínez (UPM).
   Number of participating researchers: 4.

4. **Contract title**: *CIRCUITOS MONOLÍTICOS SOBRE AsGa* ("GaAs Monolithic Circuits").
Contract type: Collaboration.
Funding company: Telecomunicación y Control, S.A.
Participating institutions: UPM.
Duration, from: March 1990, up to: March 1991.
Principal investigator: Jorge Pérez Martínez (UPM).
Number of participating researchers: 5.
Funding: 3,480,000 pts.

5. **Contract title**: *DESARROLLO DE DIVERSOS COMPONENTES PARA MEJORAR UN TRANSMISOR-DUPLEXOR EN BANDA S* ("Development of Several Components for the Improvement of an S Band Transmitter-duplexer").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM.
Duration, from: June 1994, up to: June 1995.
Principal investigator: Blas Pablo Dorta Naranjo (UPM).
Number of participating researchers: 5.
Funding: 17,400,000 pts.

6. **Contract title**: *DESARROLLO DE TECNOLOGÍAS AVANZADAS DE MULTIPLEXORES DE RADIOFRECUENCIA ESPACIALES* ("Development of Advanced Technologies for the Design of Radiofrequency Multiplexers for Space Applications").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM.
Duration, from: October 1995, up to: September 1996.
Principal investigator: José Ignacio Alonso Montes (UPM).
Number of participating researchers: 5.
Funding: 2,958,000 pts.

7. **Contract title**: *TÉCNICAS DE SIMULACIÓN DE SENSORES RADAR PARA SISTEMAS DE GUIADO* ("Simulation Techniques for Radar Sensors of Guidance Systems").
Contract type: Collaboration.
Funding company: Grupo de Mecánica de Vuelo (GMV), S.A.
Participating institutions: UPM.
Duration, from: January 1995, up to: December 1995.
Principal investigator: Félix Pérez Martínez (UPM).
Number of participating researchers: 4.
Funding: 1,160,000 pts.

8. **Contract title**: *DESARROLLO DE HERRAMIENTAS DE CAD PARA LA SÍNTESIS DE FILTROS A RESONADORES* ("Development of CAD Tools for the Synthesis of Resonator Filters").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM.
Duration, from: January 1997, up to: December 1997.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 4.
Funding: 4,729,320 pts.

9. **Contract title**: ***FASE A**: DESARROLLO DE MODELOS DE BANDA ANCHA PARA EL DISEÑO DE FILTROS A RESONADORES DIELÉCTRICOS, **FASE B**: AMPLIACIÓN DEL PROGRAMA ChebAsCW, **FASE C**: CURSO DE FORMACIÓN, **FASE D**: SECCIÓN DE ENTRADA EN BANDA Ku* ("**Phase A**: Development of Wideband Models for the Design of Dielectric Resonator Filters, **Phase B**: Extension of the Software Tool ChebAsCW, **Phase C**: Training Course, **Phase D**: Ku Band Input Section").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM.

Duration, from: June 1998, up to: December 2001.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 4.
Funding: 12,760,000 pts.

10. **Contract title**: *TRANSCEPTOR PARA SISTEMAS LMDS CON MODULACIÓN QAM* ("LMDS System Transceiver with QAM Modulation").
Contract type: Collaboration.
Funding company: Angel Iglesias, S.A. (IKUSI).
Participating institutions: UPM.
Duration, from: July 1999, up to: July 2000.
Principal investigator: Félix Pérez Martínez (UPM).
Number of participating researchers: 6.
Funding: 17,400,000 pts.

11. **Contract title**: *SUBSISTEMA TRANSMISOR-RECEPTOR PARA UN RADAR DE BAJA PROBABILIDAD DE INTERCEPTACIÓN (LPI)* ("Transmitter-receiver Subsystem for a Low Interception Probability (LPI) Radar").
Contract type: Collaboration.
Funding company: INDRA SISTEMAS, S.A.
Participating institutions: UPM.
Duration, from: October 1999, up to: October 2001.
Principal investigator: Félix Pérez Martínez (UPM).
Number of participating researchers: 8.
Funding: 58,000,000 pts.

12. **Contract title**: *UNIDADES EXTERNAS DE USUARIO PARA SISTEMAS DE ACCESO RADIO EN LA BANDA 24-26 GHz* ("Costumer Premises Equipment for 24-26 GHz Band Radio Access Systems").
Contract type: Collaboration.
Funding company: Angel Iglesias, S.A. (IKUSI).
Participating institutions: UPM.
Duration, from: May 2000, up to: October 2000.
Principal investigator: Félix Pérez Martínez (UPM).
Funding: 4,640,000 pts.

13. **Contract title**: *DIPLEXORES PARA TRANSCEPTORES DE SISTEMAS DE ACCESO RADIO EN LA BANDA 24 A 26 GHz* ("Transceiver Diplexers for 24-26 GHz Band Radio Access Systems").
Contract type: Collaboration.
Funding company: Angel Iglesias, S.A. (IKUSI).
Participating institutions: UPM.
Duration, from: April 2000, up to: December 2000.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 3.
Funding: 482.519.40 pts.

14. **Contract title**: *MANTENIMIENTO DEL PROGRAMA ChebAsCW* ("ChebAsCW Program Maintenance").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM.
Duration, from: January 2001, up to: December 2001.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 4.
Funding: 2,900 €.

15. **Contract title**: *CPE* (COSTUMER PREMISES EQUIPMENT) *PARA SISTEMAS LMDS* ("LMDS Systems CPE (Costumer Premises Equipment)").
Contract type: Collaboration.
Funding company: Angel Iglesias, S.A. (IKUSI).
Participating institutions: UPM.

Duration, from: April 2001, up to: October 2001.
Principal investigator: José Ignacio Alonso Montes (UPM).
Number of participating researchers: 7.
Funding: 4,640,000 pts.

16. **Contract title**: *PROGRAMA DE FORMACIÓN EN TÉCNICAS Y TECNOLOGÍAS DE MICROONDAS* ("Microwave Techniques and Technologies Training Program").
Contract type: Collaboration.
Funding company: Angel Iglesias, S.A. (IKUSI).
Participating institutions: UPM.
Duration, from: April 2001, up to: October 2001.
Principal investigator: Félix Pérez Martínez (UPM).
Number of participating researchers: 7.
Funding: 1,740,000 pts.

17. **Contract title**: *ESTACIONES VSAT EN BANDA Ka* ("Ka Band VSAT Stations").
Contract type: Collaboration.
Funding company: Angel Iglesias, S.A. (IKUSI).
Participating institutions: UPM.
Duration, from: June 2001, up to: July 2002.
Principal investigator: Javier Gismero Menoyo (UPM).
Number of participating researchers: 5.
Funding: 10,440,000 pts.

18. **Contract title**: *MANTENIMIENTO DEL PROGRAMA ChebAsCW* ("ChebAsCW Program Maintenance").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM.
Duration, from: January 2002, up to: December 2002.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 4.
Funding: 2,900 €.

19. **Contract title**: *SÍNTESIS MEDIANTE OPTIMIZACIÓN DE FILTROS PASO BANDA DE BANDA ESTRECHA* ("Software Tool for Narrow Band Band Pass Filter Optimization-based Synthesis").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM.
Duration, from: April 2002, up to: July 2002
Principal investigator: Magdalena Salazar Palma (UPM).
Number of participating researchers: 4.
Funding: 6,971.,60 €.

20. **Contract title**: *ADAPTACIÓN DE LOS DIPLEXORES DE UNIDADES DE USUARIO DE SISTEMAS LMDS A LAS BANDAS DE FRECUENCIA DEL CNAF (Cuadro Nacional de Atribución de Frecuencias)* ("Modification of LMDS Systems Costumer Premises Equipment Diplexers for the CNAF (National Frequency Band Assigment) Frequency Bands").
Contract type: Collaboration.
Funding company: Angel Iglesias, S.A. (IKUSI).
Participating institutions: UPM.
Duration, from: May 2002, up to: September 2002.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 4.
Funding: 6,960 €.

21. **Contract title**: *DESARROLLO DE FILTROS Y DIPLEXORES EN GUÍA RECTANGULAR* ("Development of Rectangular Waveguide Based Filters and Diplexers").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.

Participating institutions: UPM, UC3M.
Duration, from: July 2002, up to: September 2003.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 4.
Funding: 26,216 €.

22. **Contract title**: *MANTENIMIENTO DEL PROGRAMA ChebAsCW* ("ChebAsCW Program Maintenance").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM.
Duration, from: January 2003, up to: December 2003.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 4.
Funding: 2,900 €.

23. **Contract title**: *DESARROLLO DE UN PROGRAMA DE ANÁLISIS Y OPTIMIZACIÓN DE FILTROS A RESONADORES DIELÉCTRICOS* ("Development of a Software Package for the Dielectric Resonator Filters Analysis and Optimization").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM, UC3M.
Duration, from: September 2003, up to: June 2009.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 4.
Funding: 26,216 €.

24. **Contract title**: *SECCIÓN DE ENTRADA EN BANDA X* ("X Band Input Section")
Contract type: Collaboration.
Funding company: Alcatel Espacio, SA.
Participating institutions: UPM.
Duration, from: October 2003, up to: January 2004.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Funding: 5,800 €.

25. **Contract title**: *DISEÑO Y OPTIMIZACIÓN DE FILTROS DE IRIS INDUCTIVOS Y DIPLEXORES EN GUÍA RECTANGULAR* ("Design and Optimization of Rectangular Waveguide Based Inductive Iris Filters and Diplexers")
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM, UC3M.
Duration, from: October 2003, up to: February 2004.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Funding: 9,280 €.

26. **Contract title**: *MANTENIMIENTO DEL PROGRAMA ChebAsCW* ("ChebAsCW Program Maintenance").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM.
Duration, from: January 2004, up to: December 2004.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 4.
Funding: 2,900 €.

27. **Contract title**: *SECCIONES DE ENTRADA EN BANDA Ku CON RELACIONES DE ENTRADA/SALIDA 1:4, 1:8, 1:12* ("Ku Band Input Section with 1:4, 1:8, 1:12 Input/Output Relations")
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM.
Duration, from: January 2004, up to: November 2004.

Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 4.
Funding: 11,020 €.

28. **Contract title***: MANTENIMIENTO DE LOS PROGRAMAS ChebAsCW Y CavMil* ("ChebAsCW and CavMil Programs Maintenance").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM.
Duration, from: January 2005, up to: December 2005.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 4.
Funding: 2,900 €.

29. **Contract title**: *PROGRAMA DE SÍNTESIS DE REDES MULTIPUERTA (MULTIPLEXORES) MEDIANTE RESONADORES ACOPLADOS Y NODOS NO RESONANTES* ("Coupled Resonator and Non-resonant Nodes Multiport Network (Multiplexers) Synthesis Program").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UC3M, UPM.
Duration, from: April 2005, up to: December 2005.
Principal investigator: **Magdalena Salazar Palma** (UC3M).
Number of participating researchers: 4.
Funding: 20,880 €.

30. **Contract title**: *RIESGOS LABORALES Y LA CONCILIACIÓN DE LA VIDA LABORAL Y FAMILIAR EN LA COMUNIDAD DE MADRID* ("Work Risks and Conciliation of Working and Family Life in the Community of Madrid").
Contract type: Collaboration Agreement.
Funding Institution: *Instituto Regional de Seguridad y Salud en el Trabajo (IRSST), CAM* ("Regional Institute for Work Security and Health").
Participating institutions: UPM, UC3M, Universidad Complutense de Madrid.
Duration, from: May 2005, up to: November de 2005.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 19.
Precio total del proyecto: 236,000 €.

31. **Contract title**: *FILTRO PASO BAJO MICROSTRIP EN BANDA S* ("S Band Microstrip Low Pass Filter").
Contract type: Collaboration.
Funding company: Alcatel Espacio, S.A.
Participating institutions: UPM, UC3M.
Duration, from: June 2005, up to: September 2005.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers: 5.
Funding: 17,400 €.

32. **Contract title**: *DESARROLLO DE UN PROGRAMA DE SÍNTESIS DE MULTIPLEXORES GENERALIZADOS* ("Development of a Generalized Multiplexer Synthesis Software Package").
Contract type: Collaboration.
Funding company: Thales Alenia Space, S.A.
Participating institutions: UC3M, UPM.
Duration, from: June 2006, up to: June 2007.
Principal investigator: **Magdalena Salazar Palma** (UC3M).
Number of participating researchers: 6.
Funding: 28,319 €.

33. **Contract title**: *CURSO DE FORMACIÓN: SÍNTESIS AVANZADA DE FILTROS PASO BANDA PARA APLICACIONES ESPACIALES. INTRODUCCIÓN AL DISEÑO DE MULTIPLEXORES COMPACTOS*

("Training Course: Advanced Synthesis of Band Pass Filters for Space Applications. Introduction to the Design of Compact Multiplexers").
Contract type: Collaboration.
Funding company: Thales Alenia Space, S.A.
Participating institutions: UC3M.
Duration, from: February 2008.
Principal investigator: **Magdalena Salazar Palma** (UC3M).
Number of participating researchers: 2.
Funding: 2,400 €.

34. **Contract title**: *SIMULACIÓN/ANÁLISIS DE COBERTURA ELECTROMAGNÉTICA SOBRE VEHÍCULOS TÁCTICOS DEL ET DE EMISORES DE INHIBIDORES IED, PARTE I: BMR, IVECO LMV, IVECO M250*. ("Simulation/Analysis of the Electromagnetic Coverage over Tactic Vehicles of the Army of IED Frequency Inhibitor, Part I: BMR, IVECO LMV, IVECO M250")
Contract type: Collaboration.
Funding company: INDRA SISTEMAS, SA.
Participating institutions: UC3M.
Duration, from: June 2009, up to: July 2009.
Principal investigator: Luis Emilio García Castillo (UC3M).
Number of participating researchers: 8.
Funding: 19,440 €.

35. **Contract title**: *ANÁLISIS DE LA SECCIÓN EFICAZ RADAR (RCS) DE LOS PERISCOPIOS ÓPTICO J Y OPTRÓNICO PERCOSUB 2000 DEL SUBMARINO S70*. ("Radar Cross Section of the J Optical and PERCOSUB 2000 Optronic Periscopes of the S70 Submarine")
Contract type: Collaboration.
Funding company: INDRA SISTEMAS, SA.
Participating institutions: UC3M.
Duration, from: June 2009, up to: July 2009.
Principal investigator: Luis Emilio García Castillo (UC3M).
Number of participating researchers: 8.
Funding: 6,000 €.

36. **Contract title**: *FORMACIÓN EN SUBSISTEMAS DE MICROONDAS, ANTENAS Y RADAR: CUATRIMESTRE SEPTIEMBRE-DICIEMBRE 2010* ("Microwave Subsystems, Antennas and Radar Training: Period September-December 2010").
Contract type*:* Collaboration.
Funding company: INDRA SISTEMAS, SA.
Participating institutions: UC3M.
Duration, from: September 2010, up to: December 2010
Principal investigator: Daniel Segovia Vargas (UC3M).
Number of participating researchers: 17.
Funding: 51,582 €.

37. **Contract title**: *FORMACIÓN EN SUBSISTEMAS DE MICROONDAS, ANTENAS Y RADAR: CUATRIMESTRE MARZO-JUNIO 2011* ("Microwave Subsystems, Antennas and Radar Training: Period March-June 2011").
Contract type: Collaboration.
Funding company: INDRA SISTEMAS, SA.
Participating institutions: UC3M.
Duration, from: March 2011, up to: June 2011.
Principal investigator: Daniel Segovia Vargas (UC3M).
Number of participating researchers: 18.
Funding: 55,572 €.

38. **Título del proyecto**: EXTENSIÓN DE LA HERRAMIENTA CAVMIL ("Extension of the Software Tool CavMil").
Contract type: Colaboración.
Funding company: Thales Alenia Space España, SA.

Participating institutions: UC3M.
Duration, from: September 2011, up to: September 2012.
Principal Investigator: Sergio Llorente Romano (UC3M).
Number of participating researchers: 3.
Funding: 23,600 €.

39. **Título del proyecto**: MEDIDA DE ANTENAS DE DISTINTAS EMPRESAS CON STARLAB SATIMO CEDIDO POR TELEFÓNICA ("ANTENNA MEASUREMENTS USING STARLAB SATIMO FOR VARIOUS COMPANIES").
Contract type: Colaboración.
Funding company: Telefónica.
Participating institutions: UC3M.
Duration, from: 26 May 2015, up to: 25 May 2020.
Principal Investigator: Daniel Segovia Vargas (UC3M).
Number of participating researchers: 11.
Funding: 400,000 €.

B. Contracts and Collaboration Agreements Financed by USA Industries and Institutions

She has been PI of the Spanish team in 11 R+D Projects (3 Contracts, properly speaking, and 8 Collaboration Agreements) partially funded by USA institutions. A distinction is made between Contracts and Agreements, because in the latter ones the participation took place through collaboration agreements with several University Departments: Department of Electrical Engineering and Computer Science, Syracuse University (SU), Syracuse, NY (6 agreements), College of Engineering, Purdue University (PU), West Lafayette, IN (1 agreement), College of Engineering, University of Illinois at Urbana-Champaign (UIUC) (1 agreement), which essentially funded trips, lodging and stays in those Universities of members of the Spanish teams, except in the last case.

1. **Contract title**: APPLICATION OF THE FINITE ELEMENT METHOD FOR QUASI-STATIC AND DYNAMIC ANALYSIS OF 2D ARBITRARILY SHAPED INHOMOGENEOUS ANISOTROPIC MULTICONDUCTOR AND MULTIDIELECTRIC WAVEGUIDING STRUCTURES UTILIZING THE CLASSICAL ELEMENTS AND EDGE ELEMENTS.
Funding company: CAEME (Computer Applications in ElectroMagnetic Education) Center, Utah University, USA.
Participating institutions: UPM.
Duration, from: 1992, up to: 1994.
Principal investigator: **Magdalena Salazar Palma** (UPM).
Number of participating researchers (UPM): 2.
Funding: 500,000 pts.

2. **Agreement title**: APPLICATION OF WAVELETS TO FINITE ELEMENT TECHNIQUES.
Funding company: E. I. Dupont de Nemours & Company, Willminngton, Dellaware, USA.
Participating institutions: UPM, SU.
Duration, from: 1991, up to: 1992.
Principal investigator (UPM): **Magdalena Salazar Palma** (UPM).
Number of participating researchers (UPM): 2.
Funding: 6,840,800 pts.

3. **Agreement title**: MATRIX PENCIL FOR LATE TIME RESPONSE CHARACTERIZATION OF RADAR SIGNALS.
Funding company: Rome Laboratories, Rome, NY, USA.
Participating institutions: UPM, SU.
Duration, from: 1994, up to: 1995.
Principal investigator (UPM): **Magdalena Salazar Palma** (UPM).
Number of participating researchers (UPM): 2.
Funding: 6,900,000 pts.

4. **Agreement title**: APPLICATION OF THE HILBERT TRANSFORM TO ELECTROMAGNETIC PHENOMENA.
   Funding company: Rome Laboratories, Rome, NY, USA.
   Participating institutions: UPM, SU.
   Duration, from: 1995, up to: 1997.
   Principal investigator por la UPM: Magdalena Salazar Palma (UPM).
   Number of participating researchers de la UPM: 3.
   Funding: 10,261,200 pts.

5. **Agreement title:** TIME DOMAIN FINITE ELEMENT METHOD. APPLICATION TO SCATTERING PROBLEMS.
   Funding company: E. I. Dupont de Nemours & Company, Willmington, Dellaware, USA.
   Participating institutions: UPM, SU.
   Duration, from: 1996, up to: 1998.
   Principal investigator (UPM): **Magdalena Salazar Palma** (UPM).
   Number of participating researchers (UPM): 4.
   Funding: 10,300,000 pts

6. **Agreement title**: APPLICATION OF WAVELET TRANSFORMS TO THE SOLUTION OF MATRIX EQUATIONS.
   Funding company: E. I. Dupont de Nemours & Company, Willmington, Dellaware, USA.
   Participating institutions: UPM, SU.
   Duration, from: 1997, up to: 1999.
   Principal investigator (UPM): **Magdalena Salazar Palma** (UPM).
   Number of participating researchers (UPM): 4.
   Funding: 10,400,000 pts

7. **Agreement title**: ADVANCED METHODS FOR THE DESIGN OF PASSIVE CIRCUITS FOR THE NEW GENERATION OF MILLIMETER BAND COMMUNICATION SYSTEMS.
   Funding institution: College of Engineering, PU.
   Participating institutions: UC3M, UPM, PU.
   Duration, from: August 2005, up to: April 2006.
   Principal investigator of Spanish team: **Magdalena Salazar Palma** (UPM, UC3M).
   Number of participating researchers in the Spanish team (UC3M, UPM): 2.
   Funding: 28,319 €.

8. **Agreement title**: ANALYSIS AND DESIGN OF ELECTROMAGNETICS STRUCTURES USING THE METHOD OF MOMENTS WITH HIGH ORDER BASIS FUNCTIONS.
   Funding institution: OHRN Enterprises Incorporated, DeWitt, NY, USA
   Participating institutions: SU, UC3M.
   Duration, from: 2006, up to: 2010.
   Principal investigator (UC3M): **Magdalena Salazar Palma** (UC3M).
   Number of participating researchers in the Spanish team (UC3M): 3.
   Funding: 188,793 €.

9. **Agreement title**: ANALYSIS OF ELECTROMAGNETICS PROBLEMS USING THE FINITE ELEMENT METHOD AND MULTIGRID METHODS.
   Funding institution: College of Engineering, Department of Electrical and Computer Engineering, UIUC.
   Participating institutions: UC3M, UIUC.
   Duration, from: January 2008, up to: July 2008.
   Principal investigator (UC3M): **Magdalena Salazar Palma** (UC3M).
   Number of participating researchers in the Spanish team (UC3M): 3.
   Funding: 3,000 €.

10. **Contract title**: NUMERICAL METHODS FOR ANTENNA ANALYSIS AND DESIGN: A NEW FULL WAVE ELECTROMAGNETIC SIMULATOR.
    Contract type: Collaboration.
    Funding company: OHRN Enterprises Incorporated, Dewitt, NY, USA.
    Participating institutions: UC3M.

Duration, from: June 1, 2011, up to: May 31, 2012.
Principal investigator: **Magdalena Salazar Palma**.
Number of participating researchers: 6.
Funding: 50,000 $ (USD): 34,204.01 €.

11. **Contract title**: NUMERICAL METHODS FOR ANTENNA ANALYSIS AND DESIGN: A NEW FULL WAVE ELECTROMAGNETIC SIMULATOR (PART 2).
Contract type: Collaboration.
Funding company: OHRN Enterprises Incorporated, Dewitt, NY, USA.
Participating institutions: UC3M.
Duration, from: June 1, 2012, up to: May 31, 2014.
Principal investigator: **Magdalena Salazar Palma**.
Number of participating researchers: 6.
Funding: 100,000 $ (USD): 78,347.81 €

X. Patents, Utility Models and other Technology Transfer Activities

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Inventors:
Title:
Application number: Priority country: Priority date:
Applicant:
Countries where it has been extended:
Company exploiting it:

A. Patents

Coauthor of 2 patents.

The contract no. 9, Phase D, and the contract no. 24 described in Subsection A of Section IX of this CV, resulted in the following **patent**:

1. **Inventors**: J. S. Galaz Villasante, A. I. Daganzo Eusebio, M. J. Padilla Cruz, M. Salazar Palma, S. Llorente Romano, A. García Lampérez
   Title: Band Pass Filter
   Application number: 03292072.0
   Priority country: France
   Priority date: 2003
   Applicant: Alcatel Espacio S.A., now Thales Alenia Space S.A.
   Patent number and publication date:

European Patent	EP1508935-A1	02-23-2005
USA Patent	US2005040913-A1	02-24-2005
Canadian Patent	CA2473826-A1	02-22-2005
USA Patent	US7283017-B2	10-16-2007

   Countries where it has been extended: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PT, RO, SE, SI, SK, TR, USA , CA.
   Company exploiting it: Alcatel Espacio S.A., now Thales Alenia Space Spain S.A.

The PhD Thesis no. 6 (see Section XIII of this CV) and the contracts nos. 29 and 32 described in Subsection A of Section IX of this CV resulted in the following **patent**:

2. **Inventors**: I. Hidalgo Carpintero, M. J. Padilla Cruz, A. García Lampérez, M. Salazar Palma
   Title: Generalized Multiplexing Network
   Application number: 04292797.0
   Priority country: France
   Priority date: 2004
   Applicant: Alcatel Espacio, S.A., nowadays, Thales Alenia Space, S.A.
   Patent number and publication date:

European Patent	EP20040292797	11-26-2004
European Patent	EP1662603-A1	05-31-2006
USA Patent	US2006114082-A1	06-01-2006
Canadian Patent	CN1783759-A	05-26-2006
Canadian Patent	CA2526766-A1	05-26-2006
Japanese Patent	JP2006157907-A	06-15-2006
European Patent	EP1662603 B1	17-08-2011
US Patent	US8008990	30-08-2011

   Countries where it has been extended: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, JP, LI, LU, MC, NL, PT, RO, SE, SI, SK, TR, USA, CA.
   Company exploiting it: Alcatel Espacio S.A., now Thales Alenia Space S.A.

B. Utility Models

Co-author of **6 Utility Models.**

Although no more applications for patents have been done, some of the R+D contracts, mainly with Alcatel Espacio, S. A., now Thales Alenia Space, S.A., and with OHRN Enterprises Inc., resulted in six **utility models** (or software packages) that are being exploited by the mentioned companies.

1. **Description of the product:** ChebAsCW Software Package.
   This CAD program consists of two modules. The first one obtains and optimizes the characterization functions of a band pass filter with asymmetric amplitude response and self equalized group delay starting from the user selected masks of attenuation and group delay. It uses a generalized Chebychev approximation (with arbitrary transmission and equalization zeros). The second module synthesizes a coupled resonator filter topology, characterized by its coupling matrix. User can choose among a variety of topologies like canonical, in-line, triplets, quadruplets, in box, *cul-de-sac*, and so on. The software package has a number of features that allows the exploiting company to analyze their customer needs and to prepare clear and tailored offers in reduced time frames.
   Depending on the frequency band of interest, the physical filter will be implemented using the adequate technology: planar, waveguide, dielectric resonator, and so on.
   Description of her contribution: Development of some of the routines of the initial version in the frame of contract no. 6 and PI of contracts nos. 8, 9 (Phases A and B), 14, 18, 19, 22, 23, 26 and 28 of Section IX, Subsection A of this CV. This program is kept at state of the art level by including novel contributions done by her research team.
   Company exploiting it: Alcatel Espacio S.A., now Thales Alenia Space España, S.A.
   Contracts in which frame it has been developed: nos. 6, 8, 9 (Phases A, B), 14, 18, 19, 22, 23, 26 and 28 of the Section IX, Subsection A of this CV.

2. **Description of the product:** CavMil Software Package.
   Design tool (analysis and optimization) of various rectangular waveguide based filter types (E plane, inductive irises, resonant irises) and diplexers (Y, T, U, both E and H plane topologies). Mode Matching Methods are used so that the analysis CPU time is quite small. The powerful optimizer described next is used. All programs have been developed by her research team. This software package is also maintained at a state of the art level.
   Description of her contribution: PI.
   Company exploiting it: Alcatel Espacio S.A., now Thales Alenia Space, S.A.
   Contracts in which frame it has been developed: nos. 10, 12, 13, 15, 20, 21, 25, 26, 28 and 38 of Section IX, Subsection A of this CV.

3. **Description of the product:** Optimizer based in rational models estraction.
   Optimizer based in the extraction of a rational model of the device that is to be optimized by means of the Cauchy Method. This procedure allows the reduction of the design time by an order of magnitude. It can be used in conjunction with commercial electromagnetic simulators or with in-house simulators.
   Description of her contribution: PI.
   Company exploiting it: Alcatel Espacio S.A., now Thales Alenia Space, S.A.
   Contracts in which frame it has been developed: nos. 21 and 25 of Section IX, Subsection A of this CV.

4. **Description of the product:** Compact Multiplexers Synthesis Software Package.
   This software tool synthesizes multiplexers structures based on the coupling matrix among resonant and non-resonant nodes. Out of the non-resonant nodes the ports of the multiplexer are included. The program also optimizes the structure employing the optimizer described in the previous utility model (no. 3).
   Description of her contribution: PI.
   Company exploiting it: Alcatel Espacio S.A., now Thales Alenia Space, S.A.
   Contracts in which frame it has been developed: nos. 29 and 32 of Section IX, Subsection A of this CV.

5. **Description of the product:** Time and Frequency Domain EM Solver Using Integral Equation (TFDSIE). This software package performs time and frequency analysis of electromagnetic structures using Integral Equation methods and a hybrid approach.
   The methods employed in this code and the corresponding user manual are described in book no. 6 (Section VIII, Subsection A1, of this CV). The code can be downloaded for free from the link provided in the book.
   Description of her contribution: PI of the Spanish team.

Company exploiting it: OHRN Enterprises Inc., DeWitt, NY, USA.
Contracts in which frame it has been developed: no. 8 of Section IX, Subsection B, of this CV.

6. **Description of the product:** Software package for the analysis and design of electromagnetic structures, and antennas HOBBIES (Higher Order Basis Based Integral Equation Solver).
   HOBBIES is a high-performance electromagnetic simulator which may be used in an out-of-core parallel configuration or with an in-core one, depending on the complexity and number of unknowns of the problem. This software package is oriented to fast and accurate analysis of a wide variety of electromagnetic problems, in particular, complex and electrically big ones. This software can handle scattering analysis from several structures, antennas design, Electromagnetic Compatibility (EMC) and Electromagnetic Interference (EMI) analysis, design and analysis of microwaves circuits, and so on. The numerical techniques in HOBBIES can be classified into two classes:
   a. Computational electromagnetics (CEM) numerical methods, including higher order Method of Moments (MoM) and Physical Optics (PO).
   b. Computed related methodologies such as parallelization and out-of-core and parallel processing techniques.

   The package also uses a graphical interface between the kernel and the GiD pre- and postprocessor, which enables a flexible geometric modeling, user-friendly data entry and results visualization. The geometric modeling is based on NURBS (Non-Uniform Rational B-Spline) and the parametrization of lines and surfaces. Also, models and meshes can be imported (and exported) in several formats, such as IGES, DXF and ACIS.
   The methods employed and the user manual are available in book no. 7 of Section VIII, Subection A1 of this CV. There are two versions of the code: the academic one which is sold with the book, and the professional one available through OHRN Enterprises Inc., or HOBBIES Technology Company, Limited.
   Description of her contribution: PI of the Spanish team.
   Company exploiting it: OHRN Enterprises Inc., DeWitt, NY, USA, and HOBBIES Technology Company, Limited, Macao, China.
   Contracts in which frame it has been developed: nos. 8, 10 and 11 of Section IX, Subsection B, of this CV.

C. Other Technology Transfer Activities

1. Co-founder of the company **HOBBIES Technology Company, Limited,** based in Macao, China, which in the past commercialized HOBBIES, the electromagnetic analysis and design tool described in the previous paragraph. HOBBIES now is commercialized by OHRN Enterprises Inc.

2. Training courses for company engineers: see Section IX, Subsection A, Contracts nn. 9, 16, 33, 36, and 37.

3. Exhibitor (Stand: Group of Radiofrequency, Electromagnetics, Microwaves and Antennas) in the exhibition of the European Microwave Week:
   - Nuremberg, Germany, October 6-11, 2013.
   - Rome, Italy, October 5-10, 2014.
   - Paris, France, September 6-11, 2015.
   - London, United Kingdom, October 3-7, 2016.
   - Nuremberg, Germany, October 8-13, 2017.
   - Madrid, Spain, September 23-28, 2018.
   - Paris, France, September 29-October 4, 2019.

XI. Research Visits in other Research Centers

Key: D = Pre-doctoral, P = Post-doctoral, I = Invited, C = Contract, O = Others.

Center:
City:
Country:
Date:
Duration: (weeks)
Topic:
Key:

She has visited numerous Research Centers different from the Universities where she has been working, for periods of short, medium and long duration. First her stay in a National Research Center is described, since it was instrumental for the development of her Doctoral Thesis. Only the most important short visits are listed.

1. **Research Center:** Research and Development Department of Telefónica, *S.A.*, later on, *Telefónica I+D*
   City: Madrid
   Country: Spain
   Date: 1987 - 1990
   Duration: October 1987 to December 1990, 4 hours/day (tipically from 17:30 tp 21:30).
   Topic: She developed in this Center most of her Doctoral Thesis, because her advisor, Dr. José Félix Hernández-Gil Gómez, was working in this Center and at that time Telefónica I+D intensive computation facilities were much better that those available at ETSIT, UPM. A Collaboration Agreement (without salary involved) was established between this Center and *Dpto. Señales, Sistemas y Radiocomunicaciones, SSR* (Signals, Systems and Radiocommunications Dept.), *ETSI Telecomunicación, UPM*. Her stay was compatible with her teaching and research duties at the Department.
   Key: D.

2. **Research Center**: Microwave Laboratory, Duisburg University, Germany
   City: Duisburg
   Country: Germany
   Date: 1991
   Duration: 3 days in August 1991
   Topic: Experimental characterization of monolithic circuits.
   Key: D.

3. **Research Center**: Dept. of Electrical and Computer Engineering, Syracuse University, Syracuse, NY, USA.
   City: Syracuse, NY
   Country: USA
   Date: 1990 – up to date
   Duration:
   - Periods of 10 to 15 days each quarter from 1990 up to date.
   - July-August 2002, 9 weeks.
   - June-September 2003, 13 weeks.
   - October-November 2003, 6 weeks.
   - June-August 2004, 7 weeks.
   - June-August 2005, 8 weeks.

   Topic: In general, application of Numerical Methods and Signal Processing Techniques to the Analysis of Electromagnetic Structures. In particular, Projects nn. 18 and 22 Srction VII of this CV, and the topics of the Contracts described in nn. 2-6, 10 and 11 of Section X, B, of this CV.
   Key: I.

4. **Research Center**: Dept. Electrical and Computer Engineering, Hong Kong City University, Hong Kong, China
   City: Hong Kong
   Country: China
   Date: 2003
   Duration: July 2003, 1 week
   Topic: Time Domain Analysis of Electromagnetic Problems.
   Key: I.

5. **Research Center**: Dept. of Electrical and Computer Engineering, Syracuse University, Syracuse, NY, USA.
   City: Syracuse, NY
   Country: USA
   Duration: September 1, 2013 – August 31, 2014, 52 weeks.
   Topic: New Formulation for the Propagation of Electromagnetic Waves over Surfaces.
   Key: O (Sabbatical leave from UC3M).

XII. Symposia Contributions

Authors:
Title:
Tipo of participation:
Symposium:
Publication:
City, Country: Date:

Author or co-author of 406 contributions in International Symposia (123 by **invitation**) and 78 for National Symposia (5 by **invitation**), listed next in that order.

A. International Symposia

1. M. Salazar-Palma, F. Pérez-Martínez, "Experimental Method for the Measurement of a Gunn Diode Device Line: Application to the Design of a Low Phase Noise X Band MIC DRO", *MIOP'87 Mikrowellentechnologie und Optoelektronik Conference Proceedings*, Wiesbaden, Germany, 19-20 May, 1987, vol. 2, paper 6B-3, 17 pages.

2. M. Salazar-Palma, J. Pérez-Martínez, J. F. Hernández-Gil, "Fin-Line Coupled Dieletric Resonators Filters. Design Using the Finite Element Method", *MIOP'88 Mikrowellentechnologie und Optoelektronik Conference Proceedings*, Wiesbaden, Germany, 2-4 March, 1988, paper 9A-6, 5 pages.

3. M. Salazar-Palma, J.-F. Hernández-Gil, "Contribution to the Finite Element Analysis of TEM and Quasi-TEM Transmission Lines", *MIOP'89 Mikrowellen und Optronics Conference Proceedings*, Sindelfingen, Germany, 28 Feb.-2 March, 1989, paper 3A-5, 5 pages.

4. M. Salazar-Palma, F. Hernández-Gil, "Self Adaptive Mesh Scheme for the Finite Element Analysis of Anisotropic Multiconductor Transmission-Lines", *1989 IEEE MTT-S International Microwave Symposium Digest*, Long Beach, CA, USA, June 13-15, 1989, vol. 1, pp. 507-510.

5. M. Salazar-Palma, F. Hernández-Gil, "Accurate Analysis of Anisotropic Multiconductor Transmission Lines Structures with Field Singularities Employing an Efficient Finite Element Method Self Adaptive Mesh Scheme", *1989 URSI Radio Science Meeting*, San José, CA, USA, June 26-30, 1989, p. 334.

6. M. Salazar-Palma, F. Hernández-Gil, "Finite Element Self Adaptive Algorithm for Field Singularities Handling in Anisotropic Multiconductor Transmission-Lines Analysis", *1989 SBMO International Microwave Symposium Brazil. Symposium Proceedings*, Sao Paulo, Brazil, 24-27 July, 1989, pp. 723-728.

7. M. Salazar-Palma, F. Hernández-Gil, "Finite Element Analysis of General Inhomogeneous, Anisotropic and Multiconductor Transmission Lines Structures Employing an Efficient Self Adaptive Mesh Scheme", *Proceedings of the 1989 URSI International Symposium on Electromagnetic Theory*, Stockholm, Sweden, August 14-17, 1989, pp. 52-54.

8. M. Salazar-Palma, F. Hernández-Gil, "Finite Element Analysis of Microwave Transmission-Lines Employing a Self Adaptive Mesh Technique with an Efficient Element Subdivision Algorithm", *19th European Microwave Conference Proceedings*, London, England, UK, 4-7 Sept., 1989, pp. 1155-1160.

9. J. Pérez-Martínez, F. Pérez-Martínez, J. Gismero-Menoyo, P. Dorta-Naranjo, J. I. Alonso-Montes, M. Salazar-Palma, J. L. Cáceres-Armendáriz, A. Asensio-López, D. Ferreras, "In-House CAD Applied to MMIC Development", *Proceedings of an International Workshop on Monolithic Microwave Integrated Circuits for Space Applications*, European Space Agency/ESTEC, Noordwijk, The Netherlands, 14-16 March, 1990, 7 pages.

10. J. Pérez-Martínez, F. Pérez-Martínez, J. I. Alonso-Montes, A. Asensio-López, J. L. Cáceres, P. Dorta, J. Gismero, M. Salazar-Palma, "In-House CAD for Integrated Nonlinear Microwave and Millimeterwave Circuits", *1990 First International Workshop of the West German IEEE MTT/AP Joint Chapter on Integrated Nonlinear Microwave and Millimeterwave Circuits (INMMC´90) Digest*, Duisburg, Germany, 3-5 October, 1990, pp. 213-228.

11. M. Salazar-Palma, F. Hernández-Gil, "Accurate Full Wave Analysis of Generalized Waveguiding Structures Employing a Finite Element Self-Adaptive Mesh Technique", *1991 IEEE North American Radio Science Meeting*, London, Ontario, Canada, June 24-28, 1991, p. 143.

12. M. Salazar-Palma, L. Ferragut-Canals, F.-J. Mustieles, F. Hernández-Gil, "Assessing the Error of Transmission-Line Quasi-Static Analyses by means of a Mixed Finite Element Method", *Antennas and Propagation Society Symposium 1991 Digest*, London, Ontario, Canada, June 24-28, 1991, pp. 1232-1235.

13. M. Salazar-Palma, F. Hernández-Gil, "Full-Wave Analysis of Microwave Transmission Lines and Waveguiding Structures Employing a Finite Element Self-Adaptive Mesh Technique", *21st European Microwave Conference Proceedings*, Suttgart, Germany, 9-12 Sept. 1991, pp. 541-546.

14. M. Salazar-Palma, J.-F. Hernández-Gil, "The Finite Element Method Applied to the Study of Some Shielding and Proximity Effects of Transmission Line Structures", *IEEE Topical Meeting on Electrical Performance of Electronic Packaging*, Tucson, AZ, USA, April 22-24, 1992, pp. 53-55.

15. P. Dorta, M. Salazar-Palma, J. A. Casao, J. L. Cáceres, J. Pérez, "Test Set-Ups for Fast Measurement of Monolithic Integrated Circuits from On-Wafer to System. Application to a Novel GaAs Monolithic Transimpedance Amplifier for High Speed Optical Communication Systems", *Proceedings of the European Gallium Arsenide and Related III-V Compounds Applications Symposium (GaAs´92)*, European Space Research and Technology Center (ESTEC), European Space Agency (ESA), Noordwijk, The Netherlands, 27-29 April, 1992, 6 pages.

16. J. A. Casao, P. Dorta, J. L. Cáceres, M. Salazar-Palma, J. Pérez, "GaAs Monolithic Transimpedance Amplifiers for Optical Communication Systems", *WOSDICE 92, Sixteen European Workshop on Compound Semiconductors Devices and Integrated Circuits*, Segovia, Spain, May 24-27, 1992, paper H-2, 2 pages.

17. J. A. Casao, P. Dorta, J. L. Cáceres, M. Salazar-Palma, J. Pérez, "An Enhanced GaAs Monolithic Transimpedance Amplifier for Low Noise and High Speed Optical Communication Systems", *IEEE 1992 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest of Papers*, Albuquerque, New Mexico, USA, June 1-3, 1992, pp. 123-126.

18. J. A. Casao, P. Dorta, J. L. Cáceres, M. Salazar-Palma, J. Pérez, "An Enhanced GaAs Monolithic Transimpedance Amplifier for Low Noise and High Speed Optical Communication Systems", *1992 IEEE MTT-S International Microwave Symposium Digest*, Albuquerque, New Mexico, USA, June 1-5, 1992, pp. 85-88.

19. J. A. Casao, P. Dorta, J. L. Cáceres, M. Salazar-Palma, J. Pérez, "A Comparison between Two GaAs Monolithic Transimpedance Amplifiers for High Speed Optical Communication Systems", *1992 URSI Radio Science Meeting*, Chicago, IL, USA, July 18-25, 1992, p. 195.

20. M. Salazar-Palma, J. F. Hernández-Gil, "A Study of Shielding and Proximity Effects in Transmission Line Structures Using the Finite Element Method", *1992 Asia-Pacific Microwave Conference Proceedings*, Adelaide, Australia, 11-13 Aug., 1992, pp. 431-436.
(**Invited contribution**, Session "Finite Element Computation")

21. J. A. Casao, P. Dorta, J. L. Cáceres, M. Salazar-Palma, J. Pérez, "A GaAs Monolithic Transimpedance Amplifier for Optical Communication Systems", *1992 Asia-Pacific Microwave Conference Proceedings*, Adelaide, Australia, 11-13 Aug., 1992, pp. 313-316.

22. L. E. García-Castillo, M. Salazar-Palma, "On the Use of Different Formulations Based on Edge Elements for the Dynamic Analysis of General Waveguiding Structures by means of the Finite Element Method",

Proceedings of the 1992 URSI International Symposium on Electromagnetic Theory, Sydney, Australia, 17-20 Aug., 1992, pp. 31-33.

23. L. E. García-Castillo, M. Salazar-Palma, "A Non-Standard Finite Element Method for the Dynamic Analysis of Microwave Waveguiding and Transmission Line Structures", *22nd European Microwave Conference Proceedings*, Espoo, Finland, 24-27 Aug., 1992, vol. 2, pp. 1012-1017.

24. J. A. Casao, P. Dorta, J. L. Cáceres, M. Salazar-Palma, J. Pérez, G. Orengo, C. Paoloni, F. Giannini, "A Comparison between Three GaAs Monolithic Transimpedance Amplifiers for Optical Communication Systems", *22nd European Microwave Conference Proceedings*, Espoo, Finland, 24-27 Aug., 1992, vol. 1, pp. 330-335.

25. L. E. García-Castillo, M. Salazar-Palma, "Dynamic Analysis of Microwave Wave-Guiding and Transmission Line Structures Employing a Non Standard Finite Element Method", *Numerical Methods in Engineering '92, Proceedings of the First European Conference on Numerical Methods in Engineering*, Brussels, Belgium, 7-11 Sept. 1992, pp. 79-86.

26. M. Salazar-Palma, F. J. Mustieles, F. Hernández-Gil, "Adaptive Finite Element Method for the Analysis of the Electrooptic Effect in Optical Integrated Devices", *Numerical Methods in Engineering '92, Proceedings of the First European Conference on Numerical Methods in Engineering*, Brussels, Belgium, 7-11 Sept. 1992, pp. 457-463.

27. M. Salazar-Palma, F. J. Mustieles, F. Hernández-Gil, "Adaptive Finite Element Method for the Analysis of the Electrooptic Effect in $LiNbO_3$ Optical Integrated Devices", *Grin 92, Tenth Topical Meeting on Gradient-Index Optical Systems Technical Digest*, Santiago de Compostela, La Coruña, Spain, 4-6 October, 1992, pp. 128-131.

28. M. Salazar-Palma, L. E. García-Castillo, J. F. Hernández-Gil, "Characterization of the Shielding and Proximity Effects in Microwave Multiconductor Transmission Line Structures Using the Finite Element Method", *(INCEMIC) International Conference on Electromagnetic Interference & Compatibility*, Calcutta, India, 2-4 Dec., 1992, pp. 3-6.

29. L. E. García-Castillo, M. Salazar-Palma, "A Non Standard Finite Element Method for the Dynamic Analysis of Microwave Transmission Line and Waveguiding Structures", *(INCEMIC) International Conference on Electromagnetic Interference & Compatibility*, Calcutta, India, 2-4 Dec., 1992, pp. 20-23.

30. T. K. Sarkar, L. E. García-Castillo, M. Salazar-Palma, "Wavelets, What does it Mean to an Engineer?", *1993 URSI Radio Science Meeting*, Ann Arbor, MI, USA, June 28-July 2, 1993, p. 274.

31. L. E. García-Castillo, M. Salazar-Palma, T. K. Sarkar, "Introduction of Wavelets Concepts Into Finite Element Techniques", *1993 URSI Radio Science Meeting*, Ann Arbor, MI, USA, June 28-July 2, 1993, p. 275.

32. L. E. García-Castillo, T. K. Sarkar, M. Salazar-Palma, "Utilization of Wavelet Concepts into the Finite Element Method for Efficient Solution of Maxwell´s Equations", *23rd European Microwave Conference Proceedings*, Madrid, Spain, 6-9 Sept., 1993, pp. 125-128.

33. L. E. García-Castillo, T. K. Sarkar, M. Salazar-Palma, "Wavelets: A Promising Approach for Electromagnetic Problems", *IEEE 2nd Topical Meeting on Electronic Performance of Electronic Packaging (EPEP´93)*, Monterey, CA, USA, Oct. 20-22, 1993, pp. 40-42.

34. L. E. García-Castillo, M. Salazar-Palma, T. K. Sarkar, "Utilization of Wavelet Concepts for Efficient Solution of Electromagnetic Problems", *Proceedings IV International Symposium on Recent Advances in Microwave Technology (ISRAMT 1993)*, New Delhi – Agra, India, Dec. 15-18, 1993, pp. 588-591.

35. L. E. García-Castillo, T. K. Sarkar, M. Salazar-Palma, "On the Use of Wavelet Like Basis Functions for Efficient Solution of Electromagnetic Problems", *Euro Electromagnetics International Symposium on Electromagnetic Environments and Consequences. Book of Abstracts*, Bordeaux, France, May 30-June 4, 1994, paper Tha-01-09, 3 pages.

36. T. K. Sarkar, H. Wang, M. Wicks, M. Salazar-Palma, "T-Pulses and Wavelets", *Euro Electromagnetics International Symposium on Electromagnetic Environments and Consequences Book of Abstracts*, Bordeaux, France, May 30-June 4, 1994, paper Tup-01-03, 2 pages.

37. T. K. Sarkar, L. E. García-Castillo, M. Salazar-Palma, "Utilization of Wavelet Concepts in Finite Elements for Efficient Solution of Maxwell´s Equations", *IEEE Antennas and Propagation Society International Symposium 1994 Digest*, Seattle, WA, USA, June 19-24, 1994, vol. 1, p. 7.

38. T. K. Sarkar, H. Wang, M. Wicks, M. Salazar-Palma, "Wavelets and T-Pulses", *IEEE Antennas and Propagation Society International Symposium 1994 Digest*, Seattle, WA, USA, June 19-24, 1994, vol. 1, p.28.

39. G. K. Gothard, S. M. Rao, T. Roy, T. K. Sarkar, A. R. Djordjević, M. Salazar, "Application of the Finite Element Method and 'MEI' Method for the Solution of Electrostatic Problems", *1994 URSI Radio Science Meeting*, Seattle, WA, USA, June 19-24, 1994, p. 160.

40. A. R. Djordjević, T. K. Sarkar, T. Roy, M. Salazar, S. M. Rao, "Some Problems Associated with 'MEI' Method and a Hybrid Method (DSRSR) that Eliminates Them", *1994 URSI Radio Science Meeting*, Seattle, WA, USA, June 19-24, 1994, p. 164.

41. G. G. Gentili, F. Pérez-Martínez, M. Salazar-Palma, L. E. García-Castillo, "Analysis of Single and Stacked Microstrip Patch Antennas Residing in a Cavity by a Green´s Function Technique", *IEEE Antennas and Propagation Society International Symposium 1994 Digest*, Seattle, WA, USA, June 19-24, 1994, vol. 2, pp. 944-947.

42. T. Roy, T. K. Sarkar, M. Salazar-Palma, A. R. Djordjević, "A Hybrid Method for Accurate and Efficient Mesh Termination for FEM (Electrostatic Case)", *24th European Microwave Conference Proceedings*, Cannes, France, 5-8 Sept., 1994, vol. 1, pp. 579-584.

43. M. Salazar-Palma, L. E. García-Castillo, G. G. Gentili, "A Software Package for Accurate Computation of Frequency Dependent Propagation and Circuital Parameters of Inhomogeneous Anisotropic Arbitrary Shaped Multiconductor Transmission Lines", *24th European Microwave Conference Proceedings*, Cannes, France, 5-8 Sept., 1994, vol. 2, pp. 1709-1714.

44. M. Salazar-Palma, L. E. García-Castillo, G. G. Gentili, J. F. Hernández-Gil, "A Multipurpose Software Package for Accurate Electromagnetic Analysis and Simulation of Arbitrary Shaped Waveguiding Structures", *EMC'94 Roma International Symposium on Electromagnetic Compatibility*, Rome, Italy, Sept. 13-16, 1994, vol. 1, pp. 140-145.

45. T. K. Sarkar, M. Salazar, "An Alternate Interpretation of Complex Modes in Closed Perfectly Conducting (Lossless) Structures", *1994 Asia-Pacific Microwave Conference Proceedings*, Tokyo, Japan, Dec. 6-9, 1994, vol. 1, pp. 267-271.

46. T. Roy, T. K. Sarkar, A. R. Djordjević, M. Salazar, "Application of an Accurate Absorbing Boundary Condition for Finite Element Mesh (Electrostatic Case)", *1994 Asia-Pacific Microwave Conference Proceedings*, Tokyo, Japan, Dec. 6-9, 1994, vol. 3, pp. 1091-1094.

47. M. Salazar-Palma, J. F. Hernández-Gil, "An Efficient Infinite Element for the Finite Element Analysis of Open Electromagnetic Problems", *Proceedings of the 1995 International Symposium on Electromagnetic Theory*, St. Petersburg, Russia, May 23-26, 1995, pp. 445-447.

48. T. Roy, T. K. Sarkar, A. R. Djordjević, M. Salazar-Palma, "A Hybrid Method for Terminating the Finite Element Mesh (Electrostatic Case)", *Proceedings of the 1995 International Symposium on Electromagnetic Theory*, St. Petersburg, Russia, May 23-26, 1995, pp. 702-704.

49. M. Salazar-Palma, J. F. Hernández-Gil, "An Infinite Element for the Finite Element Quasi-Static Analysis of Open Waveguiding Structures", *USNC/URSI Radio Science Meeting*, Newport Beach, CA, USA, June 18-23, 1995, p. 95.

50. F. Blanc-Castillo, M. Salazar-Palma, L. E. García-Castillo, "First and Second Order Curved Non-Standard Finite Element for the Dynamic Analysis of Waveguiding Structures with Curved Contours", *USNC/URSI Radio Science Meeting*, Newport Beach, CA, USA, June 18-23, 1995, p. 96.

51. F. Blanc-Castillo, M. Salazar-Palma, L. E. García-Castillo, "A Second Order Non-Standard Finite Element for the Dynamic Analysis of Generalized Waveguiding Structures", *USNC/URSI Radio Science Meeting*, Newport Beach, CA, USA, June 18-23, 1995, p. 97.

52. T. Roy, T. K. Sarkar, A. R. Djordjević, M. Salazar-Palma, "A Hybrid Method Solution of Scattering by Conducting Cylinders (TM Case)", *Proc. 1995 SMBO/IEEE International Microwave and Optoelectronics Conference*, Rio de Janeiro, Brazil, 24-27 July, 1995, pp. 881-887.

53. G. G. Gentili, L. E. García-Castillo, F. Pérez, M. Salazar, "Efficient Green's Function Analysis of Stacked Microstrip Patch Antennas Residing in a Cavity", *25th European Microwave Conference Workshops Proceedings*, Bologna, Italy, 8 Sept., 1995, pp. 105-110.
(**Invited contribution**)

54. T. Roy, T. K. Sarkar, A. R. Djordjević, M. Salazar-Palma, "A Hybrid Method Solution of Scattering by an Elliptic Cylinder (TM Case)", *25th European Microwave Conference Proceedings*, Bologna, Italy, 1-7 Sept., 1995, pp. 238-240.

55. F. Blanc-Castillo, M. Salazar-Palma, L. E. García-Castillo, "Linear and Second Order Edge-Lagrange Finite Elements for Efficient Analysis of Waveguide Structures with Curved Contours", *25th European Microwave Conference Proceedings*, Bologna, Italy, 1-7 Sept., 1995, pp. 444-448.

56. M. Salazar-Palma, J. F. Hernández-Gil, "An Infinite Element for the Finite Element Analysis of Open Transmission Lines", *25th European Microwave Conference Proceedings*, Bologna, Italy, 1-7 Sept., 1995, pp. 747-750.

57. M. Salazar-Palma, J. M. Recio-Peláez, "A Convergence Study of a Self Adaptive Mesh Algorithm", *Third International Conference on Software for Electrical Engineering Analysis and Design, ELECTROSOFT 96*, San Miniato, Italy, 28-30 May 1996, published in Transactions on Engineering Sciences vol. 11, 1996, WIT Press, pp. 385-394.

58. T. K. Sarkar, R. S. Adve, Z. A. Maricevic, M. Salazar-Palma, "Utilization of the Matrix Pencil Technique for Determing Modal Propagation Characteristics of Printed Circuits", *1996 IEEE MTT-S International Microwave Symposium Digest*, San Francisco, CA, USA, June 17-21, 1996, vol. 1, pp. 167-170.

59. L. E. García-Castillo, T. K. Sarkar, M. Salazar-Palma, T. Roy, A. Djordjević, "Iterative Procedure for Finite Element Mesh Termination in 3D Open Region Problems", *USNC/URSI Radio Science Meeting*, Baltimore, ML, USA, July 21-26, 1996, p. 54.

60. G. G. Gentili, L. E. García-Castillo, F. Pérez-Martínez, M. Salazar-Palma, "Improved Green's Function Formulation for the Analysis of Rectangular Stacked Patch Antennas Enclosed in a Cavity", *IEEE Antennas and Propagation Society International Symposium 1996*, Baltimore, ML, USA, July 21-26, 1996, pp. 1070-1073.

61. R. S. Adve, T. K. Sarkar, M. Salazar-Palma, "Simultaneous Time and Frequency Domain Extrapolation Utilizing the 'TRIADS'", *XXVth General Assembly of the International Union of Radio Science Abstracts*, Lille, France, Aug. 28 – Sept. 5, 1996, p. 78.

62. T. K. Sarkar, M. Salazar-Palma, "Application of the Matrix Pencil Method and the Integral Equation Technique for Accurate Characterization of Guided Wave Structures", *XXVth General Assembly of the International Union of Radio Science Abstracts*, Lille, France, Aug. 28 – Sept. 5, 1996, p. 87.

63. R. S. Adve, T. K. Sarkar, M. Salazar-Palma, E. K. Miller, "A Comparison of Two Techniques for the Interpolation/Extrapolation of Frequency Domain Responses", *XXVth General Assembly of the International Union of Radio Science Abstracts*, Lille, France, Aug. 28 – Sept. 5, 1996, p. 771.

64. S. Uckun, T. K. Sarkar, S. M. Rao, M. Salazar-Palma, "A Novel Technique for Analysis of Electromagnetic Scattering from Microstrip Antennas of Arbitrary Shape", *26th European Microwave Conference Proceedings*, Prague, Czech Republic, 9-12 Sept., 1996, pp. 278-280.

65. M. Salazar-Palma, "The Finite Element Method and its Application to Electromagnetics Problems", *1996 Asia-Pacific Microwave Conference Proceedings*, New Delhi, India, Dec. 17-20, 1996, pp. 211-213.
(**Invited contribution**, Session "Electromagnetics")

66. T. K. Sarkar, Z. A. Maricevic, M. Salazar-Palma, "Characterization of Power Loss from Discontinuities in Guided Structures", *1997 IEEE MTT-S International Microwave Symposium Digest*, Denver, CO, USA, June 8-13, 1997, vol. 2, pp. 613-616.

67. L. E. García-Castillo, T. K. Sarkar, M. Salazar-Palma, T. Roy, A. Djordjević, "Analysis of Scattering and Radiation Problems by means of a Finite Element Iterative Method", *1997 North American Radio Science Meeting*, Montreal, Canada, July 13-18, 1997, p. 274.

68. T. K. Sarkar, M. Salazar-Palma, "Numerical Performance of Wavelet Like Transforms for the Solution of Large Complex Matrix Equations", *1997 North American Radio Science Meeting*, Montreal, Canada, July 13-18, 1997, p. 698.

69. T. K. Sarkar, M. Salazar-Palma, "Application of Discrete Wavelet Like Transforms for Solution of Large Matrix Equations", *1997 North American Radio Science Meeting*, Montreal, Canada, July 13-18, 1997, p. 699.

70. M. Salazar-Palma, L. E. García-Castillo, "Full Wave Analysis of Geometrically Complex Anisotropic MMIC Waveguiding Structures", *1997 North American Radio Science Meeting*, Montreal, Canada, July 13-18, 1997, p. 708.
(**Invited contribution**, Special Session "The Role of Finite Elements in the Modeling of Electromagnetics Waves", in honor of Prof. P. P. Silvester)

71. T. K. Sarkar, M. Salazar-Palma, "Numerical and Physical Characterization of Radiation from Discontinuities in Electromagnetic Systems", *1997 North American Radio Science Meeting*, Montreal, Canada, July 13-18, 1997, p. 737.

72. M. Salazar-Palma, L.-E. García-Castillo, R. Ramírez-García, M. Burgos-García, J. I. Alonso-Montes, J. L. Cáceres-Armendáriz, "A Software Package for the Design of Band-Pass Microwave Generalized Chebyschev Filters with Symmetric or Assymetric Amplitude Response and Equalized Group Delay", *27th European Microwave Conference Proceedings*, Jerusalem, Israel, Sept. 8-12, 1997, vol. 2, pp. 767-772.

73. T. K. Sarkar, Z. A. Maricevic, M. Salazar-Palma, "An Accurate Method for the Computation of Radiated Power from Discontinuities in Waveguiding Structures", *27th European Microwave Conference Proceedings*, Jerusalem, Israel, Sept. 8-12, 1997, vol. 2, pp. 1133-1135.

74. C. Su, T. K. Sarkar, M. Salazar, "Analysis of EM Scattering from Electrically Large Perfectly Conducting Objects by Adaptive Multiscale Moment Methods", *International Symposium on Electromagnetic Theory Proceedings*, Thessaloniki, Greece, May 25-28, 1998, pp. 554-556.

75. Z. Pantic-Tanner, M. Mack, M. Wilson, F. Gisin, M. Salazar-Palma, "Radiated Field Coupling to Signal Cables", *USNC/URSI National Radio Science Meeting 1998*, Atlanta, GA, USA, June 21-26, 1998, p. 231.

76. T. K. Sarkar, T. Roy, M. Salazar-Palma, L. E. García-Castillo, A. R. Djordjević, "TE and TM Scattering from Conducting Structures Utilizing a Finite Element Time Domain Method", *4th International Workshop on Finite Elements for Microwave Engineering*, Poitiers, France, July 10-11, 1998, paper B-1, 2 pages.

77. L. E. García-Castillo, M. Salazar-Palma, "Second-Order Nédélec Tetrahedral Element for Computational Electromagnetics", *4th International Workshop on Finite Elements for Microwave Engineering*, Poitiers, France, July 10-11, 1998, paper C-5, 2 pages.

78. T. K. Sarkar, T. Roy, M. Salazar-Palma, L. E. García-Castillo, A. R. Djordjević, "TM Scattering from Conducting Structures Utilizing Finite Elements in the Time Domain", *PIERS Progress in Electromagnetics Research Symposium Proceedings*, Nantes, France, 13-17 July, 1998, vol. 1, p. 182.

(**Invited contribution**, Session "New and Efficient Methods for Computational Electromagnetics")

79. C. Su, T. K. Sarkar, M. Salazar, "Adaptive Multiscale Moment Method for Analyzing EM Scattering from Perfectly Conducting Objects", *PIERS Progress in Electromagnetics Research Symposium Proceedings*, Nantes, France, 13-17 July, 1998, vol. 1, p. 464.

80. M. Salazar-Palma, L. E. García-Castillo, T. K. Sarkar, "Radiation/Scattering from 3D Conducting/Dielectric Structures Utilizing the Finite Element Method", *PIERS Progress in Electromagnetics Research Symposium Proceedings*, Nantes, France, 13-17 July, 1998, vol. 1, p. 467.

81. T. K. Sarkar, C. Su, M. Salazar, "On the Condition Number of Impedance Matrix by Orthogonal Wavelet Transformation", *PIERS Progress in Electromagnetics Research Symposium Proceedings*, Nantes, France, 13-17 July, 1998, vol. 1, p. 468.

82. C. Su, T. K. Sarkar, M. Salazar, "The Application of Wavelet Like Transform for the Solution of Electromagnetic Field Problems", *28th European Microwave Conference Proceedings*, Amsterdam, The Netherlands, 6-8 Oct., 1998, vol. 2, pp. 706-711.
(**Invited contribution**, Focus Session: "Wavelets and Applications")

83. T. K. Sarkar, C. Su, M. Salazar-Palma, A. R. Djordjević, B. Kolundzija, J. L. Cáceres-Armendáriz, "A Field Theoretic Approach to the Analysis of Practical Coupled Dielectric Resonators", *1999 IEEE MTT-S International Microwave Symposium Digest*, Anaheim, California, USA, June 13-19, 1999, vol. 1, pp. 167-170.

84. L. E. García-Castillo, M. Salazar-Palma, "On the Assembly of 3D Higher-Order Nédélec Curl-Conforming Terahedral Elements*", IEEE Antennas and Propagation Society International Sympoisum 1999 Digest*, Orlando, FL, USA, July 11-16, 1999, vol. 4, pp. 2630-2633.

85. M. Salazar-Palma, L. E. García-Castillo, A. Bocigas-Palma, T. K. Sarkar, "A Comparison between Different Self-Adaptive Schemes in the Application of the Finite Element Method to Electromagnetic Problems", *XXVIth General Assembly of the International Union of Radio Science*, Toronto, Canada, August 13-21, 1999, Paper BP1, 1 page.
(**Invited contribution**, Session "Computational Electromagnetics. Finite Element Method")

86. T. K. Sarkar, M. Salazar-Palma, "Application of the Matrix Pencil Method for Characterization of Discontinuities in Microwave Circuits and for Extrapolation of Band-Limited Measurements", *XXVIth General Assembly of the International Union of Radio Science*, Toronto, Canada, August 13-21, 1999, 1 page.

87. T. K. Sarkar, T. Roy, M. Salazar-Palma, L. E. García-Castillo, "A Finite Element Time Domain Method for Scattering Problems", *Seventh International Symposium on Recent Advances in Microwave Technology (ISRAMT'99)*, Málaga, Spain, December 13-17, 1999, pp. 525-528.
(**Invited contribution**, Session "Numerical Methos II")

88. M. Salazar-Palma, T. K. Sarkar, D. Sengupta, "A Chronology of Developments of Wireless Communications and Electronics", *Millenium Conference on Antennas and Propagation (AP 2000)*, Davos, Switzerland, April 9-14, 2000, vol. 2, p. 84 + 4 pages CD.
(**Invited contribution,** Session "History and Evolution of Electromagnetism")

89. C. Su, T. K. Sarkar, M. Salazar-Palma, "A New Formula for the Evaluation of the Impedance Matrix in the Method of Moments", *Millenium Conference on Antennas and Propagation (AP 2000)*, Davos, Switzerland, April 9-14, 2000, vol. 1, p. 259 + 4 pages CD.

90. T. K. Sarkar, T. Roy, A. Djordjević, M. Salazar-Palma, "An Exact Radiation Condition for Terminating Meshes in the Time-Domain for the Finite Element Method", *Millenium Conference on Antennas and Propagation (AP 2000)*, Davos, Switzerland, April 9-14, 2000, vol. 1, p. 587 + 4 pages CD.

91. C. Su, T. K. Sarkar, M. Salazar-Palma, "The Application of an Adaptive Multiscale Moment Method for Solution of 3D Electromagnetic Problems", *Millenium Conference on Antennas and Propagation (AP 2000)*, Davos, Switzerland, April 9-14, 2000, vol. 1, p. 615 + 4 pages CD.

92. T. K. Sarkar, K. Kim, M. Salazar-Palma, L. E. García-Castillo, "Application of Wavelets in Electromagnetics", *Microwave Symposium 2000 (MS'2000)*, Tetuan, Morocco, May 10-12, 2000, pp. 11-19.
(**Invited contribution**, Plenary Session, Thursday May 11, 2000)

93. M. Salazar-Palma, L. E. García-Castillo, T. K. Sarkar, "Identification and Elimination of Spurious Solutions in the Application of the Finite Element Method to the Analysis of Electromagnetic Problems", *Microwave Symposium 2000 (MS'2000)*, Tetuan, Morocco, May 10-12, 2000, pp. 83-87.

94. M. Salazar-Palma, A. Bocigas-Palma, L. E. García-Castillo, T. K. Sarkar, "Different Error Estimates and Refinement Stategies for the Application of Self-Adaptive Finite Element Methods to Electromagnetic Problems", *5th International Workshop on Finite Elements for Microwave Engineering*, Boston, MA, USA, June 8-9, 2000, paper 4, session 3, 1 page.
(**Invited contribution,** Session "Adaptive FEMs and Edge Elements")

95. A. Ruiz-Genovés, L. E. García-Castillo, M. Salazar-Palma, "A Comparison Among Several Families of Mixed-Order Curl-Conforming Finite Elements", *5th International Workshop on Finite Elements for Microwave Engineering*, Boston, MA, USA, June 8-9, 2000, paper 6, session 3, 1 page.

96. T. K. Sarkar, X. Xinqui, T. Roy, A. R. Djordjević, M. Salazar-Palma, L. E. García-Castillo, "Application of an Exact Radiation Condition for Efficient Termination of a Finite Element Mesh in the Time Domain", *5th International Workshop on Finite Elements for Microwave Engineering*, Boston, MA, USA, June 8-9, 2000, paper 3, session 4, 1 page.
(**Invited contribution**, Session: "FEM Modelings of Antennas")

97. T. K. Sarkar, M. Salazar-Palma, "Basics of Wavelets: From an Electromagnetic Perspective", 2nd contribution in the WMB Workshop: Wavelets for EM, Device and Circuit Modeling, *2000 IEEE MTT-S International Microwave Symposium*, Boston, MA, USA, June 16, 2000, 82 pages.
(**Invited contribution**)

98. M. C. Jiménez-González, L. E. García-Castillo, M. Salazar-Palma, "Computation of Characteristic Impedance and Losses of Multiconductor Anisotropic Transmission Lines Using the Finite Element Method", *2000 IEEE Antennas and Propagation Society International Symposium*, Salt Lake City, Utah, USA, July 16-21, 2000, vol. 2, pp. 1172-1175.

99. T. K. Sarkar, R. Adve, J. Koh, S. Park, M. Salazar-Palma, "Smart Antennas and Digital Beam Forming", *2000 IEEE Antennas and Propagation Society International Symposium*, Salt Lake City, Utah, USA, July 16-21, 2000, vol. 3, p. 1245.

100. M. Salazar-Palma, L. E. García-Castillo, T. K. Sarkar, "Application of the Finite Element Method to the Solution of Frequency Domain and Time Domain Electromagnetic Problems", Short Course, *2000 IEEE Antennas and Propagation Society International Symposium and Radio Science Meeting*, Salt Lake City, Utah, USA, July 21, 2000, 248 pages.
(**Invited contribution**)

101. M. Salazar-Palma, L. E. García-Castillo, T. K. Sarkar, "The Finite Element Method in Electromagnetics", *European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2000)*, Barcelona, Spain, Sept. 11-14, 2000, p. 1125 + 20 pp. in CD.
(**Invited contribution,** Keynote Session "Computational Electromagnetics")

102. M. Salazar-Palma, L. E. García-Castillo, T. K. Sarkar, "Frequency and Time Domain Analysis of Scattering Problems by means of a Hybrid Element Method", *European Microwave Week 2000 Workshops and Short Courses*, 3rd contribution to WS 9: Optimum and Global Electromagnetic Modelling Using Hybrid Techniques from Analysis to Optimization, Paris, France, October 2-6, 2000, 15 pages.
(**Invited contribution**)

103. T. K. Sarkar, B. Kolundjiza, A. R. Djordjević, M. Salazar-Palma, "Accurate Modeling of Frequency Responses of Multiple Planes in Gigahertz Packages and Boards", *9th Topical Meeting on Electrical*

Performance of Electronic Packaging (EPEP 2000), Scottsdale, Arizona, USA, October 23-25, 2000, pp. 59-62.

104. T. K. Sarkar, M. Salazar-Palma, "Application of Wavelet Methodologies in Electromagnetic Characterization of Packages", 9th Topical Meeting on Electrical Performance of Electronic Packaging (EPEP 2000), Scottsdale, Arizona, USA, Oct. 22, 2000, 80 pages.

105. M. Salazar-Palma, L. E. García-Castillo, T. K. Sarkar, "Identification and Elimination of Spurious Solutions in the Finite Element Method", *Cross Strait Tri-Regional Radio Science and Wireless Technology Conference*, Hong-Kong, SAR, China, December 28-30, 2000, pp. 21-24.
(**Invited contribution,** Session "EM Computation")

106. A. García-Lampérez, M. Salazar-Palma, M. Padilla, I. Hidalgo-Carpintero, "Software Tool for the Design of Narrow Band Band-Pass Filters", *2001 IEEE MTT-S International Microwave Symposium*, Phoenix, Arizona, USA, May 20-25, 2001, pp. 2103-2106.

107. T. K. Sarkar, M. Salazar-Palma, D. Sengupta, "A Chronology of Developments of Wireless Communication and Electronics from 1831 to 1920", *2001 IEEE Antennas & Propagation Society International Symposium*, Boston, Massachusetts, July 8-13, 2001, vol. 1, pp. 2-5.

108. M. Salazar-Palma, T. K. Sarkar, D. Sengupta, "A Chronology of Developments of Wireless Communication and Electronics from 1921 to 1940", *2001 IEEE Antennas & Propagation Society International Symposium*, Boston, Massachusetts, July 8-13, 2001, vol. 1, pp. 6-9.
(**Invited contribution,** Session "History of Wireless Communications")

109. A. J. Ruiz-Genovés, L. E. García-Castillo, M. Salazar-Palma, T. K. Sarkar, "Third-Order Nédélec Tetrahedral Finite Element", *2001 IEEE Antennas & Propagation Society International Symposium,* Boston, Massachusetts, July 8-13, 2001, vol. 3, pp. 196-199.

110. T. K. Sarkar, M. Salazar-Palma, "Smart Antennas and Space-Time Adaptive Processing (STAP)", *2001 IEEE Antennas & Propagation Society International Symposium*, Boston, Massachusetts, July 13, 2001, Short Course SC-8, 200 pages.
(**Invited contribution**)

111. A. J. Ruiz-Genovés, L. E. García Castillo, M. Salazar-Palma, T. K. Sarkar, "Third-Order Nédélec Tetrahedral Finite Element", *EC Computational Fluid Dynamics Conference, ECCOMAS CFD 2001*, Swansea, Wales, UK, 4-7 Sept. 2001, p. 73 + 20 pp. in CD.
(**Invited contribution**, Session "Advances in Computational Electromagnetics II").

112. L. E.García-Castillo, M. Salazar-Palma, A. J. Ruiz-Genovés, F. Blanc-Castillo, T. K. Sarkar, "A Mixed-Order Curl-Conforming Family of Simplex Finite-Elements for Electromagnetic Modeling", *International Conference in Electromagnetics in Advanced Applications (ICEAA 01)*, Torino, Italia, Sept. 10-14, 2001, pp. 873-876.
(**Invited contribution**, Session "Numerical Methods in Electromagnetics")

113. T. K. Sarkar, J. Koh, M. Salazar-Palma, "Generation of Utrawideband Electromagnetic Response through a Laguerre Expansion Using Early Time and Low Frequency Data", *European Microwave Week 2001 Workshops and Short Courses,* 8th contribution to WS 5: *EM Modeling and CAD forGuided Wave Microwave Components and Antennas*, London, England, UK, 24-28 Sept., 2001, 5 pages.
(**Invited contribution)**

114. J. Stamm, T. K. Sarkar, B. Kolundzija, M. Salazar-Palma, "Analysis of Transmission Line Structures Using a Dynamic Analysis through WIPL-D", *10th Topical Meeting on Electrical Performance of Electronic Packaging, EPEP 2001,* Cambridge, Massachussets, USA, October 29-31, 2001, pp. 55-58.

115. T. K. Sarkar, J. Koh, M. Salazar-Palma, "Generation of a Ultra-Wideband Electromagnetic Response through a Laguerre Expansion Using Early-Time and Low-Frequency Data", *2001 Asia Pacific Microwave Conference*, Taipei, Taiwan, Republic of China, December 3-6, 2001, pp.558-562.
(**Invited contribution**)

116. T. K. Sarkar, J. Koh, M. Salazar-Palma, "Generation of an Ultrawideband Electromagnetic Response through a Laguerre Expansion Using Early Time and Low Frequency Data", *18th Annual Review of Progress in Applied Computational Electromagnetics*, Monterey, CA, USA, March 18-22, 2002, pp. 111-115.

117. L. E. García-Castillo, A. J. Ruiz-Genovés, M. Salazar-Palma, T. K. Sarkar, "Third-order Nédélec Curl-conforming Finite Element", *2002 IEEE International Magnetics Conference INTERMAG, Digest of Technical Papers*, April 28-May 2, 2002, p. 128.

118. T. K. Sarkar, M. Salazar-Palma, "Efficient Generation of Wideband Responses Using a Hybrid Time and Low Frequency Information", *6th International Workshop on Finite Elements for Microwave Engineering*, Chios, Greece, May 30-June 1, 2002, p. 35.

119. L. E. García-Castillo, A. J. Ruiz-Genovés, I. Gómez-Revuelto, M. Salazar-Palma, "A Mixed-Order Curl-Conforming Family of Simplexes Finite Elements for Electromagnetic Modeling", *6th International Workshop on Finite Elements for Microwave Engineering*, Chios, Greece, May 30-June 1, 2002, p. 66.

120. T. K. Sarkar, J. Koh, M. Salazar-Palma, "Generation of Wideband Electromagnetic Response through a Laguerre Expansion Using Early Time and Low Frequency Data", *2002 IEEE MTT-S International Microwave Symposium Digest*, Seattle, Washington, USA, June 3-7, 2002, vol. 3, pp. 1989-1992.

121. T. K. Sarkar, J. Koh, M. Salazar-Palma, "Simultaneous Extrapolation in Time and Frequency Domains of Responses from Electromagnetic Systems Using Laguerre Expansions", *IEEE MTT-S 2002 Microwave Symposium*, Seattle, Washington, USA, June 3, 2002, Workshop EM-Based CAD & Optimization of Waveguide Components, Planar Circuits & Antennas, 16 pages.
(**Invited contribution**)

122. R. Fernández-Recio, T. K. Sarkar, K, Kim, M. Salazar-Palma, "Elimination of Mutual Coupling in a Conformal Adaptive Array Antenna", *2002 IEEE Antennas and Propagation Society International Symposium*, San Antonio, Texas, USA, June 16-21, 2002, vol. 1, pp. 106-109.

123. A. García-Lampérez, T. K. Sarkar, M. Salazar-Palma, "Robust Computation and Modelling of Wide-band System Responses Using the Cauchy Method", *2002 IEEE Antennas and Propagation Society International Symposium*, San Antonio, Texas, USA, June 16-21, 2002, vol. 2, pp. 720-723

124. S. Llorente-Romano, B. P. Dorta-Naranjo, F. Pérez-Martínez, M. Salazar-Palma, "Ka-band Waveguide-to-microstrip Transition Design and Implementation", *2002 IEEE Antennas and Propagation Society International Symposium,* San Antonio, Texas, USA, June 16-21, 2002, vol. 3, pp. 404-407.

125. S. Llorente-Romano, M. Salazar-Palma, T, K. Sarkar, "Use of Linear Phase Filters in Compression of Impedance Matrices with Wavelets", *2002 USNC/URSI National Radio Science Meeting,* San Antonio, Texas, USA, June 16-21, 2002, p. 142.

126. T. K. Sarkar, J. Koh, M. Salazar-Palma, "Generation of a Ultrawideband Electromagnetic Response through a Laguerre Expansion Using Early Time and Low Frequency Data", *Proceedings of the Mediterranean Microwave Symposium, 2002, MMS 2002,* Cáceres, Spain, June 26-28, 2002, pp. IP:1-IP:5.
(**Invited contribution,** Opening Session)

127. A. García-Lampérez, T. K. Sarkar, M. Salazar-Palma, "Filter Model Generation from Scattering Parameters Using the Cauchy Method", *32nd European Microwave Conference Proceedings*, Milan, Italy, 23-27 Sept. 2002, vol. 1, pp. 413-416.

128. S. Llorente-Romano, M. Salazar-Palma, "Effect of Relative Dielectric Permittivity in Quasi-Planar Filters", *32nd European Microwave Conference Proceedings*, vol. 3, Milan, Italy, 23-27 Sept. 2002, pp. 1033-1036.

129. S. Llorente-Romano, B. P. Dorta-Naranjo, F. Pérez-Martínez, M. Salazar-Palma, "Design, Implementation and Measurements of Ka-band Waveguide-to-microstrip Transitions", *32nd European Microwave Conference Proceedings*, Milan, Italy, 23-27 Sept. 2002, 4 pages.

130. T. K. Sarkar, B. Kolundzija, M. Salazar-Palma, "Simultaneous Extrapolation in Time and Frequency Domains of Responses from Electromagnetic Systems", *Journées Internationales de Nice sur les Antennes, JINA*, Nice, France, 12-14 November, 2002, vol.2, pp. 189-197.
(**Invited contribution**)

131. M. Salazar-Palma, T. K. Sarkar, D. Sengupta, "A Chronology of Developments of Wireless Communication and Electronics from 1831 to 1940", *APSYM 2002, National Symposium on Antennas & Propagation*, Cochin, India, 9-11 December 2002, pp. 424-431.
(**Invited contribution**)

132. Y. Chung, T. K. Sarkar, S. Llorente-Romano, M. Salazar-Palma, "Finite Element Time Domain Method Using Laguerre Polynomials", *19th Annual Review of Progress in Applied Computational Electromagnetics, 2003 ACES Conference,* March 24-28, 2003, pp. 234-237.

133. K. Kim, T. K. Sarkar, M. C. Wicks, R. Fernández-Recio, M. Salazar-Palma, "DOA Estimation Utilizing Directive Elements on a Conformal Surface", *Proceedings of 2003 IEEE Radar Conference*, Hunstville, Alabama, USA, May 5-8, 2003, pp. 91-96.

134. Y. S. Chung, T. K. Sarkar, S. Llorente-Romano, M. Salazar-Palma, "Finite Element Time Domain Method Using Laguerre Polynomials", *2003 IEEE MTT-S International Microwave Symosium Digest*, vol. 2, Philadelphia, PA, USA, Jun. 2003, pp. 981-984.

135. Y. S. Chung, T. K. Sarkar, S. Llorente-Romano, M. Salazar-Palma, "Finite Element Time Domain Method Using Laguerre Polynomials", *5th International Workshop on Computational Electromagnetics in the Time Domain – TLM, FDTD and Other Techniques, CEM-TD*, Halifax, Nova Scotia, Canada, June 17-19, 2003, pp. 37-41.

136. L. E. García-Castillo, I. Gómez-Revuelto, M. Salazar-Palma, "A Finite Element Method for the Analysis of Radiation and Scattering of Electromagnetic Waves on Complex Environments", *11th Conference on the Mathematics of Finite Elements and Applications, MAFELAP 2003*, Uxbridge, UK, June 21-24, 2003, 1 page.

137. A. García-Lampérez, M. Salazar-Palma, M. J. Padilla-Cruz, I. Hidalgo-Carpintero, "Synthesis of Cross-Coupled Lossy Resonator Filters with Multiple Input/Output Couplings by Gradient Optimization", *2003 IEEE Antennas and Propagation Society International Symposium*, Columbus, OH, USA, June, 22-27, 2003, vol. 2, Session 45, Paper 1, pp. 52-55.

138. I. Gómez-Revuelto, L. E. García-Castillo, F. Sáez-de-Adana, L. De-Haro, M. Salazar-Palma, "A Novel Hybrid FEM-High Frequency Technique for the Analysis of Scattering Problems", *2003 IEEE Antennas and Propagation Society International Symposium*, Columbus, OH, USA, June 22-27, 2003, vol. 2, pp. 157-160.

139. T. K. Sarkar, B. Kolundzija, M. Salazar-Palma, "Use of Higher Order Entire Domain Basis over Electrically Large Subsectional Patches", *2003 IEEE Antennas and Propagation Society International Symposium & 2003 URSI Symposium*, Columbus, OH, USA, June 22-27, 2003, Session 73, Paper 1, 1 page.

140. M. Casas, L. E. García-Castillo, M. Salazar-Palma, "Nédélec's Element Definition on Simplex Coordinates", *2003 IEEE Antennas and Propagation Society International Symposium & 2003 URSI Symposium*, Columbus, OH, USA, June 22-27, 2003, Session 73, Paper 10, 1 page.

141. R. Barrio-Garrido, S. Llorente-Romano, M. Salazar-Palma, "Design of Ka Band Highly Selective Wideband Band-Pass Filters Using Directly Coupled Resonant Irises", *2003 IEEE Antennas and Propagation Society International Symposium*, Columbus, OH, USA, June 22-27, 2003, vol. 2, Session 80, Paper 2, pp. 1161-1164.

142. S. Llorente-Romano, M. Salazar-Palma, T. K. Sarkar, Y. Cheng, "Temporal Basis of Weighted Laguerre Polynomials in Finite Element Method", *2003 URSI Symposium*, Columbus, OH, USA, June 22-27, 2003, Session 158, Paper 4, 1 page.

143. A. García-Lampérez, M. Salazar-Palma, M. J. Padilla-Cruz, I. Hidalgo-Carpintero, "Computer-Aided Design of Band-Pass Filters", *The IEEE Region 8 EUROCON 2003*, Ljubljana, Slovenia, Sept. 22-24, 2003, vol.1, pp. 81-85.

144. R. M. Barrio-Garrido, S. Llorente-Romano, A. García-Lampérez, M. Salazar-Palma, "Design of Broadband Directly Coupled Non-centred Resonant Irises Filters", *33rd European Microwave Conference*, Munich, Germany, Oct. 7-9, 2003, vol. 1, pp. 219-222.

145. S. Llorente-Romano, A. García-Lampérez, M. Salazar-Palma, A. I. Daganzo-Eusebio, J. S. Galaz-Villasante, M. J. Padilla-Cruz, "Microstrip Filter and Power Divider with Improved Out-of-Band Rejection for a Ku-Band Input Multiplexer", *33rd European Microwave Conference*, Munich, Germany, Oct. 7-9, 2003, vol. 1, pp. 315-318.

146. A. García-Lampérez, S. Llorente-Romano, M. Salazar-Palma, T. K. Sarkar, "Fast Direct Electromagnetic Optimization of a Microwave Filter without Diagonal Cross-Couplings through Model Extraction", *33rd European Microwave Conference*, Munich, Germany, Oct. 7-9, 2003, vol. 3, pp. 1361-1364.

147. K. Kim, T. K. Sarkar, M. Salazar-Palma, "Phased Arrays Operating in a Near Field Environment", *2003 IEEE Topical Conference on Wireless Communication Technology*, Honolulu, HI, USA, Oct. 15-17, 2003, pp. 380-383.

148. T. K. Sarkar, M. Salazar-Palma, "Widebandwidth Baseband Communication: Fact or Fiction?", *IEEE Topical Conference on Wireless Communication Technology*, Honolulu, HI, USA, Oct. 15-17, 2003, pp. 447-450.

149. T. K. Sarkar, M. Salazar-Palma, "Smart Antennas", *2003 Asia-Pacific Microwave Conference APMC´03*, Seoul, Korea, Nov. 4-7, 2003, Tutorial 1, 139 pages.
(**Invited contribution**)

150. T. K. Sarkar, M. Salazar-Palma, "Widebandwidth Baseband Communication: Fact or Fiction?", *2003 Asia-Pacific Microwave Conference APMC´03*, Seoul, Korea, Nov. 4-7, 2003, Session FD6, Paper 1, pp. 1896-1899.

151. T. K. Sarkar, M. Salazar-Palma, "Solving Challenging Packaging/Crosstalk Problems on Large Systems Using Early Time and Low Frequency Data", *2nd Asian Electrical Workshop on Signal Integrity. Electrical Design of Advanced Packaging & Systems*, Daejeon, Korea, Nov. 10, 2003, Session III, Paper 2, pp. 130-142.

152. M. Salazar-Palma, "A Pragmatic Approach to an Adaptive Antenna", *Workshop on Wireless and Telecommunication Technologies*, Jan. 14-15, 2004, Cairo, Egypt, Session 2, Paper 3, 44 pages.

153. T. K. Sarkar, M. Salazar-Palma, "Broadband Baseband Communication: Fact or Fiction?" *Workshop on Wireless and Telecommunication Technologies*, Jan. 14-15, 2004, Cairo, Egypt, Session 3, Paper 6, 44 pages.

154. T. K. Sarkar, M. Salazar-Palma, "Space-Time Adaptive Processing Using a Direct Data Domain Least Squares Approach", *Workshop on Wireless and Telecommunication Technologies*, Jan. 14-15, 2004, Cairo, Egypt, Session 6, Paper 1, 17 pages.

155. B. H. Jung, T. K. Sarkar, Z. Ji, M. Salazar-Palma, "Analysis of Scattering from Three-Dimensional Bodies Coated with a Dielectric Material", *20th Annual Review of Progress in Applied Computational Electromagnetics, ACES Conference 2004*, Syracuse, NY, USA, April 19-23, 2004, Session 5, Paper 1, 8 pages.

156. I. Gómez-Revuelto, L. E. García-Castillo, F. Sáez-de-Adana, M. Salazar-Palma, T. K. Sarkar, "A Novel 3D Hybrid FEM-PO Technique for the Analysis of Scattering Problems", *20th Annual Review of Progress in Applied Computational Electromagnetics, ACES Conference 2004*, Syracuse, NY, USA, April 19-23, 2004, Session 13, Paper 3, 8 pages.

157. R. Fernández-Recio, M. Yuan, T. K. Sarkar, M. Salazar-Palma, "Estimation of DOA for Different Frequencies Using an Interpolation Technique", *20th Annual Review of Progress in Applied Computational Electromagnetics, ACES Conference 2004*, Syracuse, NY, USA, April 19-23, 2004, Session 17, Paper 9, 5 pages.

158. J. Córcoles-Ortega, S. Llorente-Romano, M. Salazar-Palma, "Two Local Refinement Algorithms for Tetrahedral Meshes", *7th International Workshop on Finite Elements for Microwave Engineerin*g, Madrid, Spain, May 20-21, 2004, 1 page.

159. I. Gómez-Revuelto, L. E. García-Castillo, F. Saéz-de-Adana, L. De-Haro, M. Salazar-Palma, "A Novel 3D Hybrid FEM High-Frequency Technique for the Analysis of Scattering and Radiation Problems", *7th International Workshop on Finite Elements in Microwave Engineerin*g, Madrid, Spain, May 20-21, 2004, 1 page.

160. A. García-Lampérez, S. Llorente-Romano, M. Salazar-Palma, T. K. Sarkar, "Synthesis of a Quasi-Elliptic Microstrip Filter Through Model-Based Optimization and Finite Element Method", *7th International Workshop on Finite Elements for Microwave Engineerin*g, Madrid, Spain, May 20-21, 2004, 1 page.

161. T. K. Sarkar, S. Llorente-Romano, M. Salazar-Palma, "An Unconditionally Stable Time-domain Finite Element Method for the Analysis of Waveguiding Structures", *7th International Workshop on Finite Elements for Microwave Engineerin*g, Madrid, Spain, May 20-21, 2004, 1 page.

162. S. Llorente-Romano, T. K. Sarkar, M. Salazar-Palma, "Time-domain Analysis of 2D Scattering Problems", *7th International Workshop on Finite Elements for Microwave Engineerin*g, Madrid, Spain, May 20-21, 2004, 1 page.

163. T. K. Sarkar, M. Salazar-Palma, S. E. El-Khamy, "A Maxwellian Perspective of a Smart Antenna", *2004 URSI EMTS International Symposium on Electromagnetic Theory*, Pisa, Italy, May 23-27, 2004, pp. 10-12.
(**Invited contribution**)

164. R. Fernández-Recio, M. Yuan, T. K. Sarkar, M. Salazar-Palma, "Estimation of DOA Using an Array of Yagi Antennas in the UHF Band Using an Interpolation Technique", *2004 URSI EMTS International Symposium on Electromagnetic Theory*, Pisa, Italy, May 23-27, 2004, pp. 13-15.
(**Invited contribution**)

165. Z. Ji, M. Yuan, T. K. Sarkar, B. H. Jung, Y. Chung, M. Salazar-Palma, "Use of the Laguerre Polynomials in Solving the Time Domain EFIE without the Time Variable", *2004 URSI EMTS International Symposium on Electromagnetic Theory*, Pisa, Italy, May 23-27, 2004, pp. 727-729.
(**Invited contribution**)

166. A. García-Lampérez, M. Salazar-Palma, T. K. Sarkar, "Analytical Synthesis of Microwave Multiport Networks", *2004 IEEE MTT-S International Microwave Symposium*, Fort Worth, TX, USA, June 6-11, 2004, pp. 455-458.

167. T. K. Sarkar, M. Salazar-Palma, "A Maxwellian Approach to Smart Antennas", *2004 IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting*, Monterey, CA, USA, June 20-25, 2004, Short Course SC-4, 80 pages.
(**Invited contribution**)

168. R. Fernández-Recio, L. E. García-Castillo, T. K. Sarkar, M. Salazar-Palma, "A Broadband Solution to Estimate DOA Using an Interpolation Technique", *2004 IEEE Antennas and Propagation Society International Symposium*, Monterey, CA, USA, June 20-25, 2004, vol. 1, pp.435-438.

169. I. Gómez-Revuelto, L. E. García-Castillo, F. Sáez-de-Adana, L. De-Haro, M. Salazar-Palma, "A Novel 3D Hybrid FEM High-Frequency Technique for the Analysis of Scattering Problems", *2004 IEEE Antennas and Propagation Society International Symposium*, Monterey, CA, USA, June 20-25, 2004, vol. 4, pp. 3509-3512.

170. B. H. Jung, T. K. Sarkar, Z. Ji, M. Salazar-Palma, "Scattering from Conducting/Dielectric Composite Objects Using Combined Field Integral Equation", *2004 IEEE Antennas and Propagation Society International Symposium and URSI Radio Science Meeting*, Monterey, CA, USA, June 20-25, 2004, Session 14, Paper 1, p. 30.

171. Z. Ji, T. K. Sarkar, B. H. Jung, M. Salazar-Palma, "Using the Laguerre Polynomials as Temporal Basis Function to Solve the Time Domain Magnetic Field Integral Equation", *2004 URSI Radio Science Meeting*, Monterey, CA, USA, June 20-25, 2004, p. 290.

172. A. Pérez-Yuste, M. Salazar-Palma, "The First Wireless Remote-Control: The Telekine of Torres Quevedo ", *2004 IEEE Conference on the History of Electronics (CHE2004)* , Bletchley Park, London, UK, 28-30 June 2004, 15 pages.

173. Z. Ji, T. K. Sarkar, B. H. Jung, M. Salazar-Palma, "Solving Time Domain Electric Field Integral Equation for Thin-wire Antennas Using the Laguerre Polynomials", *Euro Electromagnetics EUROEM 2004*, 12-16 July, 2004, Magdeburg, Germany, Session 4, Paper 3, pp. 139-140.

174. T. K. Sarkar, B. Kolundzija, M. Salazar-Palma, "Use of Higher Order Basis in Solution of Electromagnetic Field Problems", *Euro Electromagnetics EUROEM 2004 and 7th Conference on Ultra-Wideband, Short Pulse Electromagnetics*, 12-16 July, 2004, Magdeburg, Germany, Session 4, Paper 3, pp. 150-158.

175. S. Jang, T. K. Sarkar, M. Salazar-Palma, C. E. Baum, "Exploiting Noisy Early Time Response Using the Half Fourier Transform", *Euro Electromagnetics EUROEM 2004 and 7th Conference on Ultra-Wideband, Short Pulse Electromagnetics*, 12-16 July, 2004, Magdeburg, Germany, Session 4, Paper 3, pp. 667-680.

176. Z. Ji, T. K. Sarkar, B. H. Jung, M. Salazar-Palma, M. Yuan, "Using the Laguerre Polynomials to Get a Stable Solution of TD-EFIE for Thin-Wire Antennas", *10th International Symposium on Antenna Technology and Applied Electromagnetics and URSI Conference, ANTEM 2004/URSI*, Ottawa, ON, Canada, July 20-23, 2004, pp. 379-382.

177. S. Llorente-Romano, A. García-Lampérez, M. Salazar-Palma, T. K. Sarkar, "Synthesis of a Quasi-Elliptic Microstrip Filter through Model-Based Optimization", *International Workshop on Microwave Filters*, Toulouse, 13-15 Sept. 2004, 1 page.
(Invited contribution)

178. R. Fernández-Recio, L. E. García-Castillo, T. K. Sarkar, M. Salazar-Palma, "Estimation of the Direction of Arrival of Broadband Signals Using a Single Snapshot", *European Conference on Wireless Technologies 2004*, Amsterdam 11-15 Oct. 2004, pp. 337-340.

179. T. K. Sarkar, B. Kolundzija, M. Salazar-Palma, "Use of Higher Order Basis in Solution of Electromagnetic Field Problem", *Proceedings of APSYM 2004, National Symposium on Antennas & Propagation*, Cochin, India, Dec. 21-23, 2004, pp. 313-320.
(Invited contribution)

180. M. Salazar-Palma, T. K. Sarkar, "Solving Challenging Electromagnetic Problems from DC to Daylight (Almost) on Your Personal Computer", *16th International Zurich Symposium on Electromagnetic Compatibility, EMC Week 2005*, Zurich, Switzerland, February 13-18, Workshop W1, "Field-Based Synthesis and Computer Aided Design of Electromagnetic Structures", 35 pages.
(Invited contribution)

181. M. Salazar-Palma, "Finite Elements in Frequency and Time Domain", *16th International Zurich Symposium on Electromagnetic Compatibility, EMC Week 2005*, Zurich, Switzerland, February 13-18, Tutorial T3, "Numerical Techniques", 63 pages.
(Invited contribution)

182. M. Salazar-Palma, "Finite Element Method in Time and Frequency Domains for Solution of Electromagnetic Field Problems", *2005 IEEE/ACES International Conference on Wireless Communications and Applied Computational Electromagnetics*, Honolulu, Hawaii, USA, April 3-7, 2005, Short Course SC-5, 63 pages.
(Invited contribution)

183. Z. Ji, T. K. Sarkar, B. H. Jung, M. Salazar-Palma, M. Yuan, "A Comparison of Marching-on-in-Time Method with Marching-on-in-Degree Method for the TD-EFIE Solver", *2005 IEEE/ACES International Conference on Wireless Communications and Applied Computational Electromagnetics*, Honolulu, Hawaii, USA, April 3-7, 2005, Session 7, Paper 9, pp. 297-300.

184. T. K. Sarkar, M. Salazar-Palma, "Relevance of Electromagnetics in Understanding Modern Communication Systems", 2*005 IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting*, Washington DC, USA, July 3-8, 2005, Short Course, 190 pages.
(**Invited contribution**)

185. A. García-Lampérez, M. Salazar-Palma, T. K. Sarkar, "Compact Multiplexer Formed by Coupled Resonators with Distributed Coupling", *2005 IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting*, Washington DC, USA, July 3-8, 2005, vol. 1A, AP Session 5, Paper 3, pp. 89-92.

186. Z. Ji, T. K. Sarkar, B. H. Jung, M. Salazar-Palma, M. Yuan, "A Comparison of the Time-Marching Method with the Method Using Laguerre Polynomials for the TDIE Solver", *2005 IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting*, Washington DC, USA, July 3-8, 2005, URSI B Session P68, Paper 6, 1 page.

187. S. Llorente-Romano, B. Gimeno, M. Salazar-Palma, "Mode Matching Analysis with Cylindrical and Plane Waves", *2005 IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting*, Washington DC, USA, July 3-8, 2005, vol. 4A, AP Session 116, Paper 3, pp. 280-283.

188. J. Córcoles-Ortega, M. Salazar-Palma, "Self-Adaptive Algorithms Based on *h*-Refinement Applied to Finite Element Method", *2005 IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting*, Washington DC, USA, July 3-8, 2005, vol. 4B, AP Session 135, Paper 7, pp. 197-200.

189. A. García-Lampérez, M. Salazar-Palma, "High Selectivity X-Band Planar Diplexer with Symmetrical Box-Section Filters", *35th European Microwave Conference*, Paris, France, 3-7 Oct. 2005, Session EuMC05, 4 pages.

190. A. García-Lampérez, S. Llorente-Romano, M. Salazar-Palma, T. K. Sarkar, "Box-Section Band Pass Filter with Planar Slow-Wave Resonators", *35th European Microwave Conference*, Paris, France, 3-7 Oct. 2005, Session EuMC12, 4 pages.

191. S. Llorente-Romano, B. Gimeno, M. Salazar-Palma, "Analysis of Cylindrical Geometries in Rectangular Waveguides Using Mode Matching", *35th European Microwave Conference*, Paris, France, 3-7 Oct. 2005, Session EuMC41, 4 pages.

192. A. García-Lampérez, S. Llorente-Romano, M. Salazar-Palma, T. K. Sarkar, "Optimization Method Based on Circuital Model Extraction", *35th European Microwave Conference*, Paris, France, 3-7 Oct. 2005,Workshop WSEuMC04, "New Trends and Techniques for the Synthesis and CAD of Microwave Filters", 14 pages.
(**Invited contribution**)

193. T. K. Sarkar, M. Salazar-Palma, "A Look at Some of the Principles of Mobile Communication from a Maxwellian Viewpoint", *Proceedings of the XXVIIIth General Assembly of International Union of Radio Science (URSI)*, New Delhi, India, October 23-29, 2005, Session BCF, Paper 1, 1 page.

194. R. Fernández-Recio, L. E. García-Castillo, I. Gómez-Revuelto, M. Salazar-Palma. "Fully Coupled Multi-Hybrid FEM-PO/PTD-UTD Method for the Analysis of Scattering and Radiation Problems", *12th Biennial IEEE Conference on Electromagnetic Field Computation, CEFC 2006,* Miami, Florida, USA, April 30-May 3, 2006, Session OC1, Wave Propagation, no. 2, 4 pages.

195. R. M. Barrio-Garrido, L. E. García-Castillo, I. Gómez-Revuelto, M. Salazar-Palma, "A Non Standard Fast Multipole Finite Element Method for Scattering and Radiation Problems", *8th International Workshop on Finite Elements for Microwave Engineering*, Stellenbosch, South Africa, May 25-26, 2006, Session 12, no.1, 1 page.

196. R. Barrio-Garrido, M. Salazar-Palma, S. Llorente-Romano, A. Oñoro-Navarro, I. Hidalgo-Carpintero, "Design, Construction and Experimental Characterization of a Broadband Highly Selective Filter in Waveguide Technology in Ka Band*", IEEE MTT-S International Microwave Symposium*, San Francisco, CA, USA, June 11-16, 2006, Session TU4A, no. 6, 4 pages.

197. A. García-Lampérez, M. Salazar-Palma, "Dual Band Filter with Split-ring Resonators*", IEEE MTT-S International Microwave Symposium*, San Francisco, CA, USA, June 11-16, 2006, Session WE2A, no. 3, 4 pages.

198. T. K. Sarkar, M. Salazar-Palma, C. Baum, **"**Utilization of the Early Time in Target Characterization Using the Half Fourier Transform", *IEEE Antennas and Propagation Society International Symposium & USNC/URSI Meeing & AMEREM Meeting*, Albuquerque, NM, USA, July 9-14, 2006, Session 163, no. 3, 4 pages.

199. T. K. Sarkar, M. Salazar-Palma, "Smart Antennas", *IEEE Antennas and Propagation Society International Symposium & USNC/URSI Meeting & AMEREM Meeting*, Albuquerque, NM, USA, July 9-14, 2006, Short Course, no. 3.
(**Invited contribution**)

200. T. K. Sarkar, M. Salazar-Palma, **"**A Brief History of Wireless Including Who Was James Clerk Maxwell and What Did He Do", *Mediterraean Microwave Symposium (MMS'2006),* Genova, Italia, September 18-21, 2006, p. 15.
(**Invited contribution**, Plenary Session)

201. T. K. Sarkar, M. Salazar-Palma, "Proper Interpretation of the Shannon Channel Capacity for the Vector Electromagnetic Problem", *Mediterraean Microwave Symposium (MMS'2006),* Genova, Italia, September 18-21, 2006, p. 531-534.

202. T. K. Sarkar, M. Salazar-Palma, **"**A Brief History of Wireless Including Who Was James Clerk axwell and What Did He Do", *XVI Riunione Nazionale di Elettromagnetismo,* Genova, Italia, September 18-21, 2006, p. 169.
(**Invited contribution**, Sessione Plenaria)

203. M. Salazar-Palma, T. K. Sarkar, "Smart Antennas and Digital Beamforming**"**, in Workshop WFA, Reconfigurable and Smart Antennas, *2007 IEEE MTT-S International Microwave Symposium*, Honolulu, Hawai, USA, 3-8 June, 2007, 29 pages.
(**Invited contribution** with review)

204. S. Burintramat, N. Yilmazer, T. K. Sarkar, M. Salazar-Palma, "Different Perspective on Channel Capacity Theorem", *IEEE AP-S International Symposium 2007*, Honolulu, Hawaii, June 10-15, 2007, Session 246, no. 1, 4 pages.

205. T. K. Sarkar, M. Salazar-Palma, C. E. Baum, "Exploiting Early Time Response Using the Half Fourier Transform for Analyzing Transient Radar Returns", *CNC/USNC North American Radio Science Meeting 2007,* July 22-26, 2007, Ottawa, ON, Canada, 1 page.

206. J. Yang, T. K. Sarkar, M. Salazar-Palma, "Reconstruction of the Band-limited Temporal Response from the Far-Field Power Spectrum of an Electromagnetic System Using the Cauchy Method", *EMTS 2007 International URSI Commission B – Electromagnetic Theory Symposium,* July 26-28, 2007, Ottawa, ON, Canada, 3 pages.

207. T.K. Sarkar, M. Salazar-Palma, C.E. Baum, "Exploiting Early Time Response Using the Half Fourier Transform for Analyzing Transient Radar Returns", *EMTS 2007 International URSI Commission B – Electromagnetic Theory Symposium,* July 26-28, 2007, Ottawa, ON, Canada, 1 page.

208. T. K. Sarkar, S. Burintramat, N. Yilmazer, A. De, M. Salazar-Palma, "A Look at the Concept of Channel Capacity from a Maxwellian Viewpoint", *IEEE International Symposium on Signals, Systems and Electronics, ISSSE'07,* Montreal, Quebec, Canada, July 30-Aug.2, 2007, pp. 53-58.

209. R. Fernández-Recio, L. E. García-Castillo, I. Gómez-Revuelto, M. Salazar-Palma, "Convergence Study of a Non-standard Schwarz Domain Decomposition Method for Finite Element Mesh Truncation in Electromagnetics" *International Conference on Electromagnetics in Advanced Applications (ICEAA ´07),* Torino, Italy, Sept. 17-21, 2007, 4 pages.

210. J. Alvárez, I. Gómez-Revuelto, J. M. Alonso, L. E. García-Castillo, M. Salazar-Palma, "Fully Coupled Multi-Hybrid FEM-MoM-PO Method for Scattering and Radiation Problems", *9th International Workshop on Finite Elements for Microwave Engineering*, Bonn, Germany, May 8-9, 2008, 21 pages.

211. A. García-Lampérez, M. Salazar-Palma, "Analytical synthesis of dual-band filters through frequency transformation and implementation by means of microstrip split-rings resonators", *2008 Intenational Microwave Symposium*, Atlanta, GA, June 15-20, 2008, Workshop WMF, Design and Implementation Techniques for Multiband Filters, 40 pages.

212. T. K. Sarkar, M. Salazar-Palma, E. Mokole, "Physics of Multiantenna Systems and Adaptive Processing Including Antenna Effects", *IEEE Antennas and Propagation Society International Symposium and USNC/URSI National Radio Science Meeting 2008,* San Diego, California, July 5-11, 2008, Short Course SC9, 69 pages.
(**Invited contribution**)

213. T. K. Sarkar, E. Mokole, M. Salazar-Palma, "Signal Enhancement in a Near-field MIMO Environment through Adaptivity on Transmit and Polarization Diversity", *IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting 2008,* San Diego, California, July 5-11, 2008, Session 304, no. 2, 2 pages.

214. T. K. Sarkar, M. Salazar-Palma, E. Mokole, "What Is the Appropriate Physical Form of Channel Capacity to Use for Wireless Communication", *IEEE AP-S International Symposium and USNC/URSI National Radio Science Meeting 2008*, San Diego, California, July 5-11, 2008, Session 524, no. 8, 4 pages.

215. R. Fernández-Recio, T. K. Sarkar, L. E. García-Castillo, M. Salazar-Palma, "Broadband DOA Estimation Using Realistic Antenna Arrays", *XXIX General Assembly of the International Union of Radio Science (URSI),* Chicago, Illinois, August 7-16, 2008, 4 pages.

216. L. E. García-Castillo, I. Gómez-Revuelto, M. Salazar-Palma, D. Segovia-Vargas, "Recent Developments Regarding Finite Element Methods at the Radiofrequency Group of Universidad Carlos III de Madrid", *VI Iberian Meeting on Computational Electromagnetics (EIEC)*, Chiclana, Spain, 22-24 Oct. 2008, Sesiónn 4.b "Finite Elements", 6 pages.

217. A. García-Lampérez, M. Salazar-Palma, "Dual Band Filter with Split-Ring Resonators (SRRs)", *11th Antennas and Propagation Symposium (APSYM 2008),* Kochi, India, Dec. 29-31, 2008, 6 pages.
(**Invited contribution**)

218. T. K. Sarkar, M. Salazar-Palma, "On Responses of Ultrawideband Antennas", *Asia Pacific Microwave Conference 2008*, Hong Kong and Macau, China, Dec. 16-20, 2008, Short Course D0.
(**Invited contribution**)

219. T. K. Sarkar, M. Salazar-Palma, "Wideband Generation of RCS Data in the Frequency Domain Using the Cauchy Method", *Asia Pacific Microwave Conference 2008*, Hong Kong and Macau, China, Dec. 16-20, 2008, pp. 1-4.

220. T. K. Sarkar, M. Salazar-Palma, "Solution of Time Domain Problems without Using Time Variable", *Asia Pacific Microwave Conference 2008*, Hong Kong and Macau, China, Dec. 16-20, 2008.
(**Invited contribution**)

221. Y. Zhang, T. K. Sarkar, H. Moon, M. C. Taylor, D. García-Doñoro, M. Salazar-Palma, "Parallel MoM Simulation of Complex EM Problems", *2009 IEEE International Symposium on Antennas & Propagation & USNC/URSI National Radio Sscience Meeting*, Charleston, SC, USA, June 1-6, 2009, Session 126, paper no. 5, 4 pages.

222. T. K. Sarkar, M. Salazar-Palma, E. Mokole, "Physics of Multiantenna Systems and Adaptive Processing Incorporating Antenna Effects", *2009 IEEE International Symposium on Antennas & Propagation & USNC/URSI National Radio Science Meeting*, Charleston, SC, USA, June 1-6, 2009, Short Course SC-15, 75 pages.
(**Invited contribution**)

223. T. K. Sarkar. A. De, S. Burintramart, M. Salazar-Palma, "A Look at Some of the Practices in Mobile Communication from an Electrical Engineering Viewpoint", *Applied Electromagnetic Conference AEMC 2009*, Kolkata, India, December 14-16, 2009, 4 pages.
(**Invited contribution**)

224. M. Salazar-Palma, T. K. Sarkar, D. Sengupta, "A Brief Chronology of the Origins and Developments of Wireless Communication and Supporting Electronics", *Applied Electromagnetic Conference AEMC 2009*, Kolkata, India, December 14-16, 2009, 4 pages.
(**Invited contribution**)

225. A. De, T. K. Sarkar, M. Salazar-Palma, "Near-field and Far-field Behavior of the Field Radiated by a Vertically Oriented Dipole Antenna above Imperfectly Conducting Earth", *Applied Electromagnetic Conference AEMC 2009*, Kolkata, India, December 14-16, 2009, 4 pages.

226. T. K. Sarkar, M. Salazar-Palma, "Physics of Mutiantenna Systems and their Impacts on Wireless Systems", *4th European Conference on Antennas and Propagation, EuCAP'2010,* Barcelona, Spain, April 12-16, 2010, Short Course 9, 120 pages.
(**Invited contribution**)

227. D. García-Doñoro, Y. Zhang, W. Zhao, T. K. Sarkar, L. E. García-Castillo, M. Salazar-Palma, "HOBBIES: Higher Order Basis Based Integral Equation Solver with Automatic Goal Oriented Optimization", *CEFC 2010, 14th Biennial IEEE Conference on Electromagnetic Field Computation*, Chicago, IL, USA, May 9-12, 2010, Oral Session 2, 3rd paper, 2 pages.

228. F. Loras-González, S. Sobrino-Arias, I. Hidalgo-Carpintero, A. García-Lampérez, M. Salazar-Palma, "A Novel Ku-Band Dielectric Resonator Triplexer based on Generalizad Multiplexer Theory", *IEEE MTT-S 2010 International Microwave Symposium*, Anaheim, CA, USA, May 23-28, 2010, Session WE4C, 4th paper, 4 pages.

229. D. García-Doñoro, Y. Zhang, W. Zhao, T. K. Sarkar, L. E. García-Castillo, M. Salazar-Palma, "HOBBIES: Electromagnetic Simulator Using GiD", *5th GiD Conference and 1st Kratos Workshop*, Barcelona, May 26-27, 2010, 4 pages.

230. M. Salazar-Palma, "Analysis of Ultrawideband Systems Using a Stable Time Domain Methodology", *Indian Antenna Week*, May 31-June 4, 2010, Puri, India, Day Four, Plenary Session, 1 page.
(**Invited contribution**)

231. T. K. Sarkar, M. Salazar-Palma, E. L. Mokole, "Physics of Ultrawideband Antennas and Its Evolution from Hertz", *ANTEM/AMEREM 2010, 14th International Symposium on Antennas and Electromagnetics and the American Electromagnetic Conference*, July 5-8, 2010, Ottawa, Canada, Session WA23: UWB Tutorial Session on UWB Antennas I, 1st paper, 1 page.
(**Invited contribution**)

232. M. Salazar-Palma , T. K. Sarkar, E. L. Mokole, "Analysis of Ultrawideband Systems Using a Stable Time Domain Methodology", *ANTEM/AMEREM 2010, 14th International Symposium on Antennas and Electromagnetics and the American Electromagnetic Conference*, July 5-8, 2010, Ottawa, Canada, Session WP30: UWB Tutorial Session on UWB Antennas I, 1st paper, 1 page.
(**Invited contribution**)

233. D. García-Doñoro, Y. Zhang, W. Zhao, T. K. Sarkar, L. E. García-Castillo, M. Salazar-Palma, "HOBBIES: A New Electromagnetic Simulator", *2010 IEEE International Symposium on Antennas and Propagation & CNC/USNC/URSI Radio Science Meeting*, July 11-17, 2010, Toronto, Ontario, Canada, Session IF219, 1st paper, 4 pages.

234. T. K. Sarkar, M. Salazar-Palma, E. L. Mokole, "The Physics and Mathematics of Multiantenna Systems and How to Improve their Performance", *2010 IEEE International Symposium on Antennas and Propagation & CNC/USNC/URSI Radio Science Meeting*, July 11-17, 2010, Toronto, Ontario, Canada, Session 229, 3rd paper, 4 pages.

235. T. K. Sarkar, M. Salazar-Palma, E. L. Mokole, "A Comparison of Performance between a MIMO and Simultaneous Multiple MISO Systems Having the Same Antennas", *2010 IEEE International Symposium on Antennas and Propagation & CNC/USNC/URSI Radio Science Meeting*, July 11-17, 2010, Toronto, Ontario, Canada, Session 229, 4th paper, 4 pages.

236. T. K. Sarkar, M. Salazar-Palma, "Physics of Multi-Antenna Systems and their Impact on Wireless Systems", *2010 IEEE International Symposium on Antennas and Propagation & CNC/USNC/URSI Radio Science Meeting*, July 11-17, 2010, Toronto, Ontario, Canada, Short Course SC-22.
(**Invited contribution**)

237. T. K. Sarkar, M. Salazar-Palma, "Characterization of Ultrawideband Antennas", *URSI (International Union of Radio Science) Commission B, EMTS 2010, 20th International Symposium on Electromagnetic Theory*, August 16-19, 2010, Berlin, Germany, 3 pages.

238. N. Yilmazer, T. K. Sarkar, M. Salazar-Palma, "DOA Estimation Using Matrix Pencil and ESPRIT Methods Using Single and Multiple Snapshots", *URSI (International Union of Radio Science) Commission B, EMTS 2010, 20th International Symposium on Electromagnetic Theory*, August 16-19, 2010, Berlin, Germany, 4 pages.

239. T. K. Sarkar, E. L. Mokole, M. Salazar-Palma, "A Review of Ultrawideband Antennas", *2010 IEEE International Conference on Wireless Information Technology and Systems*, Honolulu, Hawaii, USA, August 28-September 3, 2010, Short Course I.
(**Invited contribution**)

240. T. K. Sarkar, M. Salazar-Palma, "MIMO Radars or Is it Smart Antennas?", *2010 IEEE International Conference on Wireless Information Technology and Systems*, Honolulu, Hawaii, USA, August 28-September 3, 2010, Session 104, 4th paper.

241. T. K. Sarkar, M. Salazar-Palma, Y. Zhang, "Solution of Electrically Large Antenna Problems on Scalabe Personal Computer Clusters", *2010 IEEE International Conference on Wireless Information Technology and Systems*, Honolulu, Hawaii, USA, August 28-September 3, 2010, Session 211, 1st paper, 4 pages

242. T. K. Sarkar, M. Salazar-Palma, "Physics of Multiantenna Systems and their Impact on Wireless Systems", *2010 IEEE International Conference on Wireless Information Technology and Systems*, Honolulu, Hawaii, USA, August 28-September 3, 2010, Short Course IV.
(**Invited contribution**)

243. S. Llorente-Romano, B. Gimeno-Martínez, V. E. Boria-Esbert, M. Salazar-Palma, "Characterization of Resonances by Polar Expansion of Generalized Admittance Matrix", *40th European Microwave Conference 2010*, Paris, France, Sept. 28-30, 2010, Session EuMC22, 3rd paper, 4 pages.

244. I. Gómez-Revuelto, L. E. García-Castillo, D. Pardo, J. Kurtz, M. Salazar-Palma, "Automatic *hp* Adaptivity for Three Dimensional Closed Domain Electrodynamic Problems", *FEM 2010, 10th International Workshop on Finite Elements for Microwave Engineering*, October 12-13, 2010, Meredith, NH, USA, 1 page.

245. T. K. Sarkar, M. Salazar-Palma, D. L. Sengupta, "James Clerk Maxwell: The Founder of Electrical Engineering", *2010 Second IEEE Region 8 Conference on the History of Telecommunications (HISTELCON)*, Madrid, Spain, Nov. 3-5, 2010, 4 pages.

246. M. Salazar-Palma, T. K. Sarkar, D. L. Sengupta, "The Father of Radio: A Brief Chronology of the Origin and Developments of Wireless Communication and Supporting Electronics", *2010 Second IEEE Region 8 Conference on the History of Telecommunications (HISTELCON)*, Madrid, Spain, Nov. 3-5, 2010, 4 pages.

247. T. K. Sarkar, M. Salazar-Palma, "The Physics and Mathematics of Multiantenna Systems and how to Improve their Performances", *International Symposium on Antennas and Propagation, ISAP 2010*, Macao, China, November 23-26, 2010, Short Course SCC1.

248. T. K. Sarkar, M. Salazar-Palma, "Who Is the Father of Electrical Enginering?", *International Conference on Communications, Computers& Devices, ICCCD 2010*, Kharagpur, India, December 10-12, 2010, Keynote Lecture.
(**Invited contribution**)

249. A. De, T. K. Sarkar, M. Salazar-Palma, "Antenna Height and Its Implications for Wireless Communication", *2010 National Symposium on Antennas and Propagation, APSYM 2010*, Cochin, India, December 14-16, 2010, pp. 318-334.

250. B. H. Jung, Z. Ji, T. K. Sarkar, M. Salazar-Palma, M. Yuan, "A Comparison of Marching-on in Time Method with Marching-on in Degree Method for the TDIE Solver", *2010 National Symposium on Antennas and Propagation, APSYM*, Cochin, India, December 14-16, 2010, 16 pages.
(**Invited contribution**)

251. A. De, T. K. Sarkar, M. Salazar-Palma, "Antenna Effects in a Wireless Communication Scenario**",** *5th European Conference on Antennas and Propagation (EuCAP 2011)***,** Rome, Italy, 11-15 April 2011, pp. 2700-2704.

252. D. García-Doñoro, W. Zhao, Y. Zhang, T. K. Sarkar, L. E. García-Castillo, M. Salazar-Palma, "Automatic Goal Oriented Optimization Using Parallel Higher Order Basis Based Integral Equation Solver", *5th European Conference on Antennas and Propagation (EuCAP 2011)***,** Rome, Italy, April 11-15, 2011, pp. 3917-3920.

253. Y. Zhang, H. Zhao, S. W. Ting, D. García-Doñoro, X. W. Zhao, M. Salazar-Palma, T. K. Sarkar, "Stability Analysis of a Parallel Higher Order Basis Based Integral Equation Solver (HOBBIES) on a Cluster with 512 AMD CPU Cores", *5th European Conference on Antennas and Propagation (EuCAP 2011)***,** Rome, Italy, April 11-15, 2011, pp. 3925-3927.

254. M. Salazar-Palma, "Radiofrequency Identification (RFID): A Brief Description of the Technology and its Impact", *2nd National Conference on Telecommunications (CONATEL 2011)*, Arequipa, Peru, 17-20 May 2011, Keynote Lecture no. 4.
(**Invited contribution**)

255. P. Castillo-Araníbar, A. García-Lampérez, D. Segovia-Vargas, M. Salazar-Palma, "Design of a Compact Diplexer for Multisystem DAS Solutions", *2nd National Conference on Telecommunications (CONATEL 2011)*, Arequipa, Peru, 17-20 May 2011, 5 pages.

256. M. Salazar-Palma, T. K. Sarkar, "A Marching-on in Degree Method for the Time Domain Analysis of Electromagnetic Structures", *2011 International Conference on Microwave Technology and Computational Electromagnetics (ICMTCE)***,** Beijing, China, May 23-25, 2011, Plenary Session II, 48 pages.
(**Invited contribution**)

257. T. K. Sarkar, M. Salazar-Palma, "Combining Early and Late Time Responses in the Context of the Singularity Expansion Method Using the Half Fourier Transform", *2011 IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting*, Spokane, WA, USA, July 3-8, 2011, Session 204, Paper no. 7, pp.4.

258. T. K. Sarkar, M. Salazar-Palma, E. Mokole, "Proper Calculation of the Channel Capacity When Using Real Antennas – Frequency Selective Channel – with the Maxwellian Principles", *2011 IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting*, Spokane, WA, USA, July 3-8, 2011, Session IF247, Paper no. 6, pp. 4.

259. A. De, T. K. Sarkar, M. Salazar-Palma, "Near-Field Effects on the Antenna Gain in the Transmitting and Receiving Mode in the Presence of the Ground Plane", *2011 IEEE International Symposium on Antennas*

and Propagation and USNC/URSI National Radio Science Meeting, Spokane, WA, USA, July 3-8, 2011, Session 317, Paper no. 7, pp. 4.

260. M. Salazar-Palma, T. K. Sarkar, "A Marching-on in Degree Method for the Time Domain Analysis of Electromagnetic Structures", *2011 IEEE International Workshop on Electromagnetics; Applications and Student Innovation (IEEE iWEM 2011)*, Taipei, Taiwan, August 8-10, 2011, Opening Ceremony, Keynote Speech, 50 pages.
(**Invited contribution**)

261. T. K. Sarkar, M. Salazar-Palma, "Free Space Radiation Pattern Reconstruction from Non-Anechoic Measurement Using an Impulse Response of the Environment", *2011 IEEE International Workshop on Electromagnetics; Applications and Student Innovation (IEEE iWEM 2011)*, Taipei, Taiwan, August 8-10, 2011, Keynote Speech, 4 pages.
(**Invited contribution**)

262. T. K. Sarkar, M. Salazar-Palma, "Use of a Single Snapshot Based Adaptive Processing Using a Direct Data Domain Approach", *XXX URSI General Assembly and Scientific Symposium of the International Union of Radio Science*, Istanbul, Turkey, August 13-20, 2011, Paper B07.4.

263. T. K. Sarkar, M. Salazar-Palma, "Using the Half Fourier Transform for SEM Analysis of Both Early and Late Time Responses in the Presence of Noise", *XXX URSI General Assembly and Scientific Symposium of the International Union of Radio Science*, Istanbul, Turkey, August 13-20, 2011, Paper E03.7.

264. A. De, T. K. Sarkar, M. Salazar-Palma, "Near-Field of Antennas and Its Implications for Wireless Communications", *XXX URSI General Assembly and Scientific Symposium of the International Union of Radio Science*, Istanbul, Turkey, August 13-20, 2011, Paper BP1.21.

265. M. Salazar-Palma, T. K. Sarkar, A. De, "Interpolation of Amplitude only S-Parameter Data of Passive Integrated Devices in the Frequency Domain Using the Cauchy Method", *41st European Microwave Conference, European Microwave Week 2011*, Manchester, UK, October 9-14, 2011, Session EuMC01, paper 2, pp. 5-8.

266. A. García-Lampérez, M. Salazar-Palma, "Block Coupling Transformations in Multiband Filters", *41st European Microwave Conference, European Microwave Week 2011*, Manchester, UK, October 9-14, 2011, Session EuMC06, paper 3, pp. 95-98.

267. S. Llorente-Romano, M. Salazar-Palma, "Coupling Matrices with Reactive Loads at Ports", *41st European Microwave Conference, European Microwave Week 2011*, Manchester, UK, October 9-14, 2011, Session EuMC22, paper 4, pp. 373-376.

268. M. Salazar-Palma, T. K. Sarkar, "A Marching-on in Degree Method for the Time Domain Analysis of Electromagnetic Structures", *2011 International Conference on Computational Problem-Solving (ICCP)*, Chengdu, China, Oct. 21-23, 2011, Keynote Speech, 50 pages.
(**Invited contribution**)

269. T. K. Sarkar, M. Salazar-Palma, "An Overview on Ultrawideband Antennas", *2011 International Symposium on Antennas and Propagation (ISAP)*, Jeju, Korea, Oct. 25-28, 2011, Short Course, 218 pages.
(**Invited contribution**)

270. T. K. Sarkar, Z. Mei, M. Salazar-Palma, "Distortion Free Transmission/Reception Using an Ultrawideband T-pulse Fitting the FCC Mask", *2011 International Symposium on Antennas and Propagation (ISAP)*, Jeju, Korea, Oct. 25-28, 2011, Session WeD2, paper 1, 4 pages.
(**Invited contribution**)

271. P. R. Castillo-Araníbar, A. García-Lampérez, D. Segovia-Vargas, M. Salazar-Palma, S. Barbin, "Multiple split-ring resonators for tri-band filter with asymmetric response", *2011 SBMO/IEEE MTT-S International Microwave and Optoelectronics Conference (IMOC)*, Natal, Brazil, Oct. 29-Nov. 1, 2011, pp. 75-78.

272. M. Salazar-Palma, T. K. Sarkar, "A Marching-on in Degree Method for the Time Domain Analysis of Electromagnetic Structures", *2011 IEEE 4th International Symposium on Microwave, Antenna, Propagation, and EMC Technologies for Wireless Communications (MAPE)*, Beijing, China, Nov. 1-3, 2011, Keynote Speech, 50 pages.
(**Invited contribution**)

273. M. Salazar-Palma, T. K. Sarkar, "A Marching-on in Degree Method for the Time Domain Analysis of Electromagnetic Structures", *The International IEEE Confeence on Microwaves, Communications, Antennas and Electronic Systems, IEEE COMCAS 2011*, Tel Aviv, Israel, Nov. 7-9, 2011, Session 2C6, paper 1, 48 pages.
(**Invited contribution**)

274. A. García-Lampérez, M. Salazar-Palma, "Analytical Synthesis of All-resonator Multiplexers Based on Coupling Matrices", *Round Table on Advances and Application of N-port networks for Space Hardware*, European Space Agency, ESTEC, Noordwijk, The Netherlands, November 30, 2011, 53 pages.
(**Invited contribution**)

275. M. Salazar-Palma, "Radiofrequency Identification (RFID): A Brief Description of the Technology and Its Impact", *2011 IEEE Indian Antenna Week (IAW) and Applied Electromagnetics Conference (AEMC)*, Kolkata, India, December 18-22, 2011, Tutorial TT1.
(**Invited contribution**)

276. M. Salazar-Palma, T. K. Sarkar, "Simultaneous Extrapolation in Time and Frequency Domains Using Laguerre Associated Functions Expansion", *2011 IEEE Indian Antenna Week (IAW) and Applied Electromagnetics Conference (AEMC)*, Kolkata, India, December 18-22, 2011, Keynote Speech, 1 page.
(**Invited contribution**)

277. T. K. Sarkar, M. Salazar-Palma, "Do You Know Your S Parameters?*", 2011 IEEE Indian Antenna Week (IAW) and Applied Electromagnetics Conference (AEMC), Kolkata*, India, December 18-22, 2011, Invited Paper no. 4, 1 page.
(**Invited contribution**)

278. M. Salazar-Palma, A. De, T. K. Sarkar, "Near/Far Field of Antennas", *2011 IEEE Indian Antenna Week (IAW) and Applied Electromagnetics Conference (AEMC)*, Kolkata, India, December 18-22, 2011, Session OS 4, paper 3.
(**Invited contribution**)

279. T. K. Sarkar, M. Salazar-Palma, "A Look at Some of the Principle of Wireless Communications from a Maxwellian Viewpoint", *2012 IEEE Radio & Wireless Week*, Santa Clara, CA, USA, January 15-18, Session MO1A, paper 1.
(**Invited contribution**)

280. D. García-Doñoro, Y. Zhang, T. K Sarkar, L.E García-Castillo, M. Salazar-Palma, "Hobbies: Higher Order Basis Based Integral Equation Solver", *6th Convention on Advances and Applications of GiD, GiD Convention 2012*, Barcelona, Spain, May 10-11, Workshop, paper 8.

281. A. García-Lampérez, R. Gómez-García, M. Salazar-Palma, "Compact Diplexer with Edge-Coupled and Nonbianisotropic Split-Ring Resonators", *2012 IEEE MTT-S International Microwave Symposium* (*IMS*), Montréal, Québec, Canada, June 17-22, 2012, Session TU3H, paper 5.

282. T. K. Sarkar, E. P. Caspers, M. Salazar-Palma, M. A. Lagunas, "Wireless Power Transfer Versus Wireless Information Transfer", *2012 IEEE MTT-S International Microwave Symposium* (*IMS*), Montréal, Québec, Canada, June 17-22, 2012, Session TU4F, paper 5.

283. M. Salazar-Palma, T. K. Sarkar, "A Cursory Historical Overview on the Evolution of Wireless Communications", *2012 IEEE MTT-S International Microwave Symposium* (*IMS*), Montréal, Québec, Canada, June 17-22, 2012, Session WE1H, paper 4.

284. T. K. Sarkar, M. A. Lagunas, A. Pérez-Neira, M. Iskander, M. Salazar-Palma, "The Mathematics and the Physics of MIMO (Multi-input-multi-output) Systems", *2012 IEEE MTT-S International Microwave Symposium* (*IMS*), Montréal, Québec, Canada, June 17-22, 2012, Thursday Panel Session.
(**Invited contribution**)

285. T. K. Sarkar, M. Salazar-Palma, "A Look at Some of the Principle of Wireless Communications from a Maxwellian Viewpoint", *2012 IEEE MTT-S International Microwave Symposium* (*IMS*), Montréal, Québec, Canada, June 17-22, 2012, Short Couse 7 (SC-7), Friday.

286. T. K. Sarkar, M. Salazar-Palma, "Use of the Principle of Analytic Continuation for the Generation of Phase and for Interpolation/Extrapolation of Amplitude only Data", *2012 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting*, Chicago, IL, USA, July 8-14, 2012, Short Couse, Sunday July 8.

287. T. K. Sarkar, W. Dyab, M. Salazar-Palma, M. V. S. N. Prasad, "Propagation in Cellular Wireless Systems Takes Place Through the Elusive Sommerfeld Surface Waves", *2012 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting*, Chicago, IL, USA, July 8-14, 2012, Session 166, paper 4, 4 pp.

288. E. P. Caspers, T. K. Sarkar, M. Salazar-Palma, "Simultaneous Information Transfer and Power Transfer/Harvesting over a Transmit/Receive Antenna System", *2012 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting*, Chicago, IL, USA, July 8-14, 2012, Session 166, paper 5, 4 pp.

289. W. Dyab, T. K. Sarkar, M. Salazar-Palma, "Time Reversal Compared to Inverse Filtering", *2012 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting*, Chicago, IL, USA, July 8-14, 2012, Session 310, paper 7, 4 pp.

290. Z. Mei, T. K. Sarkar, Y. Zhang, M. Salazar-Palma, "A Hybrid Method of Moment (MoM) and Physical Optics (PO) Technique in the Time Domain", *2012 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting*, Chicago, IL, USA, July 8-14, 2012, Session 412, paper 2, pp. 4.

291. W. Dyab, T. K. Sarkar, M. Salazar-Palma, "Antenna Reciprocity and the Theory of Electromagnetic Time Reversal", *2012 IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting*, Chicago, IL, USA, July 8-14, 2012, Session 563, paper 2, pp. 4.

292. T. K. Sarkar, M. Salazar-Palma, "How Well Do You Know Your S-parameters?," *2012 Asia-Pacific Conference on Antennas and Propagation, APCAP 2012*, Singapore, August 27-29, 2012, Distinguished Lecture 2.
(**Invited contribution**)

293. A. Garcia-Lamperez, S. Llorente-Romano, M. Salazar-Palma, "Synthesis of Extracted Pole Filters without Fixed Phase Lengths", *42nd European Microwave Conference, European Microwave Week 2012*, Amsterdam, The Netherlands, October 28-November 2, 2012, Session EuMC24, paper 1, pp. 451-454.

294. A. Garcia-Lamperez, M. Salazar-Palma, "Analytical Synthesis of Coupling Matrices for N-port Networks with Reactance Compensation", *42nd European Microwave Conference, European Microwave Week 2012*, Amsterdam, The Netherlands, October 28-November 2, 2012, en *Workshop 14, Advances of N-port Networks for Space Application*, 40 pages.
(**Invited contribution**)

295. T. K. Sarkar, M. Salazar-Palma, "Problems Associated with the Choice of the Proper S-Parameters in Characterizing Antennas and How to Rectify It," *2012 IEEE International Conference on Wireless Information Technology and Systems, ICWITS 2012*, Maui, HI, USA, November 11-16, 2012, Special Session 104, paper no. 1.
(**Invited contribution**)

296. T. K. Sarkar, W. Dyab, M. Salazar-Palma, M. V. S. N. Prasad, T. Ting, "Electromagnetic Macro Modeling of Propagation in Mobile Wireless Communication: Theory and Experiment," *2012 IEEE International Conference on Wireless Information Technology and Systems, ICWITS 2012*, Maui, HI, USA, November 11-16, 2012, Special Session 202, paper no. 5.
(**Invited contribution**)

297. T. K. Sarkar, W. Dyab, M. Salazar-Palma, "What Did Maxwell Do to Prove Light Was Elecromagnetic in Nature and the Concept of His Displacement Current," *2012 IEEE International Conference on Wireless Information Technology and Systems, ICWITS 2012*, Maui, HI, USA, November 11-16, 2012, Special Session 203, paper no. 1.
(**Invited contribution**)

298. M. Salazar-Palma, "MIMO from an Electromagnetic Stand Point," *2012 IEEE International Conference on Wireless Information Technology and Systems, ICWITS 2012*, Maui, HI, USA, November 11-16, 2012, Special Session 404, paper no. 4.
(**Invited contribution**)

299. M. Salazar-Palma, T. K. Sarkar, "Efficient Generation of Wideband Responses Using Early Time and Low Frequency Information", *Pearl Jubilee International Conference on Navigation and Communication, NAVCOM 2012*, Hyderabad, India, December 20-21, 2012, Session B4, paper no. 1.
(**Invited contribution**)

300. M. Salazar-Palma, T. K. Sarkar, "Electromagnetic Macro Modeling of Propagation in Mobile Wireless Communication: Theory and Experiment", *2nd International Workshop Women in Electromagnetics WiEM 2013*, Coimbatore, India, March 1-2, 2013, 51 pages.
(**Invited contribution: Keynote Address II**)

301. W. Lee, T. K. Sarkar, H. Moon, M. Salazar-Palma, "Identification of Multiple Objects Using Their Natural Resonant Frequencies from Both Frequency and Time Domain Data", *IET International Radar Conference 2013*, Session 2, Paper no. 1 (C0625), Xi'an, China, April 14-16, 2013, 7 pages.

302. A. García-Lampérez, S. Llorente-Romano, M. Salazar-Palma, "Formulation of Realizable Scattering Matrices for Multiplexers with Contiguous Bands", *IEEE MTT-S International Wireless Symposium 2013, IWS 2013*, Beijing, China, April 14-18, 2013, Session WE3C, Paper 5, 4 pages.

303. D. García-Doñoro, Y. Zhang, T. K. Sarkar, L. E. García-Castillo, M. Salazar-Palma, "Higher Order Basis Based Integral Equation Solver: HOBBIES", *Iberian Meeting on Computational Electromagnectis, IX EIEC*, May 14-17, 2013, Dénia, Valencia, España, Session C, Paper 4.

304. L. E. García-Castillo, I. Gómez-Revuelto, D. García-Doñoro, I. Martínez-Fernández, M. Salazar-Palma, "Recent Developments Regarding Finite Element Methods at the Radiofrequency Group of Universidad Carlos III de Madrid", *Iberian Meeting on Computational Electromagnectis, IX EIEC*, May 14-17, 2013, Dénia, Valencia, España, Session D, Paper 1.

305. T. K. Sarkar, M. Salazar-Palma, M. V. S. N. Prasad, S. W. Ting, "Dynamic Electromagnetic Macro Modeling of Environment to Deal with Propagation in Cellular Wireless Communication: Theory and Experiment", *URSI Commission B 2013 International Symposium on Electromagnetic Theory, EMTS 2013*, Hiroshima, Japan, May 20-24, 2013, Session 23PM2E, Paper 3, pp 648-651.

306. W. M. G. Dyab, M. N. Abdallah, T. K. Sarkar, M. Salazar-Palma, "On the Relation between Surface Plasmons and Sommerfeld's Surface Electromagnetic Waves", *2013 IEEE MTT-S International Microwave Symposium, IMS 2013*, Session TU1A, Paper no. 5, Seattle, WA, June 2-7, 2013, 4 pages.

307. W. Lee, T. K. Sarkar, H. Moon, M. Salazar-Palma, "Identification of an Object Located on the Ground Using its Natural Poles Using both FD and TD Data", *2013 IEEE AP-S International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting*, Session 104, Paper no. 1, Orlando, FL, USA, July 7-13, 2013, pp. 23-24.

308. Z. Mei, T. K. Sarkar, Y. Zhang, X. Zhao, M. Salazar-Palma, "A Study of the Numerical Accuracy between the Matrix Elements for a Marching-On-In-Degree Time Domain and a Frequency Domain MoM", *2013 IEEE AP-S International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting*, Session 104, Paper no. 4, Orlando, FL, USA, July 7-13, 2013, pp. 29-30.

309. W. M. G. Dyab, T. K. Sarkar, M. N. Abdallah, M. Salazar-Palma, "Reconstruction of the Time Domain Response of a CRLH Transmission Line Using Analytic Continuation", *2013 IEEE AP-S International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting*, Session 104, Paper no. 6, Orlando, FL, USA, July 7-13, 2013, pp. 33-34.

310. W. M. G. Dyab, T. K. Sarkar, M. Salazar-Palma, "Schelkunoff Integrals for Vertical Dipoles", *2013 IEEE AP-S International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting*, Session 307, Paper no. 2, Orlando, FL, USA, July 7-13, 2013, pp. 726-727.

311. T. K. Sarkar, M. Salazar-Palma, M. V. S. N. Prasad, "Electromagnetic Macro Modeling of Propagation in Mobile Wireless Communication: Theory and Experiment," *2nd Asia-Pacific Conference on Antennas and Propagation, APCAP 2013,* Chiang Mai, Thailand, August 5-7, 2013.
(Invited contribution)

312. S. H. Yeung, T. K. Sarkar, M. Salazar-Palma, "A Microstrip Ultrawideband 90º Differential Phase Shifter with Phase Deviation Improvment", *2nd Asia-Pacific Conference on Antennas and Propagation, APCAP 2013,* Chiang Mai, Thailand, August 5-7, 2013, Session T1A, paper 4, 4 pages.

313. M. Salazar-Palma, A. García-Lampérez, "Analytical Synthesis of a New Class of Multiband Filters – Microstrip Implementation", *2nd Asia-Pacific Conference on Antennas and Propagation, APCAP 2013,* Chiang Mai, Thailand, August 5-7, 2013, Session T2A, paper 5, 4 pages.

314. T. K. Sarkar, M. Salazar-Palma, "Reconstructing Non-minimum Phase and Temporal Responses from Amplitude-only Data", *2013 International Workshop on Microwave and Millimeter Wave Circuits and System Technology, MMWCST 2013*, Emeishan, China, October 24-25, 2013, Keynote Speech no.4.
(Invited contribution)

315. M. Salazar-Palma, T. K. Sarkar, M. V. S. N. Prasad, "Electromagnetic Macro Modeling of Propagation in Mobile Wireless Communication: Theory and Experiment," *4th Applied Electromagnetics Conference, AEMC 2013*, Bhubaneswar, India, December 18-20, 2013.
(Invited contribution)

316. M. Salazar-Palma, T. K. Sarkar, "Use of Numerical Methods for Propagation Modeling in Wireless Communication" *Workshop on Computational Electromagnetics and Antennas*, Madurai, India, March 5, 2014.
(Invited presentation)

317. M. Salazar-Palma, "A Marching on in Degree Method for the Time Domain Analysis of Electromagnetic Structures", *2014 IEEE International Workshop on Women in Electromagnetics (Electromagnetic Theory and Applications), WiEM 2014*, Bangalore, India, March 7-8, 2014.
(Invited presentation)

318. M. Salazar-Palma, "Use of Higher Order for Solution of Large Electromagnetic Field Problems", *2014 International Wireless Symposium, IWS 2014*, Xi'an, China, March 23-27, 2014, Workshop "Very Large Scale Computational Electromagnetics", paper 2.
(Invited presentation)

319. M. Salazar-Palma, D. García Doñoro, T. K. Sarkar, Y. Zhang, H. Moon, S. W. Ting, "Advantage of Using a Higher Order Basis for the Solution of Large Electromagnetic Field Problems", *2014 International Wireless Symposium, IWS 2014*, Xi'an, China, March 23-27, 2014, 4 pages.

320. W. Dyab, T. K. Sarkar, M. Salazar-Palma, "Examining the Theoretical Basis for the Analysis of Surface Plasmons in the Microwave and Terahertz Regimes", *2014 International Wireless Symposium, IWS 2014*, Xi'an, China, March 23-27, 2014, Session TU1D, paper 5, 4 pp.

321. S. H. Yeung, A. García-Lampérez, T. K. Sarkar, M. Salazar-Palma, "A Thin and Compact High Gain Planar Antenna Integrated with a CMRC Compact Filter", *2014 International Wireless Symposium, IWS 2014,* Xi'an, China, March 23-27, 2014, Session TU3A, paper 3, 4 pp.

322. T. K. Sarkar, Y. Zhang, D. García-Doñoro, H. Moon, M. Salazar-Palma, S. W. Ting, "Solving Large Complex Problems Using a Higher Order Basis: Parallel Out-of-core Integral Equation Solvers Involving a Million Unknowns", *2014 International Wireless Symposium, IWS 2014*, Xi'an, China, March 23-27, 2014, Session WE4B, paper 2, 4 pp.

323. Y. Zhang, H. Moon, D. García-Doñoro, T. K. Sarkar, M. Salazar-Palma, S. W. Ting, "The Art of Parallelization in Solving Large Electromagnetic Field Problems Out-Of-Core", *2014 International Wireless Symposium, IWS 2014*, Xi'an, China, March 23-27, 2014, Session WE4B, paper 4, 3 pp.

324. D. García-Doñoro, M. Salazar-Palma, T. K. Sarkar, Y. Zhang, H. Moon, S. W. Ting, "Use of Optimization in Designing Complex Electromagnetic Radiating Structures", *2014 International Wireless Symposium, IWS 2014*, Xi'an, China, March 23-27, 2014, Session WE4B, paper 4, 2 pp.

325. T. K. Sarkar, M. Salazar-Palma, D. García-Doñoro, H. Moon, "Solution of a Million by Million Complex Matrix Equation by Gaussian Elimination with Partial Pivotting Using Parallel Out-of-core Solvers", *8th European Conference on Antennas and Propagation, EuCAP 2014,* The Hague, The Netherlands, April 6-11, 2014, pp. 575-578.

326. D. García-Doñoro, I. Martínez-Fernández, L. E. García Castillo, M. Salazar-Palma, "A Higher Order Finite Element Method Electromagnetic Simulator", *12th International Workshop on Finite Elements for Microwave Engineering, FEM 2014,* Chengdu, China, May 14-17, 2014, Session 8, paper 6, 4 pp.

327. W. Dyab, T. K. Sarkar, M. Salazar-Palma, "Examining the Theoretical Basis for the Analysis of Surface Plasmons in the Microwave and Terahertz Regimes", *2014 International Microwave Symposium, IMS 2014*, Tampa, Florida, June 1-6, 2014, Session TU1D, paper 5, 4 pp.

328. A. García-Lampérez, M. Salazar-Palma, S. H. Yeung, "SIW Compact Diplexer", *2014 International Microwave Symposium, IMS 2014,* Tampa, Florida, June 1-6, 2014, Session WE1A, paper 1, 4 pp.

329. T. K. Sarkar, W. Dyab, M. Salazar-Palma, "How Did Maxwell Come to the Conclusion that Light Was Electromagnetic in Nature and Why Did He Gave up his Concept of Displacemet Current that We even Use Today", *2014 IEEE International Symposium on Antennas and Propagation & USNC/URSI Radio Science Meeting,* Memphis, Tennessee, USA, July 6-11, 2014, Session 225, paper 11, 1 p.
(Invited contribution)

330. M. Abdallah, W. Dyab, T. K. Sarkar, M. V. S. N. Prasad, C. Misra, A. García Lampérez, M. Salazar-Palma, "Electromagnetic Macro Model for Analysis of Propagation Path Loss in Cellular Networks", *2014 IEEE International Symposium on Antennas and Propagation & USNC/URSI Radio Science Meeting,* Memphis, Tennessee, USA, July 6-11, 2014, Session 318, paper 2, pp. 947-948.

331. W. Dyab, M. Abdallah, T. K. Sarkar, M. Salazar-Palma, "Comments on the Analogy between Sommerfeld and Schelkunoff Integrals for the Analysis of Dipoles over Imperfect Half-Planes", *2014 IEEE International Symposium on Antennas and Propagation & USNC/URSI Radio Science Meeting,* Memphis, Tennessee, USA, July 6-11, 2014, Session IF343, paper 19, 1 p.

332. W. Dyab, D. Salama, T. K. Sarkar, M. Salazar-Palma, "Multiple-Frequency Adaptive Processing over Imperfect Ground Planes", *2014 IEEE International Symposium on Antennas and Propagation & USNC/URSI Radio Science Meeting,* Memphis, Tennessee, USA, July 6-11, 2014, Session 521, paper 9, pp. 1796-1797.

333. S. H. Yeung, A. García-Lampérez, T. K. Sarkar, M. Salazar-Palma, "Comparison of the Performance Between a Parasitically Coupled and a Direct Coupled feed for a Microstrip Antenna Array", *3rd Asia-Pacific Conference on Antennas and Propagation, APCAP 2014*, Harbin, China, July 26-29, 2014, Session Antennas 1, Paper no. 4.

(**Invited contribution**)

334. T. K. Sarkar, W. M. Dyab, M. N. Abdallah, M. Salazar-Palma, M. V. S. N. Prasad, S. W. Ting, "The Physiscs of Mobile Wireless Communication Explained Through an Electromagnetic Macro Model", *3rd Asia-Pacific Conference on Antennas and Propagation, APCAP 2014*, Harbin, China, July 26-29, 2014, Session Antennas 2, Paper no. 2.
(**Invited contribution**)

335. T. K. Sarkar, M. Salazar-Palma, B. H. Jung, "Solving Frequency Dependent Losses in the Time Domain without the Time Variable Using the Associated Laguerre Functions", *2014 International Conference on Electromagnetics in Advanced Applications, ICEAA'14*, Palm Beach, Aruba, Netherlands Antilles, August 3-9, 2014, p. 428.

336. M. N. Abdallah, W. Dyab, T. K. Sarkar, M. V. S. N. Prasad, C. S. Misra, A. García-Lampérez, M. Salazar-Palma, "Further Validation of an Electromagnetic Macro Model for Analysis of Propagation Path Loss in Cellular Networks Using Measured Drive Test Data", *2014 IEEE-APS Topical Conference on Antennas and Propagation in Wireless Communications, APWC'14,* Palm Beach, Aruba, Netherlands Antilles, August 3-9, 2014, p. 429.

337. S. Yeung, T. K. Sarkar, K. F. Man, M. Salazar-Palma, A. García-Lampérez, "Shape Optimization of Patch Resonator Bandpass Filters Using Multiple Circular Structures*", 44th European Microwave Conference, European Microwave Week 2014*, Rome, Italy, October 5-10, 2014, EuMC/EuMIC Poster Session 01, paper 24.

338. S. Llorente-Romano, M. Salazar-Palma, "Implementation of Extracted Pole Filters in Rectangular Waveguide", *44th European Microwave Conference, European Microwave Week 2014*, Rome, Italy, October 5-10, 2014, Session EuMC 32, paper 03.

339. T. K. Sarkar, M. Salazar-Palma, "A History of the Evolution of Radar", *44th European Microwave Conference, European Microwave Week 2014*, Rome, Italy, October 5-10, 2014, Session EuMC 38, paper 04.

340. A. García-Lampérez, M. Salazar-Palma, S. Yeung, "Compact Diplexer with Dual-Mode SIW Resonators", *44th European Microwave Conference, European Microwave Week 2014*, Rome, Italy, October 5-10, 2014, Session EuMC 44, paper 05.

341. T. K. Sarkar, W. Dyab, M. Salazar-Palma, "What Is Time Reversal and What It Cannot Do", *International Conference on Antenna Measurements & Applications, 2014 IEEE CAMA*, Antibes Juan-les-Pins, France, November 16-19, 2014, Session SP 142, paper 1.
(**Invited contribution**)

342. T. K. Sarkar, M. Salazar-Palma, "Use of the Matrix Pencil Method to Perform High Resolution Deembeding in electromagnetic Measurements", *International Conference on Antenna Measurements & Applications, 2014 IEEE CAMA*, Antibes Juan-les-Pins, France, November 16-19, 2014, Session ISRA 1, paper 1.

343. T. K. Sarkar, M. Salazar-Palma, "Free Space Radiation Pattern Reconstruction Using Non-anechoic Data", *International Conference on Antenna Measurements & Applications, 2014 IEEE CAMA*, Antibes Juan-les-Pins, France, November 16-19, 2014, Session AMNE 1, paper 2.

344. T. K. Sarkar, M. Salazar-Palma, "What was Maxwell's Contribution in Electromagnetism?", *19th International Symposium on Antennas and Propagation, ISAP 2014*, Kaohsiung, Taiwan, December 2-5, 2014, IEEE APS Workshop on EM Education, paper 2.
(**Invited contribution**)

345. M. Salazar-Palma, T. K. Sarkar, "Relevance of the Concept of Dispersion in Electrical Engineering Education", *19th International Symposium on Antennas and Propagation, ISAP 2014*, Kaohsiung, Taiwan, December 2-5, 2014, IEEE APS Workshop on EM Education, paper 3.
(**Invited contribution**)

346. S. H. Yeung, A. García-Lampérez, T. K. Sarkar, M. Salazar-Palma, "Recent Developments in Microstrip Patch Array Antennas", *International Symposium on Antennas and Propagation 2014, APSYM 2014,* Cochin, India, December 17-19, 2014, Inaugural Session, paper no. 2.
(**Invited contribution**)

347. T. K. Sarkar, M. Salazar-Palma, "What was Maxwell's Contribution in Electromagnetism?", *International Symposium on Antennas and Propagation 2014, APSYM 2014,* Cochin, India, December 17-19, 2014, IEEE APS Workshop on EM Education, paper 1.
(**Invited contribution**)

348. M. Salazar-Palma, T. K. Sarkar, "Relevance of the Concept of Dispersion in Electrical Engineering Education", *International Symposium on Antennas and Propagation 2014, APSYM 2014,* Cochin, India, December 17-19, 2014, IEEE APS Workshop on EM Education, paper 2.
(**Invited contribution**)

349. D. García-Doñoro, I. Martinez-Fernandez, L. E. García-Castillo, M. Salazar-Palma, "HOFEM: A Higher Order Finite Element Method Electromagnetic Simulator", *2015 IEEE International Conference on Computational Electromagnetics, ICCEM,* Hong Kong, China, February 2-5, 2015, Plenary Session, paper PS-3.
(**Invited contribution**)

350. T. K. Sarkar, M. Salazar-Palma, "Solution of Helmholtz Equation Starting with the Frequency Independent Laplace's Equation", *2015 IEEE International Conference on Computational Electromagnetics, ICCEM,* Hong Kong, China, February 2-5, 2015, Plenary Session, paper PS-10.
(**Invited contribution**)

351. M. Salazar-Palma, T. K. Sarkar, "The Genesis of Maxwell's Equations", *2015 IEEE International Microwave Symposium*, Phoenix, AZ, USA, May 17-22, 2015, Session TU2C, paper no. 1.
(**Invited contribution**)

352. T. K. Sarkar, M. Salazar Palma, "The Evolution and Blossoming of Maxwell's Macroscopic View to the Modern Microscopic Theory Based on Electrons", *2015 IEEE International Microwave Symposium*, Phoenix, AZ, USA, May 17-22, 2015, Session TU2C, paper no. 4.
(**Invited contribution**)

353. T. K. Sarkar, M. Salazar Palma, "Next Generation of Adaptive Systems", *2015 IEEE 4th Asia-Pacific Conference on Antennas and Propgation (APCAP),* Bali Island, Indonesia, June 30-July 3, 2015, Keynote Talk II.
(**Invited contribution**)

354. M. N. Abdallah, W. Dyab, T. K. Sarkar, M. Salazar Palma, "Electrically Small Antennas Design Challenges", *2015 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting*, Vancouver, BC, Canada, July 19-24, 2015, Session TU-A1.4P, Paper 1.

355. T. K. Sarkar, M. Salazar Palma, "On the Teaching of S-parameters for the Study of Antenna Problems", *2015 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting*, Vancouver, BC, Canada, July 19-24, 2015, Special Session WE-SP.1P, Paper 8.
(**Invited contribution**)

356. M. N. Abdallah, W. Dyab, T. K. Sarkar, M. Salazar Palma, "Electrically Small Antennas under Matched Conditions", *2015 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting*, Vancouver, BC, Canada, July 19-24, 2015, Session TH-A1.1A, Paper 6.

357. T. K. Sarkar, M. Salazar Palma, "Computing the SEM Poles in the Frequency Domain and not from the Late Time Response", *2015 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting*, Vancouver, BC, Canada, July 19-24, 2015, Special Session to Honour the Career of Prof. P. L. E. Uslenghi, Session TH-SP.2P, Paper 4.
(**Invited contribution**)

358. T. K. Sarkar, M. Salazar Palma, "The Physics and Mathematics for MIMO", *2015 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting*, Vancouver, BC, Canada, July 19-24, 2015, Special Session FR-SP.2A, Paper 2.
(**Invited contribution**)

359. A. Rivera-Lavado, S. Preu, L. E. García Muñoz, A. Generalov, J. Montero, G. Dohler, D. Lioubtchenko, M. Méndez, S. Malzer, S. Llorente-Romano, A. García-Lampérez, M. Salazar-Palma, D. Segovia Vargas, A. Raisanen, "Array of Dielectric Rod Waveguide Antennas for Millimeter-Wave and THz Power Generation", *2015 European Microwave Week, EuMW 2015*, Paris, France, September 6-11, 2015, Session EuMC50, Paper 2.

360. M. N. Abdallah, T. K. Sarkar, M. Salazar Palma, "How to Eliminate Shadow Fading in a Cellular Wireless System", *2015 IEEE AP-S Topical Conference on Antennas and Propagation in Wireless Communications* (*APWC 15*), Turin, Italy, September 7-11, 2015, Session 47, Paper 1.

361. T. K. Sarkar, M. Salazar Palma, E. L. Mokole, "The Principle of Analytic Continuation: How to Use It in Electromagnetics", *Radio and Antenna Days of the Indian Ocean (RADIO) 2015*, Poste de Flacq, Mauritius, September 21-24, 2015, Plenary talk.
(**Invited contribution**)

362. T. K. Sarkar, M. Salazar Palma, "Futuristic Adaptive System", *IET International Radar Conference 2015*, Hangzhou, China, October 14-16, 2015, Tutorial 2.
(**Invited contribution**)

363. D. Segovia Vargas, L. E. García Muñoz, S. Llorente Romano, F. J. Herráiz Martínez, M. Salazar Palma, A. García Lampérez, F. Tercero, J. M. Serna, J. A. López, J. A. López Pérez. F. Colomer, "Dyson Conical Quad-Spiral Array as Ultrawideband Feed System", *2015 Loughborough Antennas & Propagation Conference (LAPC)*, Loughborough, UK, November 2-3, 2015, Session PS2, paper 2.

364. T. K. Sarkar, M. Salazar Palma, "Characterization of Safety Regions of High Power Antennas", *2015 IEEE International Conference on Antenna Measurements and Applications (CAMA)*, Chiang Mai, Thailand, November 30-December 3, 2015, Session TA1, Paper 1.
(**Invited contribution**)

365. T. K. Sarkar, M. N. Abdallah, M. Salazar Palma, M. V. S. N. Parasad, "The Physics and Mathematics of the Propagation Mechanism in Cellular Wireless Communication Systems", *6th International Conference on Computers and Devices for Communication (CODEC-15)*, Kolkata, India, December 16-18, 2015, Plenary Talk, P-2.
(**Invited contribution**)

366. M. Salazar Palma, S. H. Yeung, A. García Lampérez, T. K. Sarkar, "A Thin and Compact High Gain Planar Antenna Integrated with a CMRC Compact Filter", *6th International Conference on Computers and Devices for Communication (CODEC-15)*, Kolkata, India, December 16-18, 2015, Paper Invited 9.
(**Invited contribution**)

367. T. K. Sarkar, M. Salazar Palma, E. L. Mokole, "The Principle of Analytic Continuation: How to Use It in Electromagnetics", *5th IEEE Applied Electromagnetics Conference (AEMC-2015)*, Guwahati, Assam, India, December 18-21, 2015, Plenary talk.
(**Invited contribution**)

368. M. Salazar Palma, L. E. García Muñoz, A. Rivera Lavado, S. Llorente Romano, G. Carpintero del Barrio, D. Segovia Vargas, "Analysis of the Improvement of Radiation Behavior for THz Devices", *5th IEEE Applied Electromagnetics Conference (AEMC-2015)*, Guwahati, Assam, India, December 18-21, 2015, Invited talk #7.
(**Invited contribution**)

369. T. K. Sarkar, M. Salazar Palma, "Interpolation of Amplitude–Only Frequency Domain Response Based on an Adaptive Cauchy Method", *2016 IEEE International Conference on Computational Electromagnetics, ICCEM 2016*, Guangzhou, China, February 23-25, 2016, Plenary session, Keynote speech 1.
(**Invited contribution**)

370. K. Atia Abdalmalak, S. Llorente Romano, L. E. García Muñoz, A. García Lampérez, F. J. Herráiz Martínez, M. Salazar Palma, D. Segovia Vargas, J. M. Serna Puente, F. Tercero, J. A. López Pérez, F. Colomer, J. A. López Fernández, "Radio Astronomy Ultra Wideband Receiver Covering the 2-14 GHz Frequency Band for VGOS Applications", *10th European Conference on Antennas and Propagation (EuCAP 2016)*, Davos, Switzerland, April 10-15, 2016, Session PS8.

371. A. García Lampérez, M. Salazar Palma, "Multilevel Aggressive Space Mapping Applied to Coupled-resonator Filters", *2016 EEE MTT-S International Microwave Symposium (IMS)*, San Francisco, CA, USA, May 22-27, 2016, 4 pages.

372. W. Dyab, M. N. Abdallah, T. K. Sarkar, M. Salazar Palma, "A hands-on Approach for Engineering Students and Practitioners to Analyze Electromagnetic Interactions on Flat Boundaries", *2016 EEE MTT-S International Microwave Symposium (IMS)*, San Francisco, CA, USA, May 22-27, 2016, 4 pages.

373. M. N. Abdallah, T. K. Sarkar, M. Salazar-Palma, "Maximum Power Transfer versus Efficiency", *2016 IEEE International Symposium on Antennas and Propagation / USNC-URSI National Radio Science Meeting*, Fajardo, Puerto Rico, June 26 – July 1, 2016, pp. 183-184.

374. M. N., Abdallah, T. K. Sarkar, V. Monebhurrun, "Predicting the Starting Distance of the Far Field", *2016 IEEE International Symposium on Antennas and Propagation / USNC-URSI National Radio Science Meeting*, Fajardo, Puerto Rico, June 26 – July 1, 2016, pp. 1889-1890.

375. T. K. Sarkar, M. Salazar Palma, "Electromagnetic Time Reversal: What does it imply?", *2016 URSI International Symposium on Electromagnetic Theory (EMTS)*, Espoo, Finland, August 14-18, 2016, pp. 30-33.

376. M. N. Abdallah, T. K.Sarkar, M. Salazar Palma, "Propagation in Cellular Networks", *2016 URSI International Symposium on Electromagnetic Theory (EMTS)*, Espoo, Finland, August 14-18, 2016, pp. 30-33.

377. T. K. Sarkar, E. L. Mokole, M. Salazar Palma, "Overview of Ultrawideband Systems", *2016 International Conference on Electromagnetics in Advanced Applications (ICEAA)*, Cairns, Australia, September 19-23, 2016, pp. 602-603.

378. M. N. Abdallah, T. K. Sarkar, M. Salazar-Palma, "Far Field's Starting Distance", *2016 International Conference on Electromagnetics in Advanced Applications (ICEAA)*, Cairns, Australia, September 19-23, 2016, pp. 789-792.

379. D. Garcia-Donoro, S. Ting, A. Amor-Martin, L. E. Garcia-Castillo, M. Salazar-Palma, "Higher Order Finite Element Method Solver for the Analysis of Microwave Devices in Planar Technology", *46th European Microwave Conference (EuMC)*, London, October 3-7, 2016, pp. 473-476.

380. M. N. Abdallah, T. K. Sarkar, V. Monebhurrun, M. Salazar-Palma, "Defining the Starting Distance for the Far Field of Antennas Operating in any Environment", *2016 IEEE Conference on Antenna Measurements & Applications (CAMA)*, Syracuse, NY, USA, October 23-27, 2016, 4 pages.

381. M. N. Abdallah, T. K. Sarkar, M. Salazar-Palma, "How to Radiate Maximum Energy from an Antenna", *2016 IEEE Conference on Antenna Measurements & Applications (CAMA)*, Syracuse, NY, USA, October 23-27, 2016, 3 pages.

382. D. Salama, M. N. Abdallah, T. K. Sarkar, M. Salazar-Palma, "Adaptive Processing at Multiple Frequencies for Nonuniform Arrays Deployed in any Environment", *2016 IEEE Conference on Antenna Measurements & Applications (CAMA)*, Syracuse, NY, USA, October 23-27, 2016, 4 pages.

383. D. Garcia-Doñoro, A. Amor-Martín, L. E. García-Castillo, M. Salazar-Palma, T. K. Sarkar, "HOFEM: Higher Order Finite Element Method Simulator for Antenna Analysis", *2016 IEEE Conference on Antenna Measurements & Applications (CAMA)*, Syracuse, NY, USA, October 23-27, 2016, 4 pages.

384. D. Segovia-Vargas, M. Salazar-Palma, J. Herraiz-Martínez, L. E. García-Muñoz, L. E. García-Castillo, A. Rivera, K. Abdalmalak, G. Santamaría, F. Albarracín-Vargas, A. García-Lampérez, S. Llorente-Romano, "The Radiofrequency, Electromagnetics, Microwaves and Antennas Research Group (GREMA)", *2016 IEEE MTT-S Latin America Microwave Conference (LAMC)*, Puerto Vallarta, Mexico, December 12-14, 2016, 3 pages..

385. M. N. Abdallah, D. Salama, T. K. Sarkar, M. Salazar Palma, "An Exposé of Zenneck Waves and Surface Plasmon Polaritons", *2017 IEEE MTT-S International Microwave Symposium (IMS)*, Honolulu, Hawaii, USA, June 4-9, 2017, pp. 405-408.

386. D. Salama, M. N. Abdallah, T. K. Sarkar, M. Salazar Palma, "Smart Non-uniform Antenna Arrays Deployed above an Imperfect Ground Plane at Multiple Frequencies", *2017 IEEE AP-S Topical Conference on Antennas and Propagation in Wireless Communications (APWC)*, Verona, Italy, September 12-15, 2017, pp. 292-295.

387. L. E. García-Muñoz, D. Segovia-Vargas, O. García-Pérez, E. Ugarte-Muñoz, E. de Lera-Acedo, V. González-Posadas, J. M. Serna-Puente, J. A. López-Fernández, M. Salazar-Palma, "Spanish Contribution to the SKA project: Mid-frequency Band Array", *2017 IEEE Radio and Antenna Days of the Indian Ocean (RADIO)*, Cape Town, South Africa, September 25-28, 2017.
Invited contribution**.**

388. T. K. Sarkar, J. Koh, M. Salazar Palma, "Computation of the Far Field from a Nonuniformly Spaced Antenna Elements Using a Least Square Method", *2017 International Symposium on Antennas and Propagation (ISAP)*, Phuket, Thailand, 30 October - 2 November, 2017.

389. M. Salazar Palma, "Modeling of Propagation in Mobile Wireless Communication: Theory, Simulation and Experiment", *2018 19th IEEE Mediterranean Electrotechnical Conference (MELECON)*, Marrakech, Morocco, 2-7 May 2018, 3 pages, Keynote Session.
Invited contribution**.**

390. F. Reginelli, T. K. Sarkar, M. Salazar-Palma, "Interpolation and Extrapolation of S-Parameter Data of a Microwave Filter in the Frequency Domain Using the Cauchy Method", *2018 IEEE MTT-S International Microwave Symposium (IMS)*, Philadelphia, PA, USA, June 10-15, 2018, pp. 330-333.

391. T. K. Sarkar, M. Salazar Palma, "Generation of Non-Minimum Phase Response of Electromagnetic Systems Using Amplitude only Data", *2018 IEEE Conference on Antenna Measurements & Applications (CAMA)*, Västerås, Sweden, September 3-6, 2018, 3 pages.

392. D. García Doñoro, L. E, García Castillo, M. Salazar Palma, "Parallel Finite Element Method Solver for Antenna Analysis", *2018 International Conference on Electromagnetics in Advanced Applications, (ICEAA)*, Cartagena de Indias, Colombia, September 10-14, 2018, pp. 43-46.

393. N. F. Reginelli, T. K. Sarkar, M. Salazar-Palma, "Interpolation of Missing Antenna Measurements or RCS Data Using the Matrix Pencil Method", *2018 48th European Microwave Conference, (EuMC)*, Madrid, Spain, September 23-28, 2018, pp. 1549-1552.

394. D. García Doñoro, S. Ting, A. Amor Martín, L. E. García Castillo, M. Salazar Palma, "Higher Order finite element method solver for the analysis of microwave devices in planar technology", *2018 48th European Microwave Conference, (EuMC)*, Madrid, Spain, September 23-28, 2018, pp. 473-476.

395. N. F. Reginelli, T. K. Sarkar, M. Salazar-Palma, "Interpolation of Missing Antenna Measurements or RCS Data Using the Matrix Pencil Method", *2018 15th European Radar Conference, (EuRAD)*, Madrid, Spain, September 23-28, 2018, pp. 529-532.

396. A. Moreno Montes, A. Rivera Lavado, A. García Lampérz, L. E. García Muñoz, M. Salazar Palma, D. Segovia Vargas, "A W-band Feeding Network Design for a Single Balanced Mixer in GCPW Technology", *2018 IEEE MTT-S Latin America Microwave Conference (LAMC)*, Arequipa, Perú, December 12-14, 2018.

397. M. Salazar Palma, "Importance of the Dispersion Principles in System Desing", 2019 Interntional Conference on Electromagnetics in Advanced Applications (ICEAA), ICEEA-IEEE APWC 2019, Granada, Spain, 9-13 September 2019.
Invited presentation

398. H. Chen, T. K. Sarkar, M. Salazar Palma, "Use of Computational Techniques in Electromagnetics to Enhance the Accuracy and Efficiency of Antenna Pattern Measurements", 2019 Interntional Conference on Electromagnetics in Advanced Applications (ICEAA), ICEEA-IEEE APWC 2019, Granada, Spain, 9-13 September 2019.
Invited presentation

399. T. K. Sarkar, M. Salazar Palma, "Broadband Cloaking Obtained Using HOBBIES (Higher Order Basis Based Integral Equation Solver) Optimization", 2019 IEEE Radio and Antenna Days of the Indian Ocean (RADIO), Reunion Island, French Republic, 23-26 September 2019.
Invited presentation

400. T. K. Sarkar, M. Salazar Palma, "Use of the Half Fourier Transform for Radar Target Identification", IEEE International Conferenceon Signal, Information and Data Processing (IEEE ICSIDP 2019), Chongqing, China, December 11-13, 2019.
Invited presentation

401. M. Salazar Palma, T. K Sarkar, "Synthesis of Arbitrary Antenna Patterns Using Orthogonal Basis Functions of Finite Support", Beijing Institute of Technology International Forum on Advanced Radar and Signal Processing, Beijing, China, December 16-17, 2019.
Invited presentation

402. M.Salazar Palma, T. K. Sarkar, "Synthesis of Arbitrary Antenna Patterns Using Orthogonal Basis Functions of Finite Support", CODEC 2019, Calcutta, India, 2019.
Invited presentation

403. P. Plaza, M. Castro, J. Merino, T. Restivo, A. Peixoto, C. Gonzalez, A. Menacho, F. García-Loro, E. Sancristobal, M. Blazquez, P. Diaz, I. Plaza, I. Fondón, A. Sarmiento, I. Civantos, C. Fernandez, S. Lord, D. Rover, R. Chan, M. Ciampi, R. Meier, E. Tovar, M. Salazar, S. Zvacek, J. A. Ruipérez-Valiente, B. Quintana, S. Martín, G. Botella, Á. López-Rey, M. Guedey, P. Abreu, D. Urbano, R. Strachan, "Educational Robotics for All: Gender, Diversity, and Inclusion in STEAM", 2020 IEEE Learning With MOOCS (LWMOOCS), 30 September–02 October, 2020, Antigua Guatemala, Guatemala, pp. 19-24.

404. M. Salazar Palma, "IEEE WIE: Advancing Women in Technology at all points in their life and career", IE-S WiE Workshop, IEEE ICIT 2021, Valencia, Spain, 2021.
(**Invited contribution**, Workshop Opening Session)

405. C. González, A. García-Holgado, P. Plaza, M. Castro, A. Peixoto, J. Merino, E. Sancristobal, A. Menacho, D. Urbano, M. Blázquez, F. García-Loro, T. Restivo, R. Strachan, P. Diaz, I. Plaza, C. Fernández, S. Lord, D. Rover, R. Chan, Rosana, M. Ciampi, R. Meier, E. Tovar, M. Salazar Palma, S. Zvacek, J. A. Ruipérez-Valiente, B. Quintana, S. Martín, G. Botella, A. López-Rey, P. Abreu, "Gender and STEAM as part of the MOOC STEAM4ALL", IEEE EDUCON 2021, Vienna, Austria (online), April 21-23, 2021, 5 pages.

406. Nilton Santos-Valdivia, Ahmed El Yousfi, Patricia Castillo-Araníbar, Magdalena Salazar-Palma, Daniel Segovia-Vargas, "Wideband Circularly Polarized Antenna Based on a SRR Operating with High-order Modes Using Characteristic Mode Analysis" 2024 IEEE International Symposium on Antennas and Propagation and ITNC-USNC-URSI Radio Science Meeting, 14-19 July 2024, Florence, Italy

B. National Symposia

1. M. Salazar Palma, J. Pérez Martínez, J. F. Hernández Gil, "Filtros con resonadores dieléctricos acoplados a *finline*. Diseño y aplicaciones", *Actas de la VI Reunión Anual de la Comisión B (Campos y Ondas) del Comité Español de la Unión Científica Internacional de Radio (URSI)*, Valencia, 29-30 Sept. 1987, pp. 237-242.

2. M. Salazar Palma, J. F. Hernández Gil, "Aplicación del Método de los Elementos Finitos al análisis casi-TEM de líneas de transmisión", *Actas de la VII Reunión de la Comisión B (Campos y Ondas) del Comité Español de la Unión Científica Internacional de Radio (URSI)*, vol. 2, Cuenca, 26-28 Sept. 1988, pp. 526-531.

3. M. Salazar Palma, J. F. Hernández Gil, "Algoritmo de mallado autoadaptativo para el análisis de líneas de transmisión mediante el Método de Elementos Finitos", *Actas del IV Simposium Nacional del Comité Español de la Unión Científica Internacional de Radio (URSI)*, vol. 2, Santander, 25-27 Sept. 1989, pp. 819-823.

4. M. Salazar Palma, L. Ferragut Canals, F. J. Mustieles, J. F. Hernández Gil, "Utilización de la formulación mixta en la aplicación del Método de los Elementos Finitos al análisis de estructuras de microondas", *Actas del V Simposium Nacional del Comité Español de la Unión Científica Internacional de Radio (URSI)*, vol. 2, Vigo, Pontevedra, 26-28 Sept. 1990, pp. 493-497.

5. J. M. Ruiz de Elvira, M. Salazar Palma, "Análisis de condensadores y resonadores metálicos circulares y anulares para circuitos integrados de microondas mediante el Método de los Elementos Finitos", *Actas del VI Symposium Nacional del Comité Español de la Unión Científica Internacional de Radio (URSI)*, vol. 2, Cáceres, 24-27 Sept. 1991, pp. 699-703.

6. L. E. García Castillo, M. Salazar Palma, "Análisis en onda completa de estructuras de guiado y líneas de transmisión mediante un Método de Elementos Finitos basado en elementos de arista", *Actas del VII Simposium Nacional del Comité Español de la Unión Científica Internacional de Radio (URSI)*, vol. 1, Málaga, 23-25 Sept. 1992, pp. 489-493.

7. P. Dorta, J. A. Casao, M. Salazar, J. Pérez, "*Kit* para la medida y caracterización de circuitos monolíticos. Aplicación a un amplificador de transimpedancia para comunicaciones ópticas", *Actas del VII Simposium Nacional del Comité Español de la Unión Científica Internacional de Radio (URSI)*, vol. 2, Málaga, 23-25 Sept. 1992, pp. 1098-1102.

8. L. M. Garrido Díaz, M. Salazar Palma, "Análisis paramétrico de estructuras de microondas mediante el Método de los Elementos Finitos. Aplicación al diseño de elementos pasivos", *Actas del VII Simposium Nacional del Comité Español de la Unión Científica Internacional de Radio (URSI)*, vol. 2, Málaga, 23-25 Sept. 1992, pp. 1192-1196.

9. L. E. García Castillo, T. K. Sarkar, M. Salazar Palma, "Introducción de conceptos 'wavelet' en el Método de los Elementos Finitos. Aplicación a la resolución eficiente de las ecuaciones de Maxwell", *Actas del VIII Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, Valencia, 22-24 Sept. 1993, pp. 620-624.

10. L. E. García Castillo, M. Salazar Palma, G. G. Gentili, "Parámetros circuitales y de propagación de líneas de transmisión multiconductoras inhomogéneas de geometría arbitraria", *Actas del IX Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, vol. 2, Las Palmas de Gran Canaria, 21-23 Sept. 1994, pp. 1090-1094.

11. J. M. Recio Peláez, M. Salazar Palma, L. E. García Castillo, "Paquete software de análisis de estructuras de guiado de microondas mediante el Método de los Elementos Finitos para PC compatible y uso educativo", *Actas del X Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, 27-29 Sept. 1995, Valladolid, pp. 507-510.

12. F. Blanc Castillo, M. Salazar Palma, L. E. García Castillo, "Elementos finitos de arista-Lagrange de primer y segundo grado para el análisis dinámico de estructuras de guiado de ondas con contornos curvos", *Actas del X Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, Valladolid, 27-29 Sept. 1995, pp. 659-662.

13. M. Salazar Palma, J. M. Recio Peláez, "Estudio de convergencia de un algoritmo de mallado autoadaptativo", *Actas del XI Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, vol. 1, Madrid, 18-20 Sept. 1996, pp. 29-32.

14. M. Salazar Palma, L. E. García Castillo, "Algoritmo de mallado autoadaptativo para el análisis dinámico de estructuras de guiado", *Actas del XI Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, vol. 1, Madrid, 18-20 Sept. 1996, pp. 33-36.

15. G. G. Gentili, L. E. García Castillo, F. Pérez Martínez, M. Salazar Palma, J. I. Alonso, "Análisis de antenas de parches rectangulares apilados y embebidos en cavidades mediante una formulación basada en una función de Green mejorada", *Actas del XI Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, vol. 1, Madrid, 18-20 Sept. 1996, pp. 224-227.

16. T. K. Sarkar, R. S. Adve, Z. A. Maricevic, M. Salazar Palma, "Uso de la técnica del Pincel de Matrices para la determinación de las características de propagación modal de circuitos en tecnología microtira", *Actas del XI Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, vol. 1, Madrid, 18-20 Sept. 1996, pp. 444-447.

17. R. Ramírez, L. E. García, M. Burgos, M. Salazar J. I. Alonso, "Software para el diseño de filtros con rizado constante y respuesta asimétrica mediante cavidades acopladas", *Actas del XI Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, vol. 1, Madrid, 18-20 Sept. 1996, pp. 488-491.

18. T. K. Sarkar, Z. A. Maricevic, M. Salazar Palma, "Método para el cálculo preciso de la potencia radiada por discontinuidades en estructuras de guiado abiertas", *Actas del XII Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, vol. 1, Bilbao, 15-17 Sept. 1997, pp. 283-285.

19. E. Paoletti, G. Pelosi, R. Ravanelli, M. Salazar Palma, A. Pérez Yuste, "Análisis de bocinas circulares corrugadas mediante un método híbrido", *Actas del XII Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, vol. 1, Bilbao, 15-17 Sept. 1997, pp. 359-361.

20. L. E. García Castillo, M. Salazar Palma, "Tetraedro de Nédélec de segundo grado para el análisis de problemas electromagnéticos", *Actas del XIII Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, Pamplona, 16-18 Sept. 1998, pp. 37-38.

21. M. C. Jiménez González, L. E. García Castillo, M. Salazar Palma, "Impedancia característica y pérdidas en líneas de transmisión multiconductoras mediante el Método de los Elementos Finitos", *Actas del XIII Symposium Nacional de la Unión Científica Internacional de Radio (URSI)*, Pamplona, 16-18 Sept. 1998, pp. 39-40.

22. M. Salazar Palma, L. E. García Castillo, T. K. Sarkar, "Elementos finitos autoadaptativos e iterativos para problemas electromagnéticos", *Libro de Abstracts y CD-ROM del IV Congreso Métodos Numéricos en Ingeniería*, Sevilla, 7-10 June 1999, 1+14 pages.
(**Invited contribution**, Session "*Electromagnetismo*").

23. A. Bocigas Palma, M. Salazar Palma, L. E. García Castillo, T. K. Sarkar, "Comparación entre dos estimadores de error para algoritmos de mallado autoadaptativo en la aplicación del Método de los Elementos Finitos al análisis de problemas electromagnéticos", *Actas del XIV Simposium Nacional de la Unión Científica Internacional de Radio, URSI 1999*, Santiago de Compostela, Sept. 8-10, 1999, pp. 121-122.

24. F. J. Antón Berrendo, M. Salazar Palma, "Síntesis de filtros paso banda a resonadores con estructuras basadas en tripletes y cuadrupletes*", Actas del XIV Simposium Nacional de la Unión Científica Internacional de Radio, URSI 1999*, Santiago de Compostela, Sept. 8-10, 1999, pp. 578-579.

25. J. C. Cáceres Casero, M. Salazar Palma, J. L. Cáceres Armendáriz,, "Herramienta de diseño asistido por ordenador de filtros a resonadores para comunicaciones por satélite", *Actas del XIV Simposium Nacional de la Unión Científica Internacional de Radio, URSI 1999*, Santiago de Compostela, Sept. 8-10, 1999, pp. 588-589.

26. A. García Lampérez, M. Salazar Palma, F. Pérez Martínez, M. Barba Gea, I. Hidalgo Carpintero, "Herramienta de diseño de filtros paso banda de resonadores con topologías de acoplo generalizadas", *Actas*

del XV Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2000, Zaragoza, Sept. 13-15, 2000, pp. 433-434.

27. S. Llorente Romano, L. E. García Castillo, M. Salazar Palma, F. Pérez Martínez, "Análisis, diseño y caracterización de filtros mediante cavidades acopladas directamente en guías de ondas", *Actas del XV Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2000*, Zaragoza, Sept. 13-15, 2000, pp. 435-436.

28. A. Ruiz Genovés, L. E. García Castillo, M. Salazar Palma, "Comparación entre diversas familias de elementos finitos curl-conformes de orden mixto", *Actas del XV Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2000*, Zaragoza, Sept. 13-15, 2000, pp. 567-568.

29. A. Gutiérrez Molina, I. Ledesma Obelar, J. Gismero Menoyo, M. Salazar Palma, F. Pérez Martínez, "Análisis y diseño de filtros de resonadores *hairpin* en tecnología microtira", *Actas del XVI Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2001*, Villaviciosa de Odón, Madrid, Sept. 19-21, 2001, pp. 89-90.

30. A. García Lampérez, S. Llorente Romano, L. E. García Castillo, M. Salazar Palma, F. Pérez Martínez, "Diplexor para un sistema LMDS en banda Ka", *Actas del XVI Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2001*, Villaviciosa de Odón, Madrid, Sept. 19-21, 2001, pp. 199-200.

31. A. J. Ruiz, L. E. García, M. Salazar, T. K. Sarkar, "El elemento de Nédélec de tercer grado", *Actas del XVI Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2001*, Villaviciosa de Odón, Madrid, Sept. 19-21, 2001, pp. 471-472.

32. L. E. García Castillo, M. Salazar Palma, A. J. Ruiz Genovés, F. Blanc Castillo, T. K. Sarkar, "Familia de elementos finitos curl-conformes de orden mixto para el modelado del campo electromagnético", *II Encuentro de Electromagnetismo Computacional*, Sesión 2, Aracena, Huelva, 17-19 Dic. 2001, 1 page.

33. T. K. Sarkar, M. Salazar Palma, D. Sengupta, "A Chronology of Developments of Wireless Communication and Electronics till 1910", *Actas del XVII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2002*, Alcalá de Henares, Madrid, Sept. 11-13, 2002, p. 1.
(**Invited contribution,** Plenary Session: Opening Session)

34. R. M. Barrio Garrido, S. Llorente Romano, M. Salazar Palma, "Diseño de filtros de banda ancha en banda Ka mediante iris resonantes directamente acoplados", *Actas del XVII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2002*, Alcalá de Henares, Madrid, Sept. 11-13, 2002, pp. 307-308.

35. S. Llorente Romano, C. San Segundo Santos, A. Gutiérrez Molina, M. Salazar Palma, "Filtros de líneas acopladas con ceros de transmisión en tecnología microstrip", *Actas del XVII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2002*, Alcalá de Henares, Madrid, Sept. 11-13, 2002, pp. 313-314.

36. A. García Lampérez, T. K. Sarkar, M. Salazar Palma, "Modelado de orden reducido aplicado a respuestas en frecuencia", *Actas del XVII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2002*, Alcalá de Henares, Madrid, Sept. 11-13, 2002, pp. 391-392.

37. T. K. Sarkar, R. Adve, M. Salazar Palma, "Application of Causality in Computational Electromagnetics", *Actas del XVII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2002*, Alcalá de Henares, Madrid, Sept. 11-13, 2002, p. 521.

38. L. E. García Castillo, M. Salazar, A. J. Ruiz, F. Blanc, T. K. Sarkar, "Familia de elementos finitos curl-conformes de orden mixto para el modelado de problemas electromagnéticos", *Actas del XVII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2002,* Alcalá de Henares, Madrid, Sept. 11-13, 2002, pp. 549-550.
(**Invited contribution**)

39. R. Fernández Recio, T. K. Sarkar, M. Salazar Palma, "Estimación del ángulo de llegada usando *arrays* conformados sobre superficies semiesféricas", *XVIII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2003*, A Coruña, 10-12 Sept., 2003, Sesión S1-A2.1, Papel 3, 4 pages.

40. M. L. Fribourg Casajuana, M. Salazar Palma, "Estudio de precondicionadores para resolvedores genéricos en problemas de elementos finitos", *XVIII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2003*, A Coruña, 10-12 Sept., 2003, Sesión S1-A2.1, Papel 6, 4 pages.

41. I. Gómez Revuelto, L. E. García Castillo, F. Sáez de Adana, L. de Haro y Ariet, M. Salazar Palma, "Nuevo método híbrido MEF-técnica de alta frecuencia para el análisis de problemas de *scattering* y radiación", *XVIII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2003*, A Coruña, 10-12 Sept., 2003, Sesión S1-A2.1, Papel 7, 4 pages.

42. A. García Lampérez, S. Llorente Romano, M. Salazar Palma, T. K. Sarkar, "Optimización electromagnética rápida de filtros de microondas mediante modelos circuitales", *XVIII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2003*, A Coruña, 10-12 Sept., 2003, Sesión S1-A2.2, Papel 1, 4 pages.

43. S. Llorente Romano, A. García Lampérez, M. Salazar Palma, A. I. Daganzo Eusebio, J. S. Galaz Villasante, M. J. Padilla Cruz, "Filtro y divisor de potencia para un multiplexor de entrada en tecnología microstrip y banda Ku", *XVIII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2003*, A Coruña, 10-12 Sept., 2003, Sesión S7-A2.0, Papel 2, 4 pages.

44. Ó. Gómez Rodríguez, A. García Lampérez, M. Salazar Palma, "Diseño de filtros a resonadores *hairpin* con ceros de transmisión simétricos", *XVIII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2003*, A Coruña, 10-12 Sept., 2003, Sesión S8-A2.0, Papel 3, 3 pages.

45. F. Loras González, A. García Lampérez, M. Salazar Palma, "Diseño y caracterización de filtros paso banda en tecnología microtira", *XVIII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2003*, A Coruña, 10-12 Sept., 2003, Sesión S8-A2.0, Papel 4, 3 pages.

46. R. M. Barrio Garrido, S. Llorente Romano, A. García Lampérez, M. Salazar Palma, "Diseño de filtros de banda ancha de iris resonantes no centrados", *XVIII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2003*, A Coruña, 10-12 Sept., 2003, Sesión S8-A2.0, Papel 6, 3 pages.

47. A. Pérez Yuste, M. Salazar Palma, "La influencia de la ITT en la automatización del sistema telefónico de Madrid", *VIII Simposium Nacional de la Unión Científica Internacional de Radio, URSI 2003*, A Coruña, 10-12 Sept., 2003, Sesión S8-A2.1, Papel 6, 3 pages.

48. I. Gómez Revuelto, L. de Haro Ariet, L. E. García Castillo, F. Sáez de Adana, M. Salazar Palma, "Nuevo método híbrido MEF-PO en 3D para el análisis de problemas de radiación y *scattering*", *XIX Simposium Nacional de la URSI*, Barcelona, 8-10 Sept. 2004, 4 pages.

49. A. García Lampérez, M. Salazar Palma, T. K. Sarkar, "Síntesis de redes pasivas de microondas con múltiples puertos", *XIX Simposium Nacional de la URSI*, Barcelona, 8-10 Sept. 2004, 4 pages.

50. M. Gil Martín, A. García Lampérez, M. Salazar Palma, "Nuevas estructuras de filtros de microondas paso banda con número reducido de resonadores", *XIX Simposium Nacional de la URSI*, Barcelona, 8-10 Sept. 2004, 4 pages.

51. S. Llorente Romano, R. M. Barrio Garrido, M. Salazar Palma, "Análisis de resonadores dieléctricos cilíndricos mediante ajuste modal", *XIX Simposium Nacional de la URSI*, Barcelona, 8-10 Sept. 2004, 4 pages.

52. E. Montoya Álvarez, R. M. Barrio Garrido, S. Llorente Romano, M. Salazar Palma, "Mejora de un diplexor de banda estrecha con uniones en T mediante iris inductivos y capacitivos", *XIX Simposium Nacional de la URSI*, Barcelona, 8-10 Sept. 2004, 4 pages.

53. E. Montoya Álvarez, S. Llorente Romano, M. Salazar Palma, "Análisis modal de una unión genérica de guías rectangulares", *XIX Simposium Nacional de la URSI*, Barcelona, 8-10 Sept. 2004, 4 pages.

54. R. M. Barrio Garrido, S. Llorente Romano, M. Salazar Palma, A. Oñoro Navarro, I. Hidalgo Carpintero, "Diseño, construcción y medida experimental de un filtro de banda ancha en tecnología en guía de onda en banda Ka", *XX Simposium Nacional de la URSI*, Gandía, Valencia, 14-16 Sept. 2005, Sesión CM4, no.2, 4 pages.

55. A. García Lampérez, S. Llorente Romano, M. Salazar Palma, "Filtro microtira con resonadores de onda lenta y topología de acoplamientos en caja", *XX Simposium Nacional de la URSI*, Gandía, Valencia, 14-16 Sept. 2005, Sesión CM5, no. 3, 4 pages.

56. S. Llorente Romano, B. Gimeno, M. Salazar Palma, "Ajuste modal entre geometrías cilíndricas y guías de onda rectangulares", *XX Simposium Nacional de la URSI*, Gandía, Valencia, 14-16 Sept. 2005, Sesión EM3, no. 3, 4 pages.

57. T. K. Sarkar, M. Salazar Palma, "Proper Interpretation of the Shannon Channel Capacity for the Vector Electromagnetic Problem", *XXI Simposium Nacional de la URSI*, Oviedo, Asturias, 11-15 Sept. 2006, Sesión SC1, no. 7, 3 pages.

58. T. K. Sarkar, M. Salazar Palma, "Who Was Maxwell y What Was/Is His Theory", *XXI Simposium Nacional de la URSI*, Oviedo, Asturias, 11-15 Sept. 2006, Sesión EM1, no. 1, 1 page.
(Invited contribution)

59. R. Fernández Recio, T. K. Sarkar, M. Salazar Palma, "Aplicación eficiente del Pincel de Matrices para la estimación simultánea de dirección de llegada y frecuencia", *XXI Simposium Nacional de la URSI*, Oviedo, Asturias, 11-15 Sept. 2006, Sesión ANT4, no. 2, 4 pages.

60. A. García Lampérez, M. Salazar Palma, "Diplexor de banda X con filtros en caja simétricos", *XXI Simposium Nacional de la URSI*, Oviedo, Asturias, 11-15 Sept. 2006, Sesión EM4, no. 3, 4 pages.

61. R. Fernández Recio, L. E. García Castillo, I. Gómez Revuelto, M. Salazar Palma, "Análisis de estructuras radiantes con un método multi-híbrido basado en FEM-PO/PTD-UTD", *XXI Simposium Nacional de la URSI*, Oviedo, Asturias, 11-15 Sept. 2006, Sesión EM4, no. 8, 4 pages.

62. R. Fernández Recio, L. E. García Castillo, I. Gómez Revuelto, M. Salazar Palma, "Convergencia de un Método de Elementos Finitos iterativo para problemas abiertos", *XXII Simposium Nacional de la URSI*, La Laguna, Tenerife, 19-21 Sept. 2007, Electromagnetismo II, Sesión VI, no. 2, 4 pages.

63. R. M. Barrio Garrido, L. E. García Castillo, I. Gómez Revuelto, M. Salazar Palma, "Comparativa entre el Método Rápido de los Multipolos (FMM) y el Algoritmo de Aproximación Cruzada Adaptativa (ACA)", *XXII Simposium Nacional de la URSI*, La Laguna, Tenerife, 19-21 Sept. 2007, Sesión EM2, no. 3, 4 pages.

64. A. García Lampérez, M. Salazar Palma, "Filtro con dos bandas de paso 93ossible93or y ceros de transmisión", *XXII Simposium Nacional de la URSI*, La Laguna, Tenerife, 19-21 Sept. 2007, 4 pages.

65. A. García Lampérez, M. Salazar Palma, "Resonadores de anillos divididos (SRR) para filtros de dos bandas", *XXIII Simposium Nacional de la URSI*, Madrid, 22-24 Sept. 2008, Sesión Componentes y Circuitos Pasivos de Microondas III, no. 5, 4 pages.

66. J. Álvarez González, I. Gómez Revuelto, J. M. Alonso Rodríguez, L. E. García Castillo, M. Salazar Palma, "Método multi-híbrido FEM-MoM-PO para el análisis de problemas de dispersión y radiación", *XXIII Simposium Nacional de la URSI*, Madrid, 22-24 Sept. 2008, Sesión Electromagnetismo II, no. 5, 4 pages.

67. D. García Doñoro, Y. Zhang, W. Zhao, T. K. Sarkar, L. E. García Castillo, M. Salazar Palma, "Interfaz basada en GiD para simulador electromagnético MoM", *XXIV Simposium Nacional de la URSI*, Santander, 16-18 Sept. 2009, Sesión Electromagnetismo 1, no. 5, 4 pages.

68. D. Díez García, A. García Lampérez, M. Salazar Palma, "Aproximación analítica de respuestas en frecuencia de multiplexores", *XXIV Simposium Nacional de la URSI*, Santander, 16-18 Sept. 2009, Sesión Componentes y Circuitos Pasivos de Microondas 1, no. 5, 4 pages.

69. A. García Lampérez, M. Salazar Palma, "Filtros multibanda basados en transformación de frecuencias", *XXIV Simposium Nacional de la URSI*, Santander, 16-18 Sept. 2009, Sesión Componentes y Circuitos Pasivos de Microondas 2, no. 3, 4 pages.

70. S. Llorente Romano, M. Salazar Palma, B. Gimeno Martínez, V. E. Boria Esbert, "Cálculo de las frecuencias de resonancia en geometrías sin pérdidas mediante la expansión en fracciones parciales de matrices de admitancias", *XXIV Simposium Nacional de la URSI*, Santander, 16-18 Sept. 2009, Sesión Electromagnetismo 2, no. 5, 4 pages.

71. A. García Lampérez, M. Salazar Palma, "Transformación de acoplamientos en bloques de resonadores multibanda", *XXV Simposium Nacional de la URSI*, Bilbao, 15-17 Sept. 2010, Sesión Componentes y Circuitos Pasivos de Microondas I, no. 4, 4 pages.

72. S. Llorente Romano, M. Salazar Palma, B. Gimeno, V. E. Boria, "Análisis mediante ecuaciones integrales de la transición entre una guía rectangular y una guía radial interna", *XXV Simposium Nacional de la URSI*, Bilbao, 15-17 Sept. 2010, Sesión Componentes y Circuitos Pasivos de Microondas III, no. 6, 4 pages.

73. P. R. Castillo Araníbar, A. García Lampérez, D. Segovia Vargas, F. Aznar Ballesta, M. Salazar Palma, "Resonadores múltiples de anillo partido para filtros de banda triple con respuesta asimétrica", *XXVI Simposium Nacional de la URSI*, Leganés, Madrid, 7-9 Sept. 2011, Sesión Componentes y Circuitos Pasivos de Microondas E, no. 5, 4 pages.

74. A. García Lampérez, S. Llorente Romano, M. Salazar Palma, "Síntesis de filtros de polos extraídos sin desfasadores", *XXVII Simposium Nacional de la URSI*, Elche, Alicante, 12-14 Sept. 2012, Sesión III, Componentes Pasivos III, no. 1, 4 pages.

75. S. Llorente Romano, A. García Lampérez, M. Salazar Palma, L. J. Rogla, S. Sobrino Arias, "Síntesis de filtros de polos extraídos en guía rectangular", *XXVII Simposium Nacional de la URSI*, Elche, Alicante, 12-14 Sept. 2012, Sesión III, Componentes Pasivos III, no. 3, 4 pages.

76. R. M. Barrio Garrido, L. E. García Castillo, I. Gómez Revuelto, M. Salazar Palma, "Aceleración mediante ACA de un código autoadaptativo *hp* para el análisis de problemas abiertos", *XXVII Simposium Nacional de la URSI*, Elche, Alicante, 12-14 Sept. 2012, Sesión VI, Aplicaciones Matemáticas, no. 6, 4 pages.

77. A. García Lampérez, M. Salazar Palma, "Resonadores SIW en modo dual aplicados a un diplexor compacto", *XXX Simposium Nacional de la URSI*, Pamplona, Navarra, 2-4 Sept. 2015, Sesión I. Componentes y circuitos pasivos de microondas I, ponencia no. 003.

78. L. E. García Muñoz, S. Preu, A. Rivera Lavado, R. Guzmán, C. Gordon, V. Corral, G. Carpintero, M. Salazar-Palma, D. Segovia Vargas, "Unlocking THz Communication Systems Combining Electronic and Photonic Technologies", *XXX Simposium Nacional de la URSI*, Pamplona, Navarra, 2-4 Sept. 2015, Sesión I. Tecnologías y aplicaciones a THz (Beyond 74 GHz), ponencia no. 015.
(**Invited contribution**)

XIII. Doctoral Thesis Adviced

Title:
Name:
University:
Faculty/School:
Date:

She has adviced or co-adviced the following PhD Thesis:

1. **Title**: *Técnicas eficientes en la aplicación del Método de los Elementos Finitos a problemas electromagnéticos* (Efficient Techniques in the Application of the Finite Element Method to Electromagnetic Problems)
   Name: Luis Emilio García Castillo
   University: *Universidad Politécnica de Madrid* (UPM)
   Faculty/School: *Dpto. Señales, Sistemas y Radiocomunicaciones,* SSR (Signal, Systems and Radiocommunications Dep.), *ETSI Telecomunicación* (ETSIT).
   Date: November 1998
   Mark obtained: Unanimously Excellent *cum laude*. This PhD Thesis got the following awards: **Premio INDRA**, COIT/AEIT, to the best PhD Thesis of Academic Year 1998-1999; **Premio Extraordinario de Doctorado de la Universidad Politécnica de Madrid** to the best to the best PhD Thesis of the Academic Year 1998-1999.
   (Co-advisors: Magdalena Salazar Palma, UPM, Tapan K. Sarkar, Syracuse University, SU).

2. **Title**: *DOA Estimation Exploiting Cyclostationarity Based on Direct Data Domain Approach in a Real Environment*
   Name: Kyungjung Kim
   University: Syracuse University, NY, USA
   Faculty/School: Dept. of Electrical and Computer Engineering, College of Engineering
   Date: May 2003
   Mark obtained: Pass (only possible mark). This PhD Thesis got the following award: **Best Thesis Award of Graduate College of Syracuse University during the Academic Year 2001-2002**.
   (Co-advisors: Tapan K. Sarkar, SU, Magdalena Salazar Palma, UPM).

3. **Title**: *Exploiting Early Time Scattering Response Using Fractional Fourier Transform*
   Name: Seong-man Jang
   University: Syracuse University, NY, USA
   Faculty/School: Dept. of Electrical and Computer Engineering, College of Engineering
   Date: May 2003
   Mark obtained: Pass (only possible mark). This PhD Thesis got the following award: **Best Thesis Award of Graduate College of Syracuse University during the Academic Year 2002-2003**.
   (Co-advisors: Tapan K. Sarkar, SU, Magdalena Salazar Palma, UPM).

4. **Title**: *Multiple Constraint Space-Time Direct Data Domain Approach Using Nonlinear Arrays*
   Name: Jeffrey Thomas Carlo
   University: Syracuse University, NY, USA
   Faculty/School: Dept. of Electrical and Computer Engineering, College of Engineering
   Date: May 2003
   Mark obtained: Pass (only possible mark). This PhD Thesis got the following award: **Best Thesis Award of Graduate College of Syracuse University during the Academic Year 2002-2003**.
   (Co-advicers: Tapan K. Sarkar, SU, Magdalena Salazar Palma, UPM).

5. **Title**: *La Compañía Telefónica Nacional de España en la Dictadura de Primo de Rivera (1923-1930)* (National Spain *Telefónica* Company in Primo de Rivera's Dictatorship: 1923-1930)
   Name: Antonio Pérez Yuste
   University: UPM

Faculty/School*:* SSR, ETSIT
Date: 2004
Mark obtained: Unanimously Excellent *cum laude*.

6. **Title**: *Métodos avanzados de síntesis y optimización de filtros y multiplexores de microondas* (Advanced Methods for the Synthesis and Optimization of Microwave Filters and Multiplexers)
Name: Alejandro García Lampérez
University: UPM
Faculty/School: SSR, ETSIT
Date: 2004
Mark obtained: Unanimously Excellent *cum laude*.
(Co-advisors: Magdalena Salazar Palma, UPM-UC3M, Tapan K. Sarkar, SU).

7. **Title**: *Métodos avanzados de Análisis Modal aplicados al diseño de filtros con resonadores dieléctricos en la banda de microondas y ondas milimétricas* (Modal Analysis Advanced Methods Applied to the Design of Microwave and Millimeter Wave Dielectric Resonators Filters)
Name: Sergio Llorente Romano
University: UPM
Faculty/School: SSR, ETSIT
Date: 2009
Mark obtained: Unanimously Excellent *cum laude*.
(Co-advisors: Magdalena Salazar Palma, UPM-UC3M, Benito Gimeno Martínez, *Universidad de Valencia*, Valencia University).

8. **Title**: Characteristics of the Fields in the Near and the Far Zone of Antennas and Its Significance in Wireless Communication
Name: Arijit De
University: Syracuse University, NY, USA
Faculty/School: Dept. of Electrical and Computer Engineering, College of Engineering
Date: 2010
Mark obtained: Pass (only possible mark).
(Co-advisors: Tapan K. Sarkar, SU, Magdalena Salazar Palma, UC3M).

9. **Title**: Retrieval of Free Space Radiation Pattern through Measured Date in a Non-anechoic Environment
Name: W. Zhao
University: Syracuse University, NY, USA
Faculty/School: Dept. of Electrical and Computer Engineering, College of Engineering
Date: 2013
Mark obtained: Pass (only possible mark).
(Co-advisors: Tapan K. Sarkar, SU, Magdalena Salazar Palma, UC3M).

10. **Title**: Solving Time Domain Scattering and Radiation Problems with in a Marching-on-in-degree Technique for Method of Moments.
Name: Z. Mei
University: Syracuse University, NY, USA
Faculty/School: Dept. of Electrical and Computer Engineering, College of Engineering
Date: 2014
Mark obtained: Pass (only possible mark).
(Co-advisors: Tapan K. Sarkar, SU, Magdalena Salazar Palma, UC3M).

11. **Title**: Self-adaptive hp Finite Element Method with Iterative Mesh Truncation Technique Accelerated with ACA.
Name: Rosa María Barrio Garrido
University: Charles III University of Madrid (UC3M)
Faculty, School: College of Engineering
Date: 2024
Mark obtained: Excellent
(Co-advisors: Magdalena Salazar Palma, UC3M, Luis Emilio García Castillo, UC3M).

XIV. Participation in International and National Organizations and Committees

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Committee:
Entity:
Topic:
Date:

A. Transnational Professional Organizations – IEEE and URSI

1. The Institute of Electrical and Electronics Engineers (IEEE)

Position	**Organizational Unit** (Parent Organizational Unit)	**Dates**
Vicechair	**IEEE Antennas and Propagation Society (AP-S) /Microwave Theory and Techniques Society (MTT-S) Joint Chapter.** (IEEE Spain Section)	1989 – 1991
Chair	**IEEE AP-S/MTT-S Joint Chapter** (IEEE Spain Section)	**1992 – 1996**
Chair	**IEEE Spain Section** **(**IEEE Region 8)	**1997 – 2001**
Member	**IEEE Region 8 Committee** **(**IEEE Regional Activities Board, RAB, now MGAB)	**1997 – 2001**
Member	**IEEE Women in Engineering Committee, WIEC** (IEEE Board of Directors, BoD)	2000 – 2007
Member	**IEEE Region 8 Nominations & Appointments Subcom.** (IEEE Region 8)	March 2001 – December 2002
Liaison	**IEEE WIEC – IEEE RAB** (WIEC-RAB, now MGAB)	March 2001 – December 2003
Member	**IEEE Ethics & Member Conduct Committee** (IEEE BoD)	2002
Officer	Membership Development Officer (IEEE Spain Section)	2003 – 2007
Chair	**IEEE Region 8 Conference Coordination Subcommittee** (IEEE Region 8)	**2003 – 2004**
Chair	**IEEE WIEC** (IEEE BoD)	**2003 – 2004**
Elected member at large	**IEEE AP-S Administrative Committee, AdCom** (IEEE AP-S)	**2004 – 2006**
Member	**IEEE MTT-S Technical Committee # 15 (now # 1)** (IEEE MTT-S)	June 2006 – to date
Member	**IEEE AP-S Transnational Committee** (IEEE AP-S)	2007 – 2014
Member	**IEEE History Committee** (IEEE BoD)	2007 – 2008
Member	**IEEE MGAB Geographic Unit Operations Support Committee** (IEEE Member and Geographic Activities Board, MGAB)	2008 – 2009
President-Elect	**IEEE AP-S** (IEEE Technical Activities Board, TAB)	**2010**
Member	**IEEE AP-S Past Presidents Council** (IEEE AP-S)	2010 – to date
Member	**IEEE AP-S Distinguished Lecturer Progam Committee** (IEEE AP-S)	2010 – 2014
Member	**IEEE AP-S Administrative Committee** (IEEE AP-S)	2010 – 2015

Officer	**Technical Activities Coordinator** (IEEE Spain Section)	September 2010 – February 2012
President	**IEEE AP-S** (IEEE TAB)	**2011**
Member	**IEEE TAB** (IEEE BoD)	**2011**
Corresponding member	**IEEE TAB Awards and Recognition Committee** (IEEE TAB)	2011
Chair	**IEEE AP-S Past Presidents Council** (IEEE AP-S)	**2012**
Chair	**IEEE AP-S Nominations Committee** (IEEE AP-S)	**2012**
Member	**IEEE AP-S Nominations Committee** (IEEE AP-S)	**2012-2015**
General Chair	**IEEE MGAB Sections Congress 2014** (IEEE MGAB)	**July 2012 – Dec. 2014**
Chair	**IEEE MGAB Sections Congress 2014 Steering Comm.** (IEEE MGAB)	**July 2012 – Dec. 2014**
Member	**IEEE Service Awards Committee** (IEEE Awards Board, AB)	**Oct.1, 2012 – September 2015**
Member	**IEEE TAB Society Review Committee** (IEEE TAB)	**2013-2015**
Member	**IEEE Division IV Nominations & Appointments Comm.** (Division IV, IEEE TAB)	2013
Chair	**IEEE AP-S History Committee** (IEEE AP-S)	2013 – July 2017
Member	**IEEE MTT-S Education Committee** (IEEE MTT-S)	2013 – 2020
Member	**IEEE Honorary Membership Committee** IEEE AB	**October 2013 – September 2016**
Advisor	**IEEE Spain Section** (IEEE Region 8)	February 2014 – 2024
Member, TAB Leading Represent.	Joint MGA/EAB/TAB Ad Hoc Com.Member Development (IEEE MGAB, TAB, & Educational Activities Board, EAB)	2015
Chair	**IEEE AP-S Constitution & Bylaws Committee** (IEEE AP-S)	**2015**
Member	**IEEE Region 8 Strategic Planning Committee** (IEEE Region 8)	2015 – 2016
Member	**IEEE TAB Nominations & Appointments Committee** (IEEE TAB)	**2015 – 2016**
Member	**IEEE AP-S Field Awards Subcommittee** (IEEE AP-S)	**2015 – 2016**
Elected member at large	**IEEE MTT-S Administrative Committee, AdCom** (IEEE MTT-S)	**2015 – 2017**
Member	**IEEE MTT-S Intersociety Liaison Committee** (IEEE MTT-S)	2015
Member	**IEEE MTT-S Publications Committee** (IEEE MTT-S)	2015 – 2016
Member	**IEEE MTT-S Member & Geographic Activities Comm.** (IEEE MTT-S)	2015 – to date
Member	**IEEE MTT-S SIGHT (Special Interest Group in Humanitarian Technologies) Committee/Subcommittee** (IEEE MTT-S/IEEE MTT-S MGA Committee)	2015 – to date
Member	**IEEE MTT-S Image and Visibility Committee** (IEEE MTT-S)	2015 – 2017
Member	**IEEE AP-S Member & Geographic Activities Committee** (IEEE AP-S)	July 2015 – July 2017

Member	**IEEE AP-S New Technology Directions Committee** (IEEE AP-S)	July 2015 – July 2017
Member	**IEEE AP-S Meetings Committee** (IEEE AP-S)	July 2015 – July 2017
Vicechair	**IEEE MTT-S Intersociety Liaison Committee** (IEEE MTT-S)	**2016 – 2017**
Member	**IEEE MTT-S Operations Committee** (IEEE MTT-S)	2016 – 2017
Member	**IEEE Fellow Committee** (IEEE BoD)	**2016**
Member	**IEEE SIGHTCommunities of Practice Subcommitee** (IEEE Humanitarian Activities Committee, HAC)	**2016 – 2017**
Member	**IEEE AP-S Constitution & Bylaws Committee** (IEEE AP-S)	2016 – July 2017
Member	**IEEE TAB Hall of Honor Selection Committee** (IEEE TAB)	2016 – 2018
Member, TAB Representative	**IEEE Member & Geographic Activities Board, MGAB** (IEEE BoD)	2016 – 2017
Member	**IEEE MGAB Sections Congress 2017 Committee** (IEEE MGAB)	2016 – 2017
Member	**IEEE Awards Board** (IEEE BoD)	2017, 2019
Member	**IEEE Awards Board Policy and Portfolio Review Committee** (IEEE AB)	2017
Member	**IEEE BoD Ad Hoc Committee on Ethics Programs** (IEEE BoD)	2017
Chair	**IEEE MGA Awards and Recognitions Committee** (IEEE MGAB)	**2017**
Member	**IEEE MGA Member Engagement & Life Cycle Comm.** (IEEE MGAB)	2017
Director-Elect and Delegate-Elect	**IEEE Region 8 (Africa, Europe and Middle East)** (IEEE MGAB)	**2017 – 2018**
Chair	**IEEE Region 8 Strategic Planning Committee** (IEEE Region 8)	**2017 – 2018**
Chair	**IEEE Ethics & Member Conduct Committee** (IEEE BoD)	**2017 – 2018**
Member	**IEEE Kiyo Tomiyasu Award Committee** (IEEE Technical Field Awards Council)	June 2017 – June 2019
Member	**IEEE Electromagnetics Award Committee** (IEEE Technical Field Awards Council)	June 2017 – June 2020
Member	**IEEE European Public Policy Committee** (IEEE BoD)	2018
Chair	**IEEE AP-S Society Review Committee** (IEEE AP-S)	**2018**
Member	**IEEE MGA Strategic Planning Committee** (IEEE MGAB)	2018 – 2019
Member	**IEEE MGA Awards and Recognitions Committee** (IEEE MGAB)	2018 – 2019
Member	**IEEE AP-S History Committee** (IEEE AP-S)	2018 – 2019
Member	**IEEE AP-S Constitution & Bylaws Committee** (IEEE AP-S)	2018 – 2019
Chair	**IEEE AP-S Strategic Planning Committee** (IEEE AP-S)	**2018 – 2020**
Member	**IEEE Daniel E. Noble Award in Emerging Technology** (IEEE Technical Field Awards Council)	May 2018 – May 2019
Member	**IEEE Ad Hoc Committee on Activities in Africa**	2019

	(IEEE BoD)	
Director and Delegate	**IEEE Region 8 (Africa, Europe and Middle East)** (IEEE MGAB, IEEE BoD, IEEE Assembly)	**2019 – 2020**
Member	**IEEE MGAB** (IEEE BoD)	**2019 – 2020**
Member	**IEEE Board of Directors**	**2019 – 2020**
Member	**IEEE Assembly**	**2019 – 2020**
Member	**IEEE Ad Hoc Committee on Diversity, Inclusion and Professional Ethics** (IEEE BoD)	2019 – 2020
Chair	**IEEE Kiyo Tomiyasu Award Committee** (IEEE Technical Field Awards Council)	**2019 – 2021**
Member	**IEEE Technical Field Awards Council** (IEEE Awards Board, AB)	**2019 – 2021**
Member	**IEEE Ad Hoc Committee on Future-Proofing Healthy Volunteer Pipelines throughout the IEEE** (IEEE BoD)	2020
Member	**IEEE TAB Ad Hoc on IEEE App Initiative and App Strategy** (IEEE TAB Strategic Planning Committee)	2020-2024
Member	**IEEE Governance Committee** (IEEE BoD)	**2020-2023**
Member	**IEEE MTT-S Microwave and Wireless Education Initiative Subcommittee** (IEEE MTT-S Education Committee)	2020 – 2023
Member	**IEEE Ad Hoc Committee on Diversity & Inclusion** (IEEE BoD)	2021
Member	**IEEE Fellow Committee** (IEEE BoD)	2021 – 2024
Member	**IEEE Africa Council as R8 representative** (Africa Council)	2021 – 2024
Member	**IEEE TAB Periodicals Committee** (IEEE TAB)	2021 – 2024
Past Director	**IEEE Region 8 (Africa, Europe and Middle East)** (IEEE Region 8)	2021 – 2022
Member (Past Director)	**IEEE Region 8 Operating Committee** (IEEE Region 8)	2021 – 2022
Chair	**IEEE R8 Nominations &Appointments Subcommittee** (IEEE Region 8)	2021 – 2022
Chair	**IEEE Region 8 Awards and Recognitions Subcommittee** (IEEE Region 8)	2021 – 2022
Member	IEEE MGA Awards & Recognitions Committee (as IEEE RegionAwards Chair) (IEEE MGAB)	2021 – 2022
Chair	**IEEE R8 Strategic Planning Subcommittee** (IEEE Region 8)	2021 – 2022
Member	IEEE MGA Strategic Planning Committee (as IEEE Region Strategic Planning Committee Coordinator) (IEEE MGAB)	2021 – 2022
Vice Chair, GUO	**IEEE MGAB** (IEEE MGAB)	2022 – 2023
Vice Chair, GUO	**IEEE MGA OpCom** (IEEE MGAB)	2022 – 2023
Chair	**Geographic Unit Operations Support Committee (GUOSC)** (IEEE MGAB)	2022-2023
Member	**Local Groups Working group** (IEEE GUOSC)	2022-2024

Member	**IEEE Conduct Review Committee** (IEEE Ethics and Member Conduct Committee)	2023-2024
Member	**IEEE Humanitarian Technologies Board (and chair of its Outreach Subcommittee in 2023, and chair of its Governance Subcommittee in 2024)** (IEEE BoD)	2023-2024
Past Chair	**IEEE AP-S Strategic Planning Committee** (IEEE AP-S)	2023 – 2024
Member	**Fellow Diversity Oversight Subcommittee (FDOS)** (IEEE Fellow Committee)	2023-2024
Member	**Fellow Strategic Planning Subcommittee (FSPS)** (IEEE Fellow Committee)	2023-2024
Member	**IEEE TAB N&A** (IEEE TAB)	2023-2024
Member	**IEEE WIE N&A** (IEEE WIE)	2023 – 2024
Member	**IEEE R8 OpCom (as non voting member)** (IEEE R8)	2023 – 2024
Member	**IEEE R8 Humanitarian Technologies Committee** (IEEE R8)	2023 – 2024
Member	**IEEE R8 Strategic Planning Committee** (IEEE R8)	2023 – 2024
Member	**IEEE R8 Ad Hoc Advisory Committee** (IEEE R8)	2023 – 2024
Past Chair	**Geographic Unit Operations Support Committee (GUOSC)** (IEEE MGAB)	2024
Chair	**European Public Policy Committee** (IEEE BOD)	2024
Vice-Chair	**IEEE Ad Hoc Committee on the Future of Technical and Engineering Education** (IEEE BoD)	2024
Member	**IEEE MGAB Ad Hoc on 2023 Sections Congress Recommendations** (IEEE MGAB)	2024
Chair	**IEEE MGAB Ad Hoc on 2023 Sections Congress Recommendation #10** (IEEE MGAB Ad Hoc on 2023 Sections Congress Recommendations)	2024
Chair	**IEEE R8 Ad Hoc on Volunteer Pipeline** (IEEE R8)	2024
Member	**IEEE R8 Sections Congress Coordination** (IEEE R8)	2024
Member	**IEEE MTT-S MGA Committee** (IEEE MTT-S)	2024

She has served IEEE as volunteer in more than 120 positions at all levels: Section Chapters, Section (including Spain Section Chair), Major Boards and Standing Committees, Technical Societies (including the Administrative Committee of two Societies, and President of one Society), Region (as R8 Director), IEEE Assembly (as Region 8 Delegate) and IEEE Board of Directors (as Region 8 Director). It can be highlighted that she was elected by all members worldwide of **IEEE Antennas & Propagation Society** as member of its **Administrative Committee** (AdCom) for a three-year term (first Spanish person elected to that position). In December 2009 she was elected by all members worldwide of **IEEE Antennas & Propagation Society** as **President-Elect** (first Spanish person) of the Society for year **2010** and, consequently, for **President** for **2011** and **member of AdCom as Past President** for **2012, 2013, 2014 and 2015,** chairing also several committees of the society during those four years and other years later. In September 2014 she was elected by all members worldwide of **IEEE Microwave Theory & Techniques Society** as member of its **AdCom** for a three-year term (first Spanish person elected to that position). Also, she was elected by Region 8 (Africa, Europe and

Middle East) membership as **Region 8 Director and Delegate for 2019-2020** (first Spanish person to be elected for those positions). Consequently, she was **Region 8 Director-Elect during 2017-2018**, and **Region 8 Past Director for 2021-2022**. As Region 8 Director, during **2019-2020 she was one of the 31 IEEE directors, member of the IEEE Board of Directors and one of the 23 delegates of the IEEE Assembly**. Special interest has her participation on committees related to humanitarian technologies like IEEE SIGHT (Special Interest Group on Humanitarian Technologies), both at the Technical Society level and IEEE BoD, and other initiatives related to professional ethics, diversity and inclusiveness, like **IEEE Ethics and Member Conduct Committee** and **IEEE Conduct Review Committee** and also **IEEE WIE (Women in Engineering) Committee** (which she was member of and Chair), and IEEE Ad Hoc Committee on Diversity, Inclusion and Professional Ethics and IEEE Ad Hoc Committee on Diversity and Inclusion. It is also relevant her appointment to the 2020-2023 IEEE Governance Committee and in 2022, **Vice Chair MGA, Geographic Unit Operations** and, as such, MGAB voting member, member of the **MGA Operations Committee** and Chair of the MGA Geographic Units Support Committee. Recently she was appointed as member of the new **Humanitarian Technologies Board**, and Chair of its Governance Subcommittee. She has also been appointed as **IEEE European Public Policy Committee** Chair. It can be also highlighted that she has continue to serve IEEE Spain Section, Region 8, AP-S and MTT-S in a variety of positions.
Topics related with all the listed positions are defined by IEEE (http://www.ieee.org).

2. International Union of Radio Science (URSI)

Member of URSI Commission B Technical Advisory Board (since September 2012).

B. Other International Organizations

1. Member of the Board of the European School of Antennas (ESoA), European Association of Antennas and Propagation (EurAAP), from 2011 up to date.
2. Member of the International Joint Research Center of Nanjing University of Science and Technology, Nanjing, China, from 2013 up to date.

C. Committees of International Symposia

Member of several International Symposia Committees with participation in the organization of a number of international symposia. A chronological list follows.

1. Member of the Technical Programme Committee of the European Microwave Conference/European Microwave Week, from 1990 up to 1998, from 2002 to 2004, and from 2014 to 2015.
2. Organizer of two technical sessions in 1992 IEEE Antennas and Propagation Society International Symposium / URSI Radio Science Meeting, Chicago, Illinois, USA, July 1992.
3. Organizer of a technical session in 22nd European Microwave Conference, September1992, Espoo, Finland.
4. **Chair of the Technical Programme Committee of the 23rd European Microwave Conference, September 1993, Madrid, and, thus organizer of the Conference and the corresponding Technical Exhibit.**
5. Member of the Technical Programme Committee of the Topical Meeting on Electrical Performance of Electronic Packaging (EPEP), since 1992 up to 1996; and from 2000 up to 2003.
6. Member of the Steering Committee and Technical Programme Committee of the International Workshop on Finite Elements for Microwave Engineering, from 1998 up to date.
7. **Co-chair person of the 7th International Workshop on Finite Elements for Microwave Engineering, Madrid, May de 2004, and organizer of the Workshop**.
8. Member of the Technical Programme Committee of Microcoll Conference, Budapest, from 1998 up to date.
9. Member of the Technical Programme Committee of Electrosoft Conference, 1998 and 1999.
10. Member of the Technical Programme Committee de IEEE MTT-S International Microwave Symposium from 1998 up to 2004, and de 2006 up to date.
11. Member of the Organizing Committee of 33th IEEE International Carnahan Conference on Security Technology, Madrid, España, October de1999.
12. Member of the Scientific Programme Committee (Computational Electromagnetics) of European Congress on Computational Methods in Applied Sciences and Engineering, ECCOMAS 2000, Barcelona, España, September, 2000.

13. Member of the Technical Programme Committee of MIOP, 2001, 2002.
14. Member of the International Committee of the Symposium American Electromagnetics, AMEREM 2002 and 2004.
15. Member of the Technical Program Committee of IEEE Antennas and Propagation Society International Symposium from 1998 up to date.
16. Member of the Technical Program Committee of Mediterranean Microwave Symposium, MMS, from 2000 up to date.
17. Member of the Organizing Committee of the Symposium MELECON 2004.
18. Member of the Technical Program Committee of Triennial Electromagnetic Theory Symposium, 2004, 2007, 2010, 2013, 2016.
19. Member of the Steering Committee of 2007 IEEE Antennas and Propagation Society International Symposium.
20. Member of the Judge Panel of Student Contest of IEEE Antennas and Propagation Society International Symposium, several editions from 2008.
21. Member of the Scientific Committee, and the Technical Program Committee of the Iberian Meeting on Computational Electromagnetics, from 2008 up to date.
22. Member of the International Advisory Committee of the International Symposium on Antennas, Propagation and EM Theory, 2008, ISAPE 2008.
23. URSI General Assembly Session Convener, 2008.
24. Member of the International Advisory Committee, and Technical Program Committee of Asia Pacific Microwave Conference, APMC, several editions from 2008 up to date.
25. Member of the Organizing Committee of Applied Electromagnetics Conference, AEMC 2009.
26. Member of the Advisory Committee of theThird IEEE International Symposium on Microwave, Antennas, Propagation, and EMC Technologies for Wireless Communications, 2009.
27. Member of the Technical Program Committee of 2010 IEEE International Conference on Wireless Information Technology and Systems, ICWITS 2010, Honolulu, HI, USA.
28. Member of the Technical Program Committee of HISTELCON 2010.
29. Chairperson of Subcommmittee 10, Planar Passive Filters and Multiplexers I, of the Technical Program Review Committee of IEEE MTT-S International Microwave Symposium (IMS), from 2012 up to date.
30. Member of the International Advisory Committee of Asia-Pacific Conference on Antennas and Propagation, APCAP, from 2013 up to date.
31. Member of the Technical Program Committee of 2013 edition of The International IEEE Conference on Microwaves, Communications, Antennas and Electronic Systems, COMCAS 2013.
32. **General Chairperson of the IEEE Sections Congress 2014, Amsterdam, The Netherlands, August 2014.**
33. Member of the Organizing Committee of the Symposium EUROCON 2015.
34. Member of the Review Panel of ARGENCON 2016.
35. Member of the Steering Committee of the IEEE Sections Congress 2017, Sidney, Australia, August 2017.
36. **General Chairperson of the 2018 European Microwave Week (EuMW), Madrid, Spain**.

D. Committees of National Symposia

1. Member of the Scientific Committee of *2ª Conferencia de Dispositivos Electrónicos CDE-99*, Madrid, June de 1999.
2. Member of the Scientific Committee of *Reunión Nacional de la URSI*, from 2000 up to 2005 and from 2007 up to date.
3. Member of the Program Committee and Organizing Committee of the day-event "*La Mujer en las Carreras y Profesiones Técnicas*", *Universidad Politécnica de Madrid, ETSI Telecomunicación*, November 13, 2001.
4. Membof the Scientific Committee of the *VI Encuentro Ibérico de Electromagnetismo Computacional*, 2008
5. General Co-Chair of the *XXVI Simposium Nacional de la URSI*, Leganés, Madrid, 7-9 Sept. 2011.
6. Member of the Organizing Committee of the *Workshop on THz Technologies*, Leganés, Madrid, Sept. 2011.

E. Chair of Symposia Sessions

Chair of sessions in international and national symposia in numerous years. Among them:

1. IEEE Antennas and Propagation Society Symposium, USA, from 1990.
2. URSI Symposium, USA, from 1990.
3. European Microwave Conference, from 1990.
4. Topical Meeting on Electrical Performance of Electronic Packaging (EPEP), from 1992.
5. *Simposium Nacional de la URSI*, from 1996.
6. Finite Element Workshop, from 1998.
7. Progress in Electromagnetics Research Symposium (PIERS), from 1998.
8. IEEE International Microwave Symposium, from 2000.
9. European Congress on Computational Methods in Applied Sciences and Engineering, ECCOMAS, 2000.
10. Mediterranean Microwave Symposium, from 2000.
11. 2010 IEEE International Conference on Wireless Information Technology and Systems (2010 ICWITS)
12. Indian Antenna Week, 2010, 2011.

F. Reviewer of Scientific Articles

1. International Journals:

- IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION (from 1993)
- ELECTRONICS LETTERS (from 1993)
- INTERNATIONAL JOURNAL ON NUMERICAL MODELLING (from 1993)
- IEEE TRANSACTIONS ON ELECTROMAGNETIC COMPATIBILITY (from 1993)
- IEEE MICROWAVE AND GUIDED WAVE LETTERS (from 1995)
- RADIO SCIENCE (from 1996)
- IEEE MICROWAVE AND WIRELESS COMPONENTS LETTERS (from 1997)
- IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES (from 1998)
- IEEE TRANSACTIONS ON ADVANCED PACKAGING (from 2002)
- IEEE COMMUNICATIONS MAGAZINE (from 2004).
- IEEE ANTENNAS AND PROPAGATION MAGAZINE (from 2005).
- IEE PROCEEDINGS ON CIRCUITS, DEVICES AND SYSTEMS (from 2005).
- INTERNATIONAL JOURNAL ON ACOUSTICS AND VIBRATION (from 2005).
- PROGRESS ON ELECTROMAGNETICS RESEARCH (from 2005).
- JOURNAL OF ELECTROMAGNETICS WAVES AND APPLICATIONS (from 2005).
- IEE PROCEEDINGS ON MICROWAVES, ANTENNAS & PROPAGATION (from 2006), now IET MICROWAVES, ANTENNAS & PROPAGATION.
- APPLIED COMPUTATIONAL ELECTROMAGNETIC SOCIETY (ACES) JOURNAL (from 2006).
- IEEE TRANSACTIONS ON SIGNAL PROCESSING (from 2007).
- COMPUTER APPLICATIONS IN ENGINEERING EDUCATION (from 2007).
- JOURNAL OF MICROWAVES AND OPTOELECRONICS (from 2007).
- SIGNAL IMAGE AND VIDEO PROCESSING (from 2007).
- JOURNAL OF ZHEJIANG UNIVERSITY SCIENCE (from 2007).
- ACTIVE AND PASSIVE ELECTRONIC COMPONENTS (from 2008).
- IEEE ANTENNAS AND WIRELESS COMPONENTS LETTERS (from 2009).
- IEEE ELECTRON DEVICE LETTERS (from 2010).
- JOURNAL OF QUANTUM ELECTRONICS (from 2010).
- COMPUTER PHYSICS COMMUNICATIONS (from 2011).
- COGNITIVE COMPUTATION (from 2012).
- INTERNATIONAL JOURNAL ON ADAPTIVE CONTROL AND SIGNAL PTOCESSING (from 2012).

2. International Symposia:

   She has acted as reviewer in all Symposia in which she has been involved in committees. Additionally she has been reviewer for COMPUMAG Symposium in years 2003 and 2005.

3. National Symposia:

   Simposium Nacional de la URSI, from 2000 up to 2015.

G. Reviewer for International Editorial Companies

1. Artech House, from 2000
2. John Wiley / IEEE Press, from 2002

H. Research Projects Evaluator

National

- Reviewer for ANEP (*Agencia Nacional de Evaluación and Prospectiva*), from 1992 up to date.
- Member of the Technical Committee in the area of Radiation, Microwave and Radiofrequency. Meeting for Research Projects monitoring and evaluation, Spain Ministry of Education and Science, Electronic Technology and Communications Program, Communications Subprogram. La Laguna, Tenerife, September 2007.

European Union

- Reviewer of the European Union Research Traning Networks Programme, DGXIII, 1995 and 1997.
- Member of the Review Panel of the Starting Grants 2019 (StG 2019) in Systems and Communication Engineering (PE7 Panel), European Research Council (ERC).

International

- Ukraine Board for Research (1995).
- Italian Board of Research: *Ministero dell'Istruzione dell'Università e della Ricerca* (MIUR) (2002).
- IWT Board of Research (Agency for Innovation by Science and Technology), Belgium (2004, 2009 – 2012).
- National Science Foundation, USA (2010).
- Evaluator for the Flanders Research Foundation (FWO), Belgium (2016).
- Member of the Expert Panel of the Fladers Research Foundation (FWO), Belgium, for Technological Sciences (2018-to date).

I. Editorial Boards of International Journals

Associate Editor of the following scientific journals:

1. Journal: Electromagnetics.
   City and Country: Los Angeles, California, USA
   Editor: Prof. N.G. Alexopoulos
   Editorial Company: Taylor and Francis
   Dates: 1995-1997

2. Journal: Yugoslav IEEE MTT Chapter Informer.
   City and Country: Belgrade, Yugoslavia.
   Editor: B. Jokanovic, IMTEL.
   Editorial Company: IEEE Yugoslavian Section MTT-S Chapter.
   Dates: 1995-1997.

3. Journal: Microwave Review.
   City and Country: Belgrado, Yugoslavia.

Editor: B. Jokanovic, IMTEL.
Editorial Company: IEEE Yugoslavian Section MTT-S Chapter.
Dates: 1997 – to date.

4. Journal: IEEE Antennas and Wireless Propagation Letters.
City and Country: New York, NY, USA
Editor: P. L. E. Uslenghi
Editorial Company: IEEE
Dates: 2002 – 2003.

5. Journal: Proceedings of the European Microwave Association.
City and Country: Louvain-la-Neuve, Belgium
Editor: Prof. Robert Weigel
Editorial Company: EuMA (European Microwave Association)
Dates: 2004 – 2008.

6. Journal: International Journal of Antennas and Propagation
City and Country: New York, NY, USA.
Editor: C. Furse
Editorial Company: Hindawi Publishing Corporation
Dates: October 2006 – to date.

7. Journal: IEEE Transactions on Antennas and Propagation
City and Country: New York, NY, USA.
Editor: K. W. Leung
Editorial Company: IEEE
Dates: 2013 – 2014.

J. Other Editorial Activities

1. References Editor, Review of Radio-Science, Topic 6: Guided Waves. Years: 1990-1992
2. References Editor, Review of Radio-Science, Topic 6: Guided Waves. Years: 1993-1995
3. References Editor, Review of Radio-Science, Topic 6: Guided Waves. Years: 1996-1998

K. Evaluator for International Institutions

Evaluator for Tenure Track positions, Aalto University, Finland, 2012.

L. Evaluator for National Institutions

1. Member of *Comisión de Acreditación de Catedráticos de Universidad en la Rama de Ingeniería y Arquitectura para la Agencia Nacional de Evaluación de la Calidad y Acreditación (ANECA)*, (Accreditation Committee for Full Professors in the Area of Engineering and Architecture, National Agency of Quality Assesment and Accreditation) from December 2007 up to April 2011.

2. Chair of the Committee for Technical Teaching, Evaluation Agency of the Basque University System (UNIQUAL, now UNIBASQ), from February 2010 up to July 2012.

3. Member of the panel of experts of the ACADEMIA Program, for the Area of Engineering and Architecture, ANECA, from October 2011 up to date.

4. Member of the panel of reviewers for University Faculty Training (*Formación de Profesorado Universitario*, FPU) scolarships, for the Area of Electronic and Communications Technology, ANECA, from July 2012 to July 2013.

5. Coordinator of the panel of reviewers for FPU scolarships, for the Area of Electronic and Communications Technology, ANECA, from July 2013 to July 2014.

XV. Organization of R+D Activities (Symposia, Seminars, Scientific, Technical or Professional Meetings)

Title:
Activity: Character:
Date:

Title: 1992 URSI Radio Science Meeting / IEEE Antennas Propagation Society International Symposium, Chicago, Illinois, USA
Activity: Organization of two technical sessions Character: International
Date: 18 – 25 July 1992

Title: 22nd European Microwave Conference, Sept. 1992, Espoo, Finland
Activity: Organization of one technical session Character: International
Date: 24 – 27 August 1992

Title: 23rd European Microwave Conference, Madrid, Spain
Activity: Technical Programme Committee Chair (the second most important Conference on Microwave Engineering) Character: International
Date: 6 – 9 September 1993

Title: 23rd European Microwave Conference Workshops, Madrid, Spain
Activity: Four Full-day Seminars (Advanced Microwave Devices, Computational Tecniques, Satellite Communications, Mobile Communications) Character: International
Date: 10 September 1993

Title: IEEE Spain Section AP/MTT Joint Chapter Seminars, Madrid and other Spanish cities
Activity: Organization of 30 seminars of various durations (from 2 hours to 2 days) Character: National with International speakers
Date: 1989 -1996

Title: IEEE Board of Directors Meeting, Madrid, Spain
Activity: Meeting organizer as IEEE Spain Section Chair Character: International
Date: May 1997

Title: IEEE Spain Section Executive Committee Meeting, Madrid, Spain
Activity: Meeting organizer as IEEE Spain Section Chair Character: National
Date: May 1997

Title: 33th IEEE International Carnahan Conference on Security Technology, Madrid, Spain
Activity: Member of the Organizing Committee Character: International
Date: October 1999

Title: IEEE Region 8 Committee Meeting, Sevilla, Spain
Activity: Meeting organizer as IEEE Spain Section Chair Character: International

Date: March 2001
Title: IEEE Spain Section Executive Committee Meeting, Sevilla, Spain
Activity: Meeting organizer as IEEE Spain Section Chair
Character: National
Date: March 2001

Title: Member of the Program Committee and the Organizing Committee of the Full-day Meeting "*La Mujer en las Carreras and Profesiones Técnicas*". Universidad Politécnica de Madrid, ETSI Telecomunicación, Madrid, Spain
Activity: Organizer of the meeting
Character: National
Date: 13 November 2001

Title: 7th International Workshop on Finite Element for Microwave Engineering, Madrid, Spain
Activity: Chair and organizer of the meeting
Character: International
Date: May 2004

Title: 2007 IEEE International Antennas & Propagation Symposium, Honolulu, Hawaii, USA
Activity: Student Contest Committee Member
Character: International
Date: June 2007

Title: XXVI URSI National Symposium (URSI 2011), Leganés, Madrid, Spain
Activity: General Co-chair
Character: National with international invited speakers
Date: September 2011

Title: Workshop on THz Technologies, Leganés, Madrid, Spain
Activity: Member of the Organizing Committee
Character: National with international invited speakers
Date: September 2011

Title: Course: Fundamentals of Antennas: The Antenna as a Communication System Building Block. Course of the European School of Antennas. Leganés, Madrid, Spain
Activity: Co-organizer
Character: International
Date: Two editions: October 2013 and October 2015.

Title: European Microwave Association (EuMA) Board of Directors (BoD), European Microwave Week (EuMW) Steering Committee and Handover meetings
Activity: Meetings organizer as EuMA BoD and EuMW Steering Committee member
Character: International
Dates: 28-29 January 2017

Title: 2018 European Microwave Week (EuMW) Technical Programme Committee meeting, Madrid, Spain
Activity: Meeting organizar as 2018 EuMW General Chair
Character: International
Dates: 6-8 April 2018

Title: *European Microwave Week* (EuMW) 2018, Madrid, Spain
Activity: *General Chair* of the European Microwave Week which includes three conferences, a Defense,
Character: International

Space and Security Forum, more than fifty Workshops and Short Courses, several activities for Master and PhD students, and a trade exhibition with over 350companies.
Dates: 23-28 septiembre 2018

Title: IEEE Region 8 Operating Committee (OpCom) virtual monthly meetings via WebEx
Activity: Meetings Organizer and Chair as IEEE Region 8 Director. These meetings were attended by IEEE Region 8 OpCom members (8 persons).
Character: International: IEEE R8 (Africa, Europe, Middle East)
Dates: January, February, April, May, July, August, September and December, 2019

Title: IEEE Region 8 Committee meeting, Valletta, Malta
Activity: Meeting Organizer and Chair as IEEE Region 8 Director. This meeting was attended by IEEE Region 8 OpCom members, Region 8 Section Chairs, Region 8 Subcomittee Chairs and Subcommittee members plus invited speakers (around 200 persons).
Character: International: IEEE R8 (Africa, Europe, and Middle East) and invited speakers from all over the world
Dates: 14-17 March 2019

Title: IEEE Region 8 Operating Committee Spring face-to-face meeting, Brussels, Belgium
Activity: Organizer and Chair of the meeting as IEEE Region 8 Director. This meeting was attended by IEEE Region 8 OpCom members (8 persons).
Character: International: IEEE R8 (Africa, Europe, Middle East)
Dates: 1-2 June 2019

Title: IEEE Region 8 Nominations and Appointments (N&A) Subcommittee face-to-face meeting, Budapest, Hungary
Activity: Organizer and Chair of the meeting as IEEE Region 8 Director. This meeting was attended by IEEE Region 8 N&A committee members (6 persons).
Character: International: IEEE R8 (Africa, Europe, Middle East)
Dates: 30 August – 1 September 2019

Title: IEEE Region 8 Committee meeting, Valencia, España
Activity: Organizer and Chair of the meeting as IEEE Region 8 Director. This meeting was attended by IEEE Region 8 OpCom members, Region 8 Section Chairs, Region 8 Subcomittee plus invited speakers and IEEE Spain Section ExCom members and some volunteers (around 200 persons).
Character: International: IEEE R8 (Africa, Europe, Middle East) and invited speakers from all over the world
Dates: 10-13 October 2019

Title: IEEE Region 8 Operating Committee Fall face-to-face meeting, Vienna, Austria
Activity: Organizer and Chair of the meeting as IEEE Region 8 Director. This meeting was attended by IEEE Region 8 OpCom members (8 persons).
Character: International: IEEE R8 (Africa, Europe, Middle East)
Dates: 1-3 November 2019

Title: IEEE Region 8 Operating Committee (OpCom) virtual monthly meeting via WebEx

Activity: Organizer and Chair of the meetings as IEEE Region 8 Director. These meetings were attended by IEEE Region 8 OpCom members (8 persons).
Character: International: IEEE R8 (Africa, Europe, Middle East)
Dates: January, February, April, May, June, July, August, September, Deecember 2020

Title: IEEE Region 8 Committee Spring (virtual) meeting, via WebEx
Activity: Organizer and Chair of the meeting as IEEE Region 8 Director. This meeting should have been an in person meeting but it was transformed into a virtual meeting due to the COVID-19 pandemic. This meeting was attended by IEEE Region 8 OpCom members, Region 8 Section Chairs, Region 8 Subcomittee Chairs and Subcommittee members plus invited speakers (around 200 persons).
Character: International: IEEE R8 (Africa, Europe, Middle East) and invited speakers from all over the world
Date: 21 March 2020

Title: IEEE Region 8 Operating Committee face-to-face meeting, Funchal, Madeira, Portugal
Activity: Organizer and Chair of the meeting as IEEE Region 8 Director. This meeting was attended by IEEE Region 8 OpCom members (8 people).
Character: International: IEEE R8 (Africa, Europe, Middle East)
Date: 3-4 October 2020

Title: IEEE Region 8 Committee meeting, online, via WebEx (Cisco)
Activity: Organizer and Chair of the meeting as IEEE Region 8 Director. This meeting should have been an in person meeting but it was transformed into a virtual meeting due to the COVID-19 pandemic. This meeting was attended by IEEE Region 8 OpCom members, Region 8 Section Chairs, Region 8 Subcomittee Chairs and Subcommittee members plus invited speakers (around 200 people).
Character: International: IEEE R8 (Africa, Europe, Middle East) and invited speakers from all over the world
Date: 7, 14 November 2020

Title: IEEE Region 8 Awards and Recognitions Subcommittee meeting, online, via WebEx (Cisco)
Activity: Organizer and Chair of the meeting as IEEE Region 8 Awards and Recognitions Subcommittee Chair. This meeting was attended by the Subcommittee members.
Character: International: IEEE R8 (Africa, Europe, Middle East)
Date: 26 February 2021

Title: IEEE Region 8 Nominations and Appointments Subcommittee meeting, online, via WebEx (Cisco)
Activity: Organizer and Chair of the meeting as IEEE Region 8 Nominations and Appointments Subcommittee Chair. This meeting was attended by the Subcommittee members.
Character: International: IEEE R8 (Africa, Europe, Middle East)
Date: 26 February 2021

Title: IEEE Region 8 Strategic Planning Subcommittee meeting, online, via WebEx (Cisco)
Activity: Organizer and Chair of the meeting as IEEE Region 8 Strategic Planning Subcommittee Chair. This meeting was attended by the Subcommittee members.
Character: International: IEEE R8 (Africa, Europe, Middle East)
Date: 28 February 2021

Title: 2021 IEEE Global Engineering Education Conference, EDUCON 2021, Vienna, Austria

Activity: Member of the Conference Steering Committee

Character: International: IEEE R8 (Africa, Europe, Middle East) with participants from other geographic areas

Date: 21-23 April 2021

Title: 2022 IEEE Global Engineering Education Conference, EDUCON 2022, Tunis, Tunisia

Activity: Member of the Conference Steering Committee

Character: International: IEEE R8 (Africa, Europe, Middle East) with participants from other geographic areas

Date: 28-31 March2022

XVI. R+D Managing Experience (R+D Programs and Actions)

Title:
Activity:
Date:

Title: Project "GaAs Monolithic Analog Circuits for Microwave Communication Systems up to 23 GHz" (European Commission Program for Information Technologies, ESPRIT, 5018 – COSMIC)
Activity: UPM Key person
Date: 1991- March 1993

Title: Collaboration with Syracuse University, NY, USA, in the project "Application of Wavelets to Finite Element Techniques", funded by E. I. Dupont de Nemours & Company, Willminngton, Dellaware, USA.
Activity: Spanish Principal Investigator, PI.
Date: 1991 – 1992

Title: National Agency of Assesment and Planning (*Agencia Nacional de Evaluación y Prospectiva*, *ANEP*)
Activity: Projects Evaluator
Date: 1992 – to date

Title: Erasmus (EuRopean community Action Scheme for the Mobility of University Students) Program "*High Frequency Electronics*" - ICP-E-2107-06
Activity: Microwaves and Radar Group (*Grupo de Microondas y Radar, GMR*), ETSIT, UPM, coordinator for the exchange of students among the various Universities
Date: September 1992 – December 1993

Title: Commet Program (European Union)
Activity: Organizer of a Short Course in Palermo (Italia) and lecturer of part of it (two days).
Dates: 16 – 20 November 1992

Title: HCM (Human Capital and Mobility) Program of the European Union, EU, "*Microwave Technology for Telecommunications*"- ERRCHRXCT 930214.
Activity: Microwaves and Radar Group (*Grupo de Microondas y Radar, GMR*), ETSIT, UPM, coordinator for the exchange of students and professor among the various Universities
Dates: 1993 – 1995

Title: Collaboration with Syracuse University, NY, USA in the project "Matrix Pencil for Late Time Response Characterization of Radar Signals", funded by Rome Laboratories, Rome, NY, USA.
Activity: Spanish PI.
Date: 1994 – 1995

Title: Collaboration with Syracuse University, NY, USA, in the project "Application of the Hilbert Transform to Electromagnetic Phenomena", funded by Rome Laboratories, Rome, NY, USA.
Activity: Spanish PI.
Date: 1995 – 1997

Title: Mobility of Researchers Program (European Union, DG XIII)

Activity: Project reviewer in the area of Engineering and Environmental Sciences Program
Date: 1995 - 1997

Title: Collaboration with Syracuse University, NY, USA, in the project "Time Domain Finite Element Method. Application to Scattering Problems" funded by E.I. Dupont de Nemours & Company, Willmington, Dellaware, USA.
Activity: Spanish PI.
Date: 1996 – 1998

Title: Collaboration with Syracuse University, NY, USA, in the project "Application of Wavelet Transforms to the Solution of Matrix Equations", funded by E.I. Dupont de Nemours & Company, Willmington, Dellaware, USA.
Activity: Spanish PI.
Date: 1997 – 1999

Title: Italy-Spain Integrated Action, HI 1996 - 0022: *Análisis de Alimentadores de Antenas Reflectoras de Altas Prestaciones para Comunicaciones por Satélite* (Analysis of High Efficiency Reflective Antennas Feeders for Satellite Communications)
Activity: Spanish PI.
Date: 1997.

Title: Italy-Spain Integrated Action, HI 1997-0067: *Análisis de Alimentadores de Antenas Reflectoras de Altas Prestaciones para Comunicaciones por Satélite* (Analysis of High Efficiency Reflective Antennas Feeders for Satellite Communications)
Activity: Spanish PI.
Date: 1998-1999

Title: Collaboration with Syracuse University, NY, USA, in the project "Adaptive Antennas and Diversity Techniques for Wireless Communication", funded by the National Science Foundation, Washington DC, USA.
Activity: Spanish PI.
Date: 2000 – 2004

Title: Project "Métodos avanzados de diseño de componentes pasivos para las nuevas generaciones de sistemas de comunicaciones en bandas milimétricas (TIC2002–02657) (Passive Components Advanced Synthesis Methods for the New Generation of Millimeter Wave Band Communication Systems)", funded by CICYT
Activity: PI.
Date: November 2002 – May 2006

Title Collaboration with Syracuse University, NY, USA, in the project "Intelligent Conformal Arrays", funded by Office of Naval Research, ONR, Washington, DC, USA, and Airforce Rome Laboratories, AFRL, Rome, NY, USA.
Activity: PI.
Date: 2004 – 2006

Title: Special Action "7th International Workshop on Finite Elements for Microwave Engineering", funded by Spain Ministry of Education and Culture, MEC.
Activity: PI.
Date: May 2004 – May 2005

Title: Collaboration with Purdue University, IN, USA, in the project "Advanced Methods for the Design of Passive Circuits for the New Generation of Millimeter Band Communication Systems".
Activity: Spanish PI.
Date: 2005 – 2006

Title: Collaboration with Syracuse University, NY, USA, in the project "Analysis and Design of Electromagnetics Stuctures Using the Method of Moments with High Order Basis Functions", funded by OHRN Enterprises Inc., DeWitt, NY, USA.
Activity: Spanish PI.
Date: 2006 – 2010

Title: Radiofrequency Research Group (*Grupo de Radiofrecuencia, GRF*), now Radiofrequency, Electromagnetics, Microwaves & Antennas Research Group (*Grupo de Radiofrecuencia, Electromagnetismo, Microondas y Antenas, GREMA*), of Dept. of Signal Theory and Communications, UC3M.
Activity: Co-responsible of the research group.
Date: 2006 up to date.

Title: Cooperation Project between Universidad Carlos III de Madrid and Tetouan University, Morocco, in the project "*Análisis y diseño de antenas multifrecuencias y/o miniaturizadas basadas en metamateriales*" (Analysis and Design of Multifrequency and/or Miniaturized Antennas Based on Metamaterials) (A/7422/06).
Activity: Spanish PI.
Date: 2007

Title: Meeting for Research Projects monitoring and evaluation, Spain Ministry of Education and Science, Electronic Technology and Communications Program, Communications Subprogram.
Activity: Member of the Technical Committee in Radiation, Microwave and Radiofrequency.
Date: 19-20 September 2007.

Title: Accreditation Committee for Full Professors, National Agency of Quality Assesment and Accreditation, ANECA – *Consejo de Universidades de España* (Spain Universities Council)
Activity: Committee member for the Area of Engineering and Architecture.
Dates: Diciembre 2007 – Abril 2011.

Title: Collaboration with University of Illinois at Urbana-Champaign, IL, USA, in the project "Analysis of Electromagnetics Problems Using the Finite Element Method and Multigrid Methods".
Activity: Spanish IP.
Date: 2008

Title: Project "*Desarrollos instrumentals fotónicos y de radiofrecuencia y aplicación a técnicas experimentales de geodesia espacial* (Development of Photonic and Radiofrequency Instrumentations and Application to Space Geodesy Experimental Techniques)" (DIFRAGEOS-CM), funded by Madrid Regional Ministry of Education (Consejería de Educación, *CAM*).
Activity: PI.
Date: October 2014 – September 2016

Title: Project "*Simulador Electromagnético para Entorno* HPC (Electromagnetic Simulator for HPC Environment)", funded by Spain Ministry of Economy, Industry and Competitiveness, MEICN
Activity: PI.
Dates: 2017 – 2019.

XVII. Other Merits, Awards and Recognitions

A. Other Merits Related to Teaching Activity

1. Teaching of 17 undergradute subjects.
2. Coordination of 10 undergraduate subjects.
3. Design and launching of 2 undergraduate subjects.
4. Advisor of 36 Master Thesis. Three of them got awards from the *Colegio Oficial de Ingenieros de Telecomunicación*, COIT, Spain Official Association of Telecommunication Engineers.
5. Mentoring of 20 grant-aided undergraduate students working towards their Master Projects.
6. Supervision of 16 students during their training period in companies.
7. Teaching in 8 graduate subjects of 7 Doctoral Programs: 2 of them were inter-university programs with foreign universities (*Universidad Autónoma de México* and *Universidad de Cuba*), 2 of them with quality mention (*Dpto. SSR, ETSI Telecomunicación*, *UPM*, and *Dpto. TSC, EPS, UC3M*), and 1 in a foreign University (Syracuse University, NY, USA).
8. Teaching in 2 graduate subjects of a Master Degree at *Dpto. TSC, UC3M*.
9. Coordination of a graduate subject.
10. Advisor of 8 research works of 4 PhD students.
11. Evaluation of one research work of a PhD student.
12. Advisor of a PhD student of other University, with a pre-doctoral mobility grant, ETSIT, UPM..
13. Evaluation of 18 PhD Thesis projects, 6 of them from foreign Universities.
14. Evaluation of 16 PhD Thesis, 4 of them from foreign Universities.
15. Member of the Dissertation Committee of 20 Doctoral Thesis, Committee Chairp in 4 cases.
16. Advisor of 5 grant-aided PhD students (3 *MEC*, 1 *CAM*, 1 *Dpto. TSC, UC3M*) and other 6 PhD students.
17. Vice Chair and lecturer (2 subjects) of the *Programa de Postgrado en Sistemas and Redes de Comunicaciones* (Graduate Program in Systems and Communication Networks), of the Depts. of Signals, Systems and Radiocommunications and Telematic Engineering, ETSIT, UPM, from 1991 to 1996.
18. Author and coauthor of 14 academic publications: 10 for undergraduate subjects, 2 for graduate subjects of the *Programa de Postgrado* mentioned before and 2 for the PhD Program (*Programa de Doctorado*) of the Dept. SSR, ETSI Telecomunicación, UPM.
19. Lecturer in the frame of Project TEN (Project no. 12 of Section VII of this CV) through satellite, in the inter-university graduate program of *Departamento SSR, ETSI Telecomunicación, UPM – Universidad Autónoma de México* and *Universidad de Cuba*.
20. Participation in Academic Committees at several levels: University (*Claustro, Comisiones de Profesorado, de Investigación*), College (*Junta* and other Committees), Department (*Consejo, Consejo de Dirección* and other Committees) and Research Group (Coordinator of various European Union projects) from 1986 up to date, both in UPM and UC3M.
21. **Chair of the Department of Signal Theory and Communications (*Departamento de Teoría de la Señal y Comunicaciones*), *Universidad Carlos III de Madrid*, from June 2007 up to May 2010**.
22. **Founder member of Institute for Gender Studies (*Instituto Universitario de Estudios de Género*), UC3M.**

B. Other Merits Related to Research Activity

1. Hosted a high number of visiting professors from national and foreign Universities.
2. Lecturer in over 80 Short Courses or Seminars in national and foreign Universities, or organized in the frame of Symposia or International and National meetings.
3. Participation in 6 round tables.
4. Attended 50 Short Courses or Seminars in foreign and Spanish Universities, or organized in the frame of Symposia or International and National meetings, plus 6 Graduate Courses.
5. **Co-responsible of the Radiofrequency Research Group** (*Grupo de Radiofrecuencia,* GRF) now **Radiofrequency, Electromagnetics, Microwaves & Antennas Group (***Grupo de Radiofrecuencia, Electromagnetismo, Microondas y Antenas,* GREMA**).**

C. Grants, Awards and Recognitions

1. Grants:

- Pre-doctoral Grant funded by Spain Ministry of Education (*Ministerio de Educación*) January 1, 1974 - December 31, 1976.
- Numerous grants from National (UPM, ETSIT-UPM, IEEE Spain Section) and International (IEEE, IEEE Region 8, IEEE Microwave Theory and Techniques Society, IEEE Antennas and Propagation Society, European Microwave Association, Syracuse University, etc.) Institutions for trips in order to attend symposia and scientific meetings, publication of papers in Scientific Journals, visits to Universities and Research Centers, and so on.

2. Awards:

- **Institution:** *Confederación Española de Organizaciones Empresariales,* CEOE (Spanish Confederation of Industry Organizations).
  Title: 1988 Research Award
  Award description: Colective award given to the Department of Signals, Systems, and Radiocommunications (*Departamento de Señales, Sistemas and Radiocomunicaciones*), SSR, ETSIT, UPM, and cash award of 2,000,000 pts.
- **Institution**: Spain Official Association of Telecommunication Engineers (*Colegio Oficial de Ingenieros de Telecomunicación*) and Spanish Association of Telecommunication Engineers (*Asociación Española de Ingenieros de Telecomunicación*), COIT/AEIT, Madrid.
  Title: COIT/AEIT award to the best Doctoral Thesis in Information and Communication Technologies of the academic year 1994-1995
  Award description: Certificate and cash award of 350,000 pts.
- **Institution:** Technical University of Madrid (*Universidad Politécnica de Madrid*), UPM.
  Title: Best Doctoral Thesis Award of the academic year 1994-1995
  Award description: Certificate.
- **Institution:** Spain Official Association of Telecommunication Engineers (*Colegio Oficial de Ingenieros de Telecomunicación*)
  Title: 2022 Pioneer on IT Award (Premio Pionera IT 2022). Note: IT stands for Telecommunication Engineering
  Award description: Certificate
- Awards given to students working under her advice:
  - 2 awards to the Doctoral Thesis no.1 of section XIII of this CV.
  - 1 award to each of the Doctoral Thesis nos. 2, 3 and 4, of section XIII of this CV.
  - 3 awards to 3 Master Thesis.
  - Contribution no. 166 of subsection “A. International Symposia” of Section XII of this CV was finalist in Student Paper Competition of 2004 IEEE MTT-S International Microwave Symposium, Fort Worth, TX, USA.
  - Contribution no. 173 of subection “A. International Symposia” of Section XII of this CV, was finalist for the Best Paper Award in the Electromagnetics Symposium EUROEM 2004, 12-16 July, 2004, Magdeburg, Germany.

3. Recognitions:

- Elevation to **IEEE Senior** Member: 2001.
- **Elevation to IEEE Fellow** “for contributions to the application of numerical techniques to electromagnetic modeling”: 2014.
- **Lecturer of the Inaugural Lesson of the Academic Year 2015-2016, Carlos III University of Madrid** (the video recording of the opening ceremony may be seen in https://arcamm.uc3m.es/arcamm_3/item/show/3c71a75ba71030330aa4307520c60165 , with the inaugural lesson going from minute 44 to minute 78)**.**
- Interviewed by the journal BIT, of the Spain Official Association of Telecommunication Engineers, COIT. The interview was published in issue 202, February 2016 (https://docs.google.com/viewerng/viewer?url=https://www.coit.es/sites/default/files/archivobit/pdf/entrevista_portada_0.pdf), and a photograph taken during the interview was displayed in the front cover (https://www.coit.es/archivo-bit/febrero-2016).

- **Honorary Doctorate in Science and Technology, Aalto University (previously, Helsinki University of Technology), Finland**, 2016 (https://www.aalto.fi/news/schools-of-technology-will-hold-the-third-joint-ceremonial-conferment-of-doctoral-degrees).
- Inducted as **professional member of IEEE-HKN**, Eta Kappa Nu: 2017.
- **IEEE Life Fellow member**: 2020.
- **Presentation by the Spanish Official National Association of Telecommunication Engineer of the 2022 IT Pioneer award**, in the second edition of this award, established to highlight the career and professional journey of a female Telecommunication Engineer (IT, in Spanish) as a "pioneer", in a technical profession with a high percentage of male professionals. A second goal of the award is to make visible the contributions and achievements that have been made in society thanks to the presence of female talent in the technological field, in particular in telecommunications.
- Elected or appointed for over **100 positions in IEEE** at all levels, from Technical Societies Chapters of the Spain Section, to **Spain Section Chair**, chair and member of various IEEE Board of Directors Standing and Ad Hoc Committees, member of the Administrative Committees of two Technical Societies, chair and member of various committees of Technical Societies, **President of one Technical Society**, member of two IEEE Major Boards, **Region 8 (Africa, Europe and Middle East) Director**, **IEEE Assembly member** and **IEEE Board of Directors member**. All these positions are listed in Section XIV, subsection A.1 of this CV.

D. Other Merits

Participation in Professional Organizations

1. Member, *Colegio Oficial de Ingenieros de Telecomunicación de España* (COIT), Spain Official Association of Telecommunication Engineers
2. Member, *Asociación Española de Ingenieros de Telecomunicación* (AEIT), Spanish Association of Telecommunication Engineers
3. Life Fellow (2020), Fellow (2014), Senior (2001), Member (1989), Institute of Electrical and Electronics Engineers (IEEE)
4. Member, IEEE Antennas and Propagation Society (IEEE AP-S)
5. Member, IEEE Microwave Theory and Techniques Society (IEEE MTT-S)
6. Member, IEEE Magnetics Society (IEEE MAG-S)
7. Member, IEEE Circuits and Systems Society (IEEE CAS-S)
8. Member, IEEE Communications Society (IEEE ComSoc)
9. Member, IEEE Education Society (IEEE EdSoc)
10. Member, IEEE Electromagnetic Compatibility Society (IEEE EMC-S)
11. Member, IEEE Women in Engineering (IEEE WIE)
12. Correspondant, International Radio Scientifique Union, URSI.

Participation in other Institutions

Member of two Spanish Non Governmental Organizations:
- *Gabinete de Estudios de la Organización No Gubernamental "Cooperación Internacional"*.
- *Patrona de Honor de la Organización No Gubernamental "Fundación Benéfica del Valle"*.