CURRICULUM VITAE

PERSONAL INFORMATION	
First name/Surname	Roberta Palmeri
Email	roberta.palmeri@unirc.it
Nationality	Italian
Date of birth	08 July 1989
WORK EXPERIENCE AND EDUCATION	
Date	From December 2019
Position	**Assistant Professor** at Università "Mediterranea" di Reggio Calabria (RC), Italy
Date	December 2017 – November 2019
Position	**Research Fellow** at Università "Mediterranea" di Reggio Calabria (RC), Italy
Date	May 2018
Title of qualification	**PhD** in Information Engeneering Thesis title: Synthesis of innovative electromagnetic devices via inverse scattering techniques Supervisor: Prof. Tommaso Isernia
Name and type of organisation providing education and training	Università "Mediterranea" di Reggio Calabria (RC), Italy
Date	November 2014 - October 2017
Title of qualification	PhD Student, curriculum: information engineering Supervisor: Prof. Tommaso Isernia
Name and type of organisation providing education and training	Università "Mediterranea" di Reggio Calabria (RC), Italy
Date	July 2015
Title of qualification	**Information Engineering Qualification** (curriculum: Information Engineering)
Name and type of organisation providing education and training	Università degli Studi di Catania (CT), Italy
Date	2012-2014
Title of qualification	**Master of Telecommunication Engineering** (summa cum laude) Thesis title: "Nuovi approcci per la diagnostica a microonde di oggetti sepolti" Advisors: Prof. Gino Sorbello, Dr. Loreto Di Donato
Name and type of organisation providing education and training	Università degli Studi di Catania (CT), Italy
AWARDS	

Date	May 2018
	Young Scientist Award during the 2nd URSI Atlantic Radio Science Meeting
Date	June 2017
	Best publication and presentation "*Inverse scattering for antennas and PC devices design*" – annual meeting of Italian Society of Electromagnetism (SIEm) and CNIT
Date	April 2017
	2016 IEEE AP-S Central and South Italy Chapter prize for publication "A. Morabito, R. Palmeri, and T. Isernia, *A compressive sensing inspired procedure for array antennas diagnostics by a small number of phaseless measurements*, IEEE Trans. Antennas Propag., vol. 64, no. 7, pp. 3260-3265, 2016."
Date	November 2015
	2014 Best Italian Remote Sensing thesis prize "Nuovi approcci per la diagnostica a microonde di oggetti sepolti" – IEEE Geoscience and Remote Sensing South Italy Chapter
RESEARCH ACTIVITIES	Inverse problems in electromagnetics. In particular, development of new strategies based on inverse scattering for the synthesis of innovative devices.
OTHER ACTIVITIES	- **Associate Editor** for *ELSEVIER – AEU - International Journal of Electronics and Communications* - **Reviewer** for peer reviewed international journals - **Oral speaker** at more than 10 international conferences - Involved in scientific disseminations (f.i., **local coordinator for Pint of Science 2020**)
JOURNAL PUBLICATIONS	
	- L. Di Donato, R. Palmeri, G. Sorbello, T. Isernia, and L. Crocco, "Assessing the capabilities of a new linear inversion method for quantitative microwave imaging," *Int. J. Antennas Propag*., vol. 2015, 2015. - M. T. Bevacqua, L. Crocco, L. Di Donato, T. Isernia, and R. Palmeri, "Exploiting sparsity and field conditioning in subsurface microwave imaging of non-weak buried target," *Radio Sci.*, vol.51, no.4, pp. 301-310, 2016. - F. Morabito, R. Palmeri, and T. Isernia, "A compressive sensing inspired procedure for array antennas diagnostics by a small number of phaseless measurements," *IEEE Trans. Antennas Propag.,* vol. 64, no. 7, pp. 3260-3265, 2016. - L. Di Donato, R. Palmeri, G. Sorbello, T. Isernia, and L. Crocco, "A new linear distorted wave inversion method for microwave imaging via virtual experiments," *IEEE Trans. Microw. Theory Techn*., vol. 64, no. 8, pp. 2478-2488, 2016. - R. Palmeri, M. T. Bevacqua, L. Crocco, T. Isernia, and L. Di Donato, "Microwave imaging via distorted iterated virtual experiments and compressive sensing," *IEEE Trans. Antennas Propag*., vol. 65, no. 2, pp. 829-838, 2017. - R. Palmeri, M. T. Bevacqua, A. F. Morabito, and T. Isernia, "Design of Artificial-Materials-Based Antennas Using Inverse Scattering Techniques", *IEEE Trans. Antennas Propag*., vol. 66, no. 12, pp. 7076-7090, 2018. - F. Morabito, R. Palmeri, V. A. Morabito, A. R. Laganà, and T. Isernia, "Single-Surface Phaseless Characterization of Antennas via Hierarchically-Ordered Optimizations", *IEEE Trans. Antennas Propag*., vol. 67, no. 1, pp. 461-474, 2018. - R. Palmeri, M. T. Bevacqua, A. F. Morabito, and T. Isernia, "Noncooperative Localization and Tracking Through the Factorization

	Method", *IEEE Geosci. Remote Sens. Lett.*, vol. 16, no. 8, pp. 1205-1209, 2019. - M. T. Bevacqua, R. Palmeri and R. Scapaticci, "Multiresolution Virtual Experiments for Microwave Imaging of Complex Scenarios", Electronics, vol. 8, no. 2, 2019. - R. Palmeri and T. Isernia, "Volumetric Invisibility Cloaks Design Through Spectral Coverage Optimization", *IEEE Access*, vol. 7, pp. 30860-30867, 2019. - M. T. Bevacqua and R. Palmeri, "Qualitative methods for inverse obstacle problem: a comparison on experimental data", *J. Imaging,* vol. 5, no. 4, pp. 47-60, 2019. - R. Palmeri, A. F. Morabito, and T. Isernia, "Diagnosis of planar arrays through phaseless measurements and sparsity promotion", *IEEE Antennas Wirel. Propag. Lett.*. vol. 18, no. 6, pp. 1273-1277, 2019. - M. T. Bevacqua, T. Isernia, R. Palmeri, M. N. Akinci, and L. Crocco, "Physical insight unveils new imaging capabilities of orthogonality sampling method", *IEEE Trans. Antennas Propag*., 2020 (in press).
MONOGRAPH	
	R. Palmeri, "Design of Innovative Electromagnetic Devices via Inverse Scattering Techniques", Ph.D. Thesis in Information Engineering, Università Mediterranea di Reggio Calabria*, Quaderni del Dottorato di Ricerca in Ingegneria dell'Informazione, Quaderno N. 35, ISBN: 978-88-99352-23-3, 2018*.
BOOK CHAPTER	
	M.T. Bevacqua, L. Crocco, L. Di Donato, T. Isernia, and R. Palmeri, "Virtual Experiments and Compressive Sensing for Subsurface Microwave Tomography", In: C.H. Chen, Compressive Sensing of Earth Observations, chapter no. 8, pp. 195-216, CRC Press, 2017.
CONFERENCE PROCEEDINGS	
	- M. T. Bevacqua, L. Crocco, L. Di Donato, T. Isernia, and R. Palmeri, "Exploiting virtual experiments for the solution of inverse scattering problem," In: *Proceedings on International Conference on Electromagnetics in Advanced Applications (ICEAA)*, 2015. - F. Morabito and R. Palmeri, "A new approach to the diagnostics of array antennas by means of a small number of phaseless measurements," *XXI Riunione Nazionale di Elettromagnetismo (RiNEm),* 2016. - R. Palmeri, M. T. Bevacqua, L. Crocco, T. Isernia, and L. Di Donato "Iterated virtual experiments and compressive sensing for quantitative inverse scattering problem," *XXI Riunione Nazionale di Elettromagnetismo (RiNEm),* 2016. - M. T. Bevacqua, L. Crocco, L. Di Donato, R. Palmeri, and T. Isernia, "A 'virtual experiments' setting for inverse scattering problems," In: *Proceedings on 2016 17th International Symposium on Antenna Technology and Applied Electromagnetics (ANTEM)*, 2016. - M. T. Bevacqua, R. Palmeri, L. Di Donato, L. Crocco, and T. Isernia, "Microwave imaging via iterated virtual experiments," In: *Proceedings on 10th European Conference on Antennas and Propagation (EuCAP 2016)*, 2016. - T. Isernia, R. Palmeri, A. F. Morabito, and L. Di Donato, "Inverse scattering and compressive sensing as e.m. design tool," In: *Proceedings on 2017 IEEE AP-S Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI 2017),* 2017. - R. Palmeri, M. T. Bevacqua, A.F. Morabito, and T. Isernia, "Inverse scattering methods as a tool for the design of GPCs devices", In:

	Proceedings on 2017 IEEE Conference on Antenna Measurements and Applications (2017 IEEE CAMA), 2017. - R. Palmeri, M. T. Bevacqua, R. Scapaticci, A. F. Morabito, L. Crocco, and T. Isernia, "Biomedical imaging via wavelet-based regularization and distorted iterated virtual experiments", In: *Proceedings on International Conference on Electromagnetics in Advanced Applications (ICEAA)*, 2017. - R. Palmeri, A. F. Morabito, and T. Isernia, "Design of a varying dielectric profile antenna generating reconfigurable $\Sigma - \Delta$ pattern via inverse scattering techniques", In: *Proceedings on International Conference on Electromagnetics in Advanced Applications (ICEAA)*, 2017. - R. Palmeri, M. T. Bevacqua, L. Di Donato, L. Crocco, and T. Isernia, "Microwave imaging of non-weak targets in stratified media via virtual experiments and compressive sensing," In: *Proceedings on 11th European Conference on Antennas and Propagation (EuCAP 2017)*, 2017. - R. Palmeri and T. Isernia, "Design of (multibeam) artificial dielectrics based lenses via inverse scattering techniques", 39th European Space Agency (ESA) Workshop on Multibeam Antennas, 2018. - M. T. Bevacqua, R. Palmeri, L. Crocco, and T. Isernia, "The reduced scattered field as a tool for focusing in an unknown scenario", *XXII Riunione Nazionale di Elettromagnetismo (RiNEm),* 2018. - R. Palmeri and G. Labate, "Theoretical Advantages on non-detectable objects with frequency-shifting and spatial-squeezing coating", *XXII Riunione Nazionale di Elettromagnetismo (RiNEm),* 2018. - R. Palmeri and M. T. Bevacqua, "Inverse scattering and linear sampling method for monitoring of moving targets in home automation applications", *IEEE Young Professionals Conference on Remote Sensing (YP Remote Sensing 2018)*, 2018. - R. Palmeri, M. T. Bevacqua, A. F. Morabito, and T. Isernia, "Exploiting inverse scattering methodologies to design artificial materials", In: *Proceedings of 2018 IEEE International Symposium on Antennas and Propagation*, 2018. - M. T. Bevacqua, R. Palmeri, T. Isernia, and L. Crocco, "Some consideration on the physical meaning of orthogonality sampling method", In: *Proceedings of 2018 IEEE AP-S Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting (APS/URSI 2018),* 2018. - M. T. Bevacqua, R. Palmeri, T. Isernia, and L. Crocco, "Physical interpretation of the orthogonality sampling method", In: *Proceedings on 2nd URSI Atlantic Radio Science Meeting (AT-RASC 2018)*, 2018. - R. Palmeri and T. Isernia, "A simple approach to invisibility under different linear approximations", In: *Proceedings on 2nd URSI Atlantic Radio Science Meeting (AT-RASC 2018)*, 2018. - T. Isernia and R. Palmeri, "Inverse scattering as a way to artificial dielectrics based devices", In: *Proceedings on IEEE 12th International Conference on Artificial Materials for Novel Wave Phenomena (Metamaterials 2018)*, 2018. - M. T. Bevacqua, R. Palmeri, L. Crocco, and T. Isernia, "Exploiting the orthogonality sampling method to design virtual scattering experiments", In: *Proceedings of 12th European Conference on Antennas and Propagation (EuCAP 2018)*, 2018. - R. Palmeri, M. T. Bevacqua, A. F. Morabito, and T. Isernia, "A modified contrast source inversion method for the synthesis of innovative dielectric devices", In: *Proceedings of 12th European Conference on Antennas and Propagation (EuCAP 2018)*, 2018. - R. Palmeri and T. Isernia, "Inverse Design of Multibeam GAMs-based Lens Antenna", In: *Proceedings of 13th European Conference on Antennas and Propagation (EuCAP 2019)*. - R. Palmeri, A. F. Morabito, and T. Isernia, "Planar Array Diagnosis Through Phaseless Measurements: A Compressive-Sensing Inspired

	Approach", In: *Proceedings of 13th European Conference on Antennas and Propagation (EuCAP 2019)*. - F. Morabito, P. G. Nicolaci, R. Palmeri, and T. Isernia, "Two-Dimensional Phase Retrieval as a "Crosswords" problem ", In: *Proceedings of 13th European Conference on Antennas and Propagation (EuCAP 2019)*. - F. Morabito, R. Palmeri, and T. Isernia, "A New Field Expansion Enabling the Compressive-Sensing-based Diagnosis of Realistic Planar Arrays Through Phaseless Measurements", *Progress in Electromagnetics Research Symposium (PIERS 2019).* - F. Morabito, R. Palmeri, and T. Isernia, "Phase Retrieval of Scalar Fields Radiated by Finite-Dimensional Sources Starting From Single-Surface Measurements", *Progress in Electromagnetics Research Symposium (PIERS 2019).* - R. Palmeri, M. T. Bevacqua, and T. Isernia, "Design of invisibility devices through artificial materials: further possible tools from the inverse scattering perspective", *IEEE 13th International Conference on Artificial Materials for Novel Wave Phenomena (Metamaterials 2019)*. - R. Palmeri and T. Isernia, "Towards an effective inverse design of artificial materials based devices through the Scattering Matrix Method", *European Optical Society – Optical Microsystems 2019 (OμS19)*. - R. Palmeri, A.F. Morabito, and T. Isernia, "Phase faults detection in antenna array through amplitude-only far field measurements and sparsity promotion-based techniques", *IEEE Conference on Antenna Measurements and Applications (2019 IEEE CAMA).* - R. Palmeri and T. Isernia, "Towards an Effective Inverse Design of Artificial Materials based Devices Through the Scattering Matrix Method", *accepted for 14th European Conference on Antennas and Propagation (EuCAP 2020)* - G. M. Battaglia, A. F. Morabito, R. Palmeri, and T. Isernia, "Towards 3-D Vector Intensity Focusing of Near and Far Fields", *accepted for 14th European Conference on Antennas and Propagation (EuCAP 2020)* - G. Labate, R. Palmeri, T. Isernia, and A. Alù, "Re-moving the Scattered Energy from Dielectric Objects in Spatial and Frequency Domain for Cloaking Techniques", *accepted for 14th European Conference on Antennas and Propagation (EuCAP 2020)* - M. T. Bevacqua, R. Palmeri, and T. Isernia, "On Radiating Currents and Invisible Objects in Inverse Scattering Problem", *accepted for IEEE International Conference on Computational Electromagnetics (ICCEM 2020.)*

February 2020