

## 1. CAREER SUMMARY

Full Professor on RF and Antenna design. Hands-on experience with EM simulation modeling tools and multi-objective optimization techniques.

## 3. EDUCATION

**PhD in “Radiofrequency Microwave and Electromagnetic”** *April 20, 2012*  
**Florence University** *Florence, Italy*

**Thesis:** Time Domain Analysis and Multi-Objective Optimization for Scattering and Antenna Problems

**Master's Degree in Electronic Engineering** *2008*

**Bachelor's Degree in Electronic Engineering** *2005*

**Florence University** *Florence, Italy*

## 4. CURRENT WORK POSITION

**Full Professor** *2023*

**Associated Professor** *2015-2023*

**Researcher & Lecturer** *2012 to present*

**Polytechnic University of Tirana (PUT),** *Tirana, Albania*

## 5. PREVIOUS WORK EXPERIENCE

**Expert in quality assurance in higher education institutions** *2020 to present*  
**National Quality Assurance Agency in Higher Education** *Tirana, Albania*

**Consultant: Optimization of national DVB-T2 broadcast network** *2017 – 2019*  
**DigitAlb Ltd,** *Tirana, Albania*

**Part-Time Lecturer of “Wireless Network”** *2012 – 2013*  
**Epoka University** *Tirana, Albania*

**Researcher: Automated design procedure for conflictual Multi-objective antenna design parameters** *2008 – 2011*  
**Florence University, Computational Electromagnetic Laboratory** *Florence, Italy*

**Researcher: Active Multi-Beam Antenna Concept Using Advanced Very High Order Multilayer BFN** *Jun. – Oct. 2008*  
**MECSA: Microwave Engineering Center for Space Applications** *Florence, Italy*

## 10. OTHER ACADEMIC MERITS

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### TPC member & reviewer or organizer of scientific conferences

- 2022 – TPC member; Mediterranean Microwave Symposium (MMS2022), May 9-13, 2022
- 2021 – Local Organizing Committee, “The 1st International Conference on Information Technologies and Educational Engineering (ICITEE21)” November 19-20, 2021
- 2018 – TPC member; International Conference on Computing and Network Communications (CoCoNet’18), ISBN: 978-1-5386-5928-1
- 2018 – TPC member; 6th International Conference on Emerging Internet, Data & Web Technologies (EIDWT-2018), ISBN: 978-3-319-75927-2
- 2016 – Local Organizing Committee, “13<sup>th</sup> international Workshop on Finite Elements for Microwave Engineering”, May 16-18, 2016, Florence, Italy

### Administrative responsibilities at higher education institutions

- Higher education reviewing expert at National Quality Assurance Agency in Higher Education, Albania
- Administrative board of Master of Science in Telecommunication Engineering, at PUT, Albania

## 11. SCIENTIFIC AND SOCIETAL IMPACT OF RESEARCH

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Partial list of publications can be consulted using:

- ORCID <http://orcid.org/0000-0001-5945-1664>

### Books and books chapters

- **E. Agastra**, ed. “Technology of audio/audiovisual transmissions in the digital age”, AIBE – Albanian Institute of Broadcast Engineers, Mediaprint, 114 pp, 2021, ISBN: 978-9-9280-8499-6
- **E. Agastra**, G. Pelosi, S. Selleri, R. Taddei, “Multi-Objective Optimization Techniques”, In Wiley Encyclopedia of Electrical and Electronics Engineering, Vol. 1-29, Sept. 2014, ISBN: 978-0-4713-4608
- **E. Agastra**, “Time Domain Analysis and Multiobjective Optimization in RF Engineering”, Lambert Academic Publishing, 204 pages, Nov. 2012. ISBN-13: 978-3-8383-4565-9.

### Publications in scientific peer-reviewed journals (10 more relevant to this application)

- **E. Agastra**, A. Biberaj, O. Shurdi, and B. Kamo, “Bistatic RCS Control on Slot-sinusoidal Antenna by Adding 3 and 5 Parasitic Ellipses Openings”, Progress in Electromagnetic Research M (PIER M), Vol. 113, pp. 73-86, Sept. 2022, ISSN 1937-8726
- **E. Agastra**, A. Biberaj, E. Mihaj, B. Kamo. “Power Amplifier Non Linearities and Pre-Correction Module Impact on DVB-T2 OFDM Transmitter System”, International Journal on Information Technologies and Security, No.4 (vol. 13), pp. 35-46, 2021, ISSN 1313-8251
- J. Imami, **E. Agastra**, A. Biberaj, “Multi-beam Antenna Array Operating Over Switch On/Off Element Condition”, International Journal of Advanced Computer Science and Applications (IJACSA), Vol.12, No. 1, pp. 373 – 378, Feb. 2021, ISSN: 2156-5570
- **E. Agastra**, J. Imami, O. Shurdi, “Binary operating antenna array elements by using Hausdorff and Euclidean metric distance”, International Journal of Advanced Computer Science and Applications (IJACSA), Vol.11, No. 10, pp. 132 – 136, Dec. 2020, ISSN: 2156-5570
- **E. Agastra**, G. Pelosi, S. Selleri, R. Taddei, “Taguchi’s Method for Multi-Objective Optimization Problems”, International Journal of RF and Microwave Computer-Aided Engineering, Vol. 54, No. 3, pp. 357-366, May, 2013, ISSN: 1099-047X

- **E. Agastra**, G. Pelosi, and S. Selleri, "Attachment modes in the Method of Moments in Time-Domain", Progress In Electromagnetics Research B, Vol. 46, pp. 317-336, 2013, ISSN: 1937-6472
- **E. Agastra**, L. Lucci, G. Pelosi and S. Selleri, "High Gain Compact Strip and Slot UWB Sinuous Antennas", International Journal of Antennas and Propagation, vol. 7, no. 6, pp. 1-9, 2012, ISSN: 1687-5869
- **E. Agastra**, C. Dedeban, G. Guarnieri, S. Maddio, G. Pelosi, Ch. Pichot, S. Selleri, "Space and time basis function design for the method of moments in time domain analysis of wire and planar structures," International Journal of RF and Microwave Computer-Aided Engineering, vol. 21, no. 5, pp. 551 – 559, Sept. 2011, ISSN: 1099-047X
- **E. Agastra**, L. Lucci, R. Nesti, G. Pelosi, S. Selleri, "Modified NSGA-II algorithm for multiobjective optimization of high-efficiency and compact rectangular horn," International Journal of RF and Microwave Computer-Aided Engineering, vol. 21, pp. 174-181, March 2011, ISSN: 1099-047X
- **E. Agastra**, G. Bellaveglia, L. Lucci, R. Nesti, G. Pelosi, G. Ruggerini, and S. Selleri, "Genetic algorithm optimization of high-efficiency wide-band multimodal square horns for discrete lenses," Progress In Electromagnetics Research, Vol. 83, pp. 335-352, 2008, ISSN: 1559-8985

#### **International conference proceedings (6 more relevant to this application)**

- **E. Agastra**, A. Biberaj, O. Shurdi, B. Kamo, A. Rakipi, "RCS analysis on ultra-wideband sinuous antenna with elliptical slots", 21st Mediterranean Microwave Symposium (MMS), 2022, 9-13 May, 2022, Pizzo Calabro, Italy, IEEE Proceedings of MMS 21, ISBN: 978-1-6654-7110-7
- A. Lala, B. Kamo, J. Jorgji, E. Agastra, "Modeling of Radio Base Stations with the Numerical FDTD Method, for the Electromagnetic Field Evaluation," 6th International Conference on Emerging Internet, Data & Web Technologies, Tirana, Albania, March 15-17, 2018, Proceedings of EIDWT-2018, Springer International Publishing, LNDECT 17, pp. 968-977, ISBN: 978-3-319-75927-2
- **E. Agastra**, "X-Band waveguide diplexer design with relaxed fabrication tolerance", XXI – RiNEm – Italian Meeting on Electromagnetics, Parma – Italy, 12 - 14 Sept. 2016, Proceedings of the XXI RiNEm, pp. 71 – 74, ISBN: 978-88-907599-1-8
- **E. Agastra**, A. Lala, B. Kamo, L. Ntibarikure, "Efficient FEM software package integration with evolutionary algorithms for large electromagnetic problems," Proceedings of the 13th International Workshop on Finite Elements for Microwave Engineering - FEM2016, p. 169, May 16-18, 2016, Florence, Italy, ISBN: 978-88-6655-967-2
- **E. Agastra**, B. Kamo, A. Lala, I. Shinko, Sh. Cakaj, "Method of Moments in Time Domain Comprising WGM, SPM and Attachment Modes: Stability Issues," IEEE, 10th European Conference on Antennas and Propagation (EuCAP), Davos, Switzerland, 10-15 April 2016, pp. 1320-1324, ISBN: 978-88-907018-6-3
- **E. Agastra**, A. Lala, B. Kamo, D. Kina, "Low cost QoS and RF power measuring tool for 2G/3G mobile network using Android OS platform", IEEE, 11th International Wireless Communications and Mobile Computing Conference (IWCMC 2015), Dubrovnik, Croatia, 24-28 Aug. 2015, pp. 1324-1328, ISBN: 978-1-4799-5343-1