Nicola Anselmi

QUALIFICATIONS

08/02/2023 – CURRENT
Italian National Qualification - Full Professor

Abilitazione Scientifica Nazionale (ASN), “I Fascia”, Settore Concorsuale 09/F1 (Campi Elettromagnetici)

09/05/2019 – CURRENT
Italian National Qualification - Associate Professor

Abilitazione Scientifica Nazionale (ASN), “II Fascia”, Settore Concorsuale 09/F1 (Campi Elettromagnetici)

24/02/2019 – CURRENT
Qualification aux fonctions de maître de conférences (MCF)

Section 63 Electrical, Electronic, Photonic and Systems Engineering (Qualification aux fonctions de maître de conférences, Section 63 - Génie électrique, électronique, photonique et systèmes)

29/11/2021 – CURRENT
IEEE Senior Member

EDUCATION AND TRAINING

31/10/2013 – 22/04/2018
PH.D. DEGREE IN INFORMATION AND COMMUNICATION TECHNOLOGY University of Trento - Information and Communication Technology Doctoral School – Cycle XXIX

31/01/2010 – 30/10/2012
MASTER DEGREE IN TELECOMMUNICATION ENGINEERING University of Trento

31/08/2005 – 27/11/2009
BACHELOR DEGREE IN TELECOMMUNICATION ENGINEERING University of Padova

WORK EXPERIENCE

UNIVERSITY OF TRENTO

ASSISTANT PROFESSOR (RTD-A) – 15/07/2020 – 19/07/2025

D.R. n. 214 20-03-2020, Settore Concorsuale 09/F1 (Campi Elettromagnetici).

UNIVERSITY OF TRENTO

POSTDOCTORAL RESEARCHER (ASSEGNISTA DI RICERCA) – 19/11/2019 – 14/07/2020

SC: 09/F1 “Campi Elettromagnetici”; SSD: ING-INF/02 “Campi Elettromagnetici”. Title of the research activity: “Tecniche innovative per lo studio e sviluppo di antenne a schiera clustered non convenzionali per applicazioni in ambito radar e di comunicazione”.

UNIVERSITY OF GENOVA

POSTDOCTORAL RESEARCHER (ASSEGNISTA DI RICERCA) – 03/09/2018 – 02/09/2019

SC: 09/F1 “Campi Elettromagnetici”; SSD: ING-INF/02 “Campi Elettromagnetici”. Title of the research activity: “Studio e sviluppo di metodologie innovative per la progettazione, analisi numerica, e sintesi di architetture non convenzionali per antenne a schiera di prossima generazione”.

MEMBER OF THE ELEDIA@UNITN – 01/11/2012 – CURRENT

The research activity of Dr. Nicola Anselmi is mainly concerned with (*a*) the development of advanced methodologies for the design and the analysis of unconventional antenna arrays with electronic scanning for advanced sensing and communication systems and (*b*) the theoretical study and the numerical implementation of innovative methodologies for the solution of inverse problems within the framework of electromagnetic diagnostics.

TEACHING/ADVISING

Teacher of the following university level courses at the University of Genova

- "Elementi di Elettromagnetismo", Dipartimento di Ingegneria Civile, Chimica e Ambientale, University of Genova (a. a. 2023/2024 - 3 ECTS)
- "Electromagnetic Propagation", Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni, University of Genova (a. a. 2023/2024 - 5 ECTS)
- "Elementi di Elettromagnetismo", Dipartimento di Ingegneria Civile, Chimica e Ambientale, University of Genova (a. a. 2024/2025 - 3 ECTS)
- "Electromagnetic Propagation", Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni, University of Genova (a. a. 2024/2025 - 5 ECTS)

Co-Teacher of the following university level courses at the University of Trento

- “Antenna Array Theory and Synthesis Methods”, Master’s Degree in Civil Engineering, Dipartimento di Ingegneria Civile, Ambientale e Meccanica (a. a. 2024/2025 – 6 ECTS)
- “Quantum Electromagnetics”, Master’s Degree in Physics, Dipartimento di Fisica (a. a. 2024/2025 – 6 ECTS)

Co-Teacher of 7 International PhD Summer Schools within the ICAM Doctoral School of the University of Trento

- Advanced Sampling and Retrieval Methods - The Compressive Processing Paradigm, 13 - 17 Jun. 2022, Trento, Italy
- Global Optimization Methods - Theory, Techniques, and Advanced Engineering Applications, 1 - 10 Jul. 2023, Trento, Italy
- Inverse Problems (Ill-Posedness and Regularization): Theory, Techniques, and Engineering Applications, 25 - 29 Jul. 2022, Trento, Italy
- Inverse Problems (Ill-Posedness and Regularization): Theory, Techniques, and Engineering Applications, 28 Aug. - 01 Sep. 2023, Trento, Italy
- Advanced Sampling and Retrieval Methods - The Compressive Processing Paradigm, 23 - 27 Oct. 2023, Trento, Italy
- Inverse Problems and Imaging, 22 - 26 Jul. 2024, Trento, Italy
- Radar Systems and Technologies, Jul. 29 - 02 Aug. 2024, Trento, Italy

Co-Teacher of 6 International PhD courses within the “European School of Antennas (ESoA)"

- Compressive Sensing in Electromagnetics, 18-22 Mar. 2019, Riva del Garda, Trento, Italy
- Microwave Imaging and Diagnostic – Theory, Techniques and Applications, 1-5 Feb. 2021, Naples, Italy
- Compressive Sensing in Electromagnetics, 25-29 Oct. 2021, Riva del Garda, Trento, Italy
- Arrays and Reflectarrays, 26-30 Sep. 2022, UCL Louvain La Neuve, Belgium
- Quantum Electromagnetics - Modeling the nanoscale in the real world, 21-25 Nov. 2022, Madonna di Campiglio, Trento, Italy
- Arrays and Reflectarrays, 09-13 Sep. 2024, UCL Louvain La Neuve, Belgium

Co-Teacher of 3 Short Courses

- Short Course on “Antenna Array Synthesis – Theory, Techniques, and Applications,” at the International Conference on Microwaves, Communications, Antennas, Biomedical Engineering & Electronic Systems (IEEE COMCAS 2021), Nov. 1-3, 2021, Tel Aviv, Israel
- Short Course on “Inverse Scattering and EM Imaging – Theory, Techniques, and Applications,” at the International Conference on Microwaves, Communications, Antennas, Biomedical Engineering & Electronic Systems (IEEE COMCAS 2021), Nov. 1-3, 2021, Tel Aviv, Israel
- Short Course on “Quantum Electromagnetics and Its Applications,” at the IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (IEEE-APS/URSI), July 23–28, 2023, Portland, Oregon, USA

Teaching Assistant of 10 courses in the area of Electromagnetic Fields

Bachelor and Master level Courses belonging to the "Settore Concorsuale 09/F1 (Campi Elettromagnetici)" [SSD ING-INF/02 - Campi Elettromagnetici] at the University of Trento, Italy:

- "Electromagnetic Propagation" – 2017/2018 Bachelor Degree in Electronic and Telecommunications Engineering
- "Wired Communication System and Devices" – 2017/2018 Master Degree in Telecommunications Engineering
- "Electromagnetic Propagation" – 2016/2017 Bachelor Degree in Electronic and Telecommunications Engineering
- "Wired Communication System and Devices" – 2016/2017 Master Degree in Telecommunications Engineering
- "Wired Communication System and Devices" – 2015/2016 Master Degree in Telecommunications Engineering
- "Optimization Algorithms and Techniques" – 2015/2016 Master Degree in Telecommunications Engineering
- "Electromagnetic Propagation" – 2014/2015 Bachelor Degree in Electronic and Telecommunications Engineering
- "Wired Communication System and Devices" – 2014/2015 Master Degree in Telecommunications Engineering
- "Wired Communication System and Devices" – 20013/2014 Master Degree in Telecommunications Engineering
- "Wired Communication System and Devices" – 2012/2013 Master Degree in Telecommunications Engineering

Teaching Assistant of 3 courses within the "European Institute of Innovation and Technology (EIT)" Master School, University of Trento

- EIT – 2017/2018 Master School of the EIT, University of Trento, Italy
- EIT – 2016/2017 Master School of the EIT, University of Trento, Italy
- EIT – 2015/2016 Master School of the EIT, University of Trento, Italy

Advisor/Co-Advisor of 9 Master Thesis at the University of Trento

- Co-Advisor of Mohammad Abdul Hannan, "Wavelet-Based Compressive Sensing Imaging of 2D Non-Sparse Scatterers", Master Thesis in Telecommunication Engineering, University of Trento (a. a. 2014/2015)
- Co-Advisor of Marco Califano, "Study and Development of an Innovative Tolerance Analysis Tool for Membrane Reflector Antennas Based on Interval Analysis", Master Thesis in Telecommunication Engineering, University of Trento (a. a. 2015/2016)
- Co-Advisor of Matteo Fioranzato, "Hexagonal Aperture Phased Array Tiling using an Integer-based Genetic Algorithm Optimization", Master Thesis in Telecommunication Engineering, University of Trento (a. a. 2017/2018)
- Co-Advisor of Gianluca Zampieri, "Innovative Modular Strategy For Satellite Antenna Array Design," Master Thesis in Telecommunication Engineering, University of Trento (a. a. 2018/2019)
- Co-Advisor of Benoni Arianna, " An Innovative Minkowski-Sum Based Methodology for Exact Tolerance Analysis of Continuous and Discrete Antennas," Master Thesis in Information and Communication Engineering, University of Trento (a. a. 2019/2020)
- Advisor of Tahir Amna, "Innovative Design of Tiled Phased Arrays for Satcoms and CubeSat Applications", Master Thesis in Information and Communication Engineering, University of Trento (a. a. 2021/2022)
- Advisor of Kapidis Fivos, "Innovative Synthesis of High-Frequency Radar Sensors Through the System-by-Design", Master Thesis in Information and Communication Engineering, University of Trento (a. a. 2021/2022)
- Advisor of Viviani Nicolò, "Artificial Intelligence-driven Design of Unconventional Antenna Array Architectures For Modern Wireless Communication Systems," Master Thesis in Information and Communication Engineering, University of Trento (a. a. 2021/2022)
- Advisor of Jarozweski Filip, "Innovative two-sizes tiling optimization method for dual-band interleaved phased array architectures," Master Thesis in Computer, Communications and Electronic Engineering, University of Trento (a. a. 2023/2024).

Advisor/Co-Advisor of 9 Bachelor Thesis at the University of Trento

- Co-Advisor of Niccolò Bisagno, "Testing of a Non-Linear Compressive Sensing Solver for 2D Microwave imaging Applications", Bachelor Thesis in Telecommunication Engineering, University of Trento (a. a. 2013/2014)
- Co-Advisor of Elia Mantovani, "Half-Space Biomedical Imaging of Sparse Pathologies Using a Wavelet Based Compressive Sensing Technique and a Multi Frequency Strategy", Bachelor Thesis in Telecommunication Engineering, University of Trento (a. a. 2014/2015)
- Co-Advisor of Alessandro Passarini Alessandro, "Cross-Borehole Imaging of Sparse Buried Objects by Means of a Wavelet Based Compressive Sensing Approach and a Single Frequency Strategy", Bachelor Thesis in Telecommunication Engineering, University of Trento (a. a. 2015/2016)
- Co-Advisor of Federico Boulos, "A Compressive Sensing Based Multi-Resolution Approach for Microwave Imaging", Bachelor Thesis in Telecommunication Engineering, University of Trento (a. a. 2016/2017)
- Co-Advisor of Giulia Tabarelli De Fatis, "Half-Space Biomedical Imaging of Sparse Targets by Means of a Compressive Sensing Approach", Bachelor Thesis in Telecommunication Engineering, University of Trento (a. a. 2016/2017)
- Co-Advisor of Francesco Zardi, "A Graph-based Search Method for Fast Phased Array Tiling Optimization", Bachelor Thesis in Telecommunication Engineering, University of Trento (a. a. 2016/2017)
- Co-Advisor of Tosi Luca, "Quantum Computing Methodologies for the Analysis and Synthesis of Array Antennas," Master Thesis in Information and Communication Engineering, University of Trento (a. a. 2021/2022)

- Advisor of Centa Andrea Remo, “Wide-scanning Phased Array Antenna Design for Scan-loss Mitigation”, Bachelor Thesis in Computer, Communications and Electronic Engineering, University of Trento (a. a. 2021/2022)
- Advisor of Amadei Emanuele, “Entropy-Driven Optimization of Irregularly Tiled Phased Arrays”, Bachelor Thesis in Computer, Communications and Electronic Engineering, University of Trento (a. a. 2021/2022)

ABROAD RESEARCH EXPERIENCES

11/2015 – 12/2015

Visiting Scientist at the Laboratoire des Signaux et Systèmes (L2S)

CentraleSupélec, Gif-Sur-Yvette, France (contact: Dr. D. Lesselier)

12/2015 – 07/2017

Visiting PhD Student at the Laboratoire des Signaux et Systèmes (L2S)

CentraleSupélec, Gif-Sur-Yvette, France (contact: Dr. D. Lesselier)

TECHNOLOGICAL TRANSFER

2017 – CURRENT

Scientific Coordinator of 5 industrial and institutional projects funded by public and private institutions

Main partners: European Space Agency, Agency of Defence Development of the Republic of Korea, Huawei Technologies CO., LTD, Huawei Technologies Dusseldorf GmbH

2011 – CURRENT

Participant in 21 industrial and institutional projects funded by public and private institutions

Main partners: Huawei Technologies, Leonardo Finmeccanica S.p.A., Selex ES, Elettronica S.p.A., MIUR, DIGITEO, Ministero degli Affari Esteri e della Cooperazione Internazionale, Virtual Institute for Artificial Electromagnetic Materials and Metamaterials, Provincia Autonoma di Trento

EDITORIAL ACTIVITIES

06/2022 – CURRENT

Associate Editor of the IEEE Antennas Wireless and Propagation Letters

07/2022 – CURRENT

Associate Editor of the IEEE Open Journal of Antennas and Propagation

INVITED CONTRIBUTIONS AND TALKS

25 Invited contributions in scientific sessions

- Session “Inversion methods for electromagnetic imaging and applications” EMTS 2013, Hiroshima, Japan, May 20-24, 2013
- Session “Advanced design and optimization techniques for phased arrays” EUCAP 2014, The Hague, The Netherlands, Apr. 6-11, 2014
- Session “Inverse scattering and applications” PIERS 2016 in Shanghai, China, Aug. 8-11, 2016
- Session “Compressed sensing adopted to RF” EUCAP 2016, Davos, Switzerland, Apr. 11-15, 2016
- Session "Computational imaging at microwave, millimeter wave, and terahertz frequencies" IEEE APS/URSI, Fajardo, Puerto Rico, Jun. 26 - Jul. 1, 2016
- Session “Inverse Scattering and Imaging” EMTS 2016, Espoo, Finland, Aug. 14-18, 2016
- Session “Emerging Strategies for the Synthesis of Innovative Array-Antenna Architectures” EUCAP 2017, Paris, France, Mar. 19-24, 2017
- Session "Current Trends and Advances in Computational Inverse Scattering: Theory, Techniques, and Application" APCAP 2017, Xi’an, China, Oct. 16-19, 2017
- Session “Inverse Problems: Theory, Techniques, and Applications” EUCAP 2018, London, United Kingdom, Apr. 9-13, 2018
- Session “Beamforming techniques for information and power transmission” EUCAP 2018, London, United Kingdom, Apr. 9-13, 2018
- Session “Emerging Approaches and Future Trends in Electromagnetic Inverse Problems“ IEEE APS/URSI, Boston, Massachusetts, USA, Jul. 8-13, 2018
- Session “Innovative Phased Array Technology and Applications” IEEE AP-S/USNC-URSI, Boston, Massachusetts, USA, Jul. 8-13, 2018

- Session “Circuits & Systems for Compressed Sensing in the Internet of Things Era” ISCAS 2018, Florence, Italy, May 27-30, 2018
- Session "Unconventional techniques and applications for inverse scattering problems" EUCAP 2019, Krakow, Poland, Mar. 31 - Apr. 5, 2019
- Session “Low-Cost Phased Array Technology” IEEE AP-S/USNC-URSI, Atlanta, Georgia, USA, Jul. 7-12, 2019
- Session “Innovative Reconfigurable and Multifunction Antenna Arrays” IEEE APS/URSI, Atlanta, Georgia, USA, Jul. 7-12, 2019
- Session “Array design III” IEEE International Symposium on Phased Array Systems & Technology, Boston, MA, USA, Oct. 15-18, 2019
- Session “Antenna Arrays” IEEE COMCAS 2019, Tel Aviv, Israel, Nov. 4-6, 2019
- Session “Antenna Design and Applications II” IEEE APMC, Singapore, Dec. 10-13, 2019
- Session “Unconventional Design Approaches for Low Cost Antennas” IEEE APS/URSI, Singapore, Dec. 4–10, 2021
- Session “Innovative Trends in Antenna Tolerance Analysis and Robust Design” IEEE APS/URSI, Singapore, Dec. 4–10, 2021
- Session “Towards a Smart EM Environment: Network, Hardware and Electromagnetic Perspectives” IEEE APS/URSI, Denver, Colorado, USA, Jul. 15-07, 2022
- Session “Antenna Design for Wireless Power Transmission/RF Energy Harvesting” EUCAP 2023, Florence, Italy, Mar. 26-31, 2023
- Session “Quantum Electromagnetics - From Photonics to Quantum Computing” EUCAP 2023, Florence, Italy, Mar. 26-31, 2023
- Session “Current Trends and Advances in Antenna Array Synthesis” IEEE COMCAS 2023, Tel Aviv, Israel, Nov. 6-8, 2023

7 Invited contributions to International journals and books

- In August 2016, he has been invited by Prof. N. Shinohara to contribute with a book chapter to the book “Wireless Power Transfer – Theory, Technology, and Applications” (Springer-Verlag Berlin Heidelberg, ISBN 978-3-642-12869-1)
- In March 2017, he has been invited by Prof. P. K. Choudhury to contribute with a review article on learning-by-examples techniques as applied to electromagnetics on the Journal of Electromagnetic Waves & Applications
- In January 2018, he has been invited by Prof. S. K. Goudos to contribute with a paper at the “Special Issue on Optimization methods for Key Enabling Technologies: 5G, IoT and Big Data” of the EURASIP Journal on Wireless Communications and Networking
- In October 2019, he has been invited to contribute with a book chapter “Optimal trade-off synthesis for future generation phased arrays @ ELEDIA Research Center,” CNIT Technical Reports – Technical Report-04 on ‘Italian Perspectives on Antennas for Next Generation Communications,’ Eds. G. Di Massa and S. Costanzo, pp. 81-98, February 2020 (ISBN: 9788894982312)
- In April 2021 he has been invited by Prof. D. H. Werner to contribute with a book chapter to the book “ Advances in Electromagnetic Empowered by Artificial Intelligence and Deep Learning” (Wiley-IEEE Press, Eds. S. D. Campbell and D. Werner)
- In July 2022, he has been invited to contribute with a book chapter “On the Role and the Exploitation of the Information in Inverse Scattering Problems for Microwave Imaging - Theory, Numerical Tools, and Applications,” Technical Report-10 on ‘Microwave Imaging based on Inverse Scattering: Techniques, Systems and Applications,’ Eds. M. Pastorino and A. Randazzo, pp. 1-16, April 2023 (ISBN: 9788894982633)
- In July 2022 he has been invited by Prof. A. Moeness to contribute with a book chapter “Sparse Arrays for Radar, Sonar, and Communications” (Wiley-IEEE Press, Eds. A. Moeness)

2013 – CURRENT

24 Presentations as a speaker in national and international conferences

24/05/2022

3 Invited lectures and seminars

- Invited Lectures on “Introduction to Antennas and Array Antennas” School of Mechanical and Electrical Engineering, Xidian University, 20-23 May, 2025, Xi’an, China (Reference: Prof. Peng LI);
- Invited lectures on "Antenna Array Synthesis - Theory, Fundamentals, and Latest Advances" at the University of Salento, 8-16 November, 2022, Lecce, Italy (Reference: Prof. Luciano TARRICONE);
- Invited Seminar on “Antenna Tolerance Analysis: Latest Advances and Innovative Solutions” University of Salento, 24 May 2022, Lecce, Italy (Reference: Prof. LucianoTARRICONE)

HONOURS AND AWARDS

2016

"Giorgio Barzilai" Prize for Young Researchers – Italian Electromagnetic Society (SIEM)

2017
Third Prize of the "Annual Student Poster Competition" – the Quantitative Nondestructive Evaluation (QNDE 2017) Conference

2018
"Young Scientist" Prize – Applied Computational Electromagnetics Society (ACES)

2019
"Mini-Circuits Harvey Kaylie Best Paper Prize" – IEEE International Conference on Microwaves, Communications, Antennas & Electronic Systems (COMCAS)

2020
Outstanding Reviewer Award – IEEE Transactions on Antennas and Propagation

2021
Outstanding Reviewer Award – IEEE Transactions on Antennas and Propagation

2023
Top Reviewer Award – IEEE Transactions on Antennas and Propagation

2024
Top Reviewer Award – IEEE Transactions on Antennas and Propagation

SCIENTIFIC CHAIRING/ORGANIZATION

Member of the organization committee of 3 Workshops

- International Workshop on Metamaterials-by-Design (IWMbD 2015), 3-4 Dec. 2015, CentraleSupélec, Paris Saclay, France
- International Workshop on Metamaterials-by-Design (IWMbD 2016), 15-16 Dec. 2016, Riva del Garda, Trento, Italy
- International Workshop on Metamaterials-by-Design (IWMbD 2017), 14-15 Dec. 2017, UC3M Campus de Madrid, Madrid, Spain

Member of the scientific committee in 3 international conferences

- the 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radi Science Meeting (APS/URSI 2019), Atlanta, Georgia, USA, July 7 - 12, 2019
- the European Conference on Antennas and Propagation 2019 (EuCAP 2019), Krakow, Poland, March 31 - April 5, 2019
- the European Conference on Antennas and Propagation 2020 (EuCAP 2020), Copenhagen, Denmark, March 15 - 20, 2020
- the European Conference on Antennas and Propagation 2023 (EuCAP 2023), Florence, Italy,March 26 - 31, 2023

Co-Organizer of 9 special sessions in international scientific conferences

- Co-organizer of a special session titled "Innovative Antenna Synthesis Paradigm for New Generation Telecommunications Systems" *Sixth Asia-Pacific Conference on Antennas and Propagation (APCAP 2017)*, Xi'An, China, October 16-19, 2017
- Co-organizer of a special session titled "Compressive Sensing as Applied to Antennas and Applications" at the *2018 IEEE International Conference on Antennas and Applications (2018 IEEE CAMA),* Västerås, Sweden, September 3-6, 2018
- Co-organizer of a special session titled "Compressive Sensing in Applied Computational Electromagnetics - Trends and Advances" at the *2018 International Applied Computational Electromagnetics Society (ACES) Symposium*, Beijing, China, July 29 – August 1, 2018
- Co-organizer of a special session titled "Signal Processing Techniques for Advanced Electromagnetics Synthesis, Analysis, and Measurements" at the *13th European Conference on Antennas and Propagation (EuCAP 2019)*, Krakow, Poland, 31 March – 5 April, 2019
- Co-organizer of a special session titled "Innovative Reconfigurable and Multifunction Antenna Arrays" at the *2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI)*, Atlanta, Georgia, USA on July 7–12, 2019
- Co-organizer of a special session titled "Signal Processing Techniques for Advanced Electromagnetics Synthesis, Analysis, and Measurements" at the *14th European Conference on Antennas and Propagation (EuCAP 2020)*, Copenhagen, Denmark, 15 – 20 March, 2020

- Co-organizer of a special session titled "Unconventional Design Approaches for Low Cost Antennas" at the *2021 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI)*, Singapore, December 4 – 10, 2021
- Co-organizer of a special session titled "Trends and Evolution of Unconventional Antenna Arrays towards 6G Communications and Multifunction Radars" at the *2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI)*, Denver, Colorado, USA, July 10 – 15, 2022
- Co-Organizer of a special session titled "Quantum Electromagnetics - From Photonics to Quantum Computing" at the *17th European Conference on Antennas and Propagation (EuCAP 2023)*, Florence, Italy, 26 – 31 March, 2023

Co-Chair of 11 sessions in international scientific conferences

- Co-chair of a special session titled "Innovative Antenna Synthesis Paradigm for New Generation Telecommunications Systems" *Sixth Asia-Pacific Conference on Antennas and Propagation (APCAP 2017)*, Xi'An, China, October 16-19, 2017
- Co-chair of a special session titled "Compressive Sensing as Applied to Antennas and Applications" at the *2018 IEEE International Conference on Antennas and Applications (2018 IEEE CAMA),* Västerås, Sweden, September 3-6, 2018
- Co-chair of a special session titled "Compressive Sensing in Applied Computational Electromagnetics - Trends and Advances" at the *2018 International Applied Computational Electromagnetics Society (ACES) Symposium*, Beijing, China, July 29 – August 1, 2018
- Co-chair of a convened session titled "Signal Processing Techniques for Advanced Electromagnetics Synthesis, Analysis, and Measurements" at the *13th European Conference on Antennas and Propagation (EuCAP 2019)*, Krakow, Poland, 31 March – 5 April, 2019
- Co-chair of a special session titled "Innovative Reconfigurable and Multifunction Antenna Arrays" at the *2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI)*, Atlanta, Georgia, USA on July 7–12, 2019
- Co-chair of a special session titled "Unconventional Design Approaches for Low Cost Antennas" at the *2021 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI)*, Singapore, December 4 – 10, 2021
- Co-chair of a session titled "Low Cost Antenna Design and Analysis" at the *2021 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI)*, Singapore, December 4–10, 2021
- Co-chair of a session titled "Adaptive, Reconfigurable and Active Antennas" at the *2021 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI)*, Singapore, December 4–10, 2021
- Co-chair of a special session titled "Trends and Evolution of Unconventional Antenna Arrays towards 6G Communications and Multifunction Radars" at the *2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI)*, Denver, Colorado, USA, July 10 – 15, 2022
- Co-chair of a convened session titled "Quantum Electromagnetics - From Photonics to Quantum Computing" at the *17th European Conference on Antennas and Propagation (EuCAP 2023)*, Florence, Italy, 26 – 31 March, 2023
- Co-chair of a session titled "mm-wave Phased Arrays" at the *17th European Conference on Antennas and Propagation (EuCAP 2023)*, Florence, Italy, 26 – 31 March, 2023

MEMBERSHIP AND REVIEWER ACTIVITIES

Member of 4 scientific institutions (i.e., IEEE, IEEE-AP, CNIT, SIEM)

2013 – CURRENT

Reviewer for 21 international journals

- IET Microwaves, Antennas and Propagation (since 2013)
- IEEE Antennas and Wireless Propagation Letters (since 2016)
- IEEE Transactions on Antennas and Propagation (since 2017)
- IEEE Transactions on Microwave Theory and Techniques (since 2018)
- IEEE Journal on Multiscale and Multiphysics Computational Techniques (since 2018)
- IEEE Transactions on Aerospace and Electronic Systems (since 2019)
- IEEE Internet of Things Journal(since 2019)
- IEEE Access (since 2020)
- IEEE Open Journal of Antennas and Propagation (since 2022)
- IEEE Transactions on Vehicular Technologies (since 2022)
- Journal of Mechanical Engineering Science (since 2017)
- Signal Processing: Image Communication (since 2019)
- Engineering Structures (since 2019)
- Applied Mathematical Modellings (since 2019)
- EPJ Applied Metamaterials (since 2020)
- International Journal of Antennas and Propagation (since 2021)
- International Journal of Microwave and Wireless Technologies (since 2022)
- Electronics Letters (since 2022)

- Applied Sciences (since 2022)
- The Journal of the Acoustical Society of America (since 2023)
- Journal of Optics (since 2024)

Reviewer for 15 conferences

- International Applied Computational Electromagnetics Society (ACES) Symposium held in Beijing, China, July 29 – August 1, 2018
- 13th European Conference on Antennas and Propagation (EuCAP 2019), Krakow, Poland, 31 March – 5 April, 2019
- IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI), Atlanta, Georgia, USA, July 7–12, 2019
- International Applied Computational Electromagnetics Society (ACES) Symposium held in Nanjing China, 8 – 11 August, 2019
- 14th European Conference on Antennas and Propagation (EuCAP 2020), Copenhagen, Denmark, 15 – 20 March, 2020
- IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI), Montréal, Québec, Canada July 5–10, 2020
- 15h European Conference on Antennas and Propagation (EuCAP 2021), Düsseldorf, Germany, 22 – 26 March, 2021
- IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI), Singapore, Singapore, December 4–10, 2021
- 16h European Conference on Antennas and Propagation (EuCAP 2022), Madrid, Spain, 27 March – 1 April, 2022
- IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI), Denver, Colorado, USA, July 10–15, 2022
- 17h European Conference on Antennas and Propagation (EuCAP 2023), Florence, Italy, 26 March – 31 March, 2023
- IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI), Portland, Oregon, USA, July 23–29, 2023.
- 18h European Conference on Antennas and Propagation (EuCAP 2024), Glaskow, Scotland, 17 March – 22 March, 2024. IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI), Florence, Italy, July 14–19, 2024.
- 19h European Conference on Antennas and Propagation (EuCAP 2025), Stokholm, Sweden, 30 March – 4 April, 2025.
- IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI), Ottawa, Canada, July 13–18, 2025.

PUBLICATIONS SUMMARY

Scopus Profile: 55749784900

https://www.scopus.com/authid/detail.uri?authorId=55749784900

ORCID Profile: 0000-0001-5970-5679

https://orcid.org/0000-0001-5970-5679

DECLARATIONS

Acconsento alla pubblicazione del mio CV in ottemperanza alle disposizioni di legge dettate in materia di trasparenza (D.Lgs. 33/2013)

Trento, 11 Agosto 2025
Nicola Anselmi

Nicola Anselmi

Firmato digitalmente da Nicola Anselmi
ND: cn=Nicola Anselmi, o=University of Trento, ou=ELEDIA@UniTN - University of Trento, email=nicola.anselmi@eledia.org, c=IT
Data: 2025.08.11 17:57:18 +02'00'

PUBLICATIONS LIST

Refereed Journal Papers

[R1] P. Rocca, L. Manica, N. Anselmi, and A. Massa, "Analysis of the pattern tolerances in linear arrays with arbitrary amplitude errors," *IEEE Antennas and Wireless Propagation Letters*, vol. 12, no. 1, pp. 639-642, May 2013 (DOI: 10.1109/LAWP.2013.2261912).

[R2] L. Manica, N. Anselmi, P. Rocca, and A. Massa, "Robust mask-constrained linear array synthesis through an interval-based particle swarm optimisation," *IET Microwaves, Antennas & Propagation*, vol. 7, no. 12, pp. 976-984, 2013 (DOI: 10.1049/IET-MAP.2013.0203).

[R3] N. Anselmi, L. Manica, P. Rocca, and A. Massa, "Tolerance analysis of antenna arrays through interval arithmetic," *IEEE Transactions on Antennas and Propagation*, vol. 61, no. 11, pp. 5496-5507, Aug. 2013 (DOI: 10.1109/TAP.2013.2276927).

[R4] P. Rocca, L. Manica, N. Anselmi, and A. Massa, "Optimal synthesis of robust beamformer weights exploiting interval analysis and convex optimization," *IEEE Transactions on Antennas and Propagation*, vol. 62, no. 7, pp. 3603-3612, Jul. 2014 (DOI: 10.1109/TAP.2014.2318071).

[R5] T. Moryama, L. Poli, N. Anselmi, M. Salucci, and P. Rocca, "Real array pattern tolerances from amplitude excitation errors," *IEICE Electronics Express*, vol. 11, no. 17, pp. 1-8, Aug. 2014 (DOI: 10.1587/elex.11.20140571).

[R6] G. Oliveri, N. Anselmi, and A. Massa, "Compressive sensing imaging of non-sparse 2D scatterers by a total-variation approach within the born approximation," *IEEE Transactions on Antennas and Propagation*, vol. 62, no. 10, pp. 5157-5170, Oct. 2014 (DOI: 10.1109/TAP.2014.2344673).

[R7] P. Rocca, N. Anselmi, and A. Massa, "Interval arithmetic for pattern tolerance analysis of parabolic reflectors," *IEEE Transactions on Antennas and Propagation*, vol. 62, no. 10, pp. 4952-4960, Oct. 2014 (DOI: 10.1109/TAP.2014.2342758).

[R8] G. Oliveri, F. Viani, N. Anselmi, and A. Massa, "Synthesis of multi-layer WAIM coatings for planar phased arrays within the system-by-design framework," *IEEE Transactions on Antennas and Propagation*, vol. 63, no. 6, pp. 2482-2495, Jun. 2015 (DOI: 10.1109/TAP.2015.2415516).

[R9] L. Poli, P. Rocca, N. Anselmi, and A. Massa, "Dealing with uncertainties on phase weighting of linear antenna arrays by means of interval-based tolerance analysis," *IEEE Transactions on Antennas and Propagation*, vol. 63, no. 7, pp. 3229-3224, Jul. 2015 (DOI: 10.1109/TAP.2015.2421952).

[R10] N. Anselmi, M. Salucci, G. Oliveri, and A. Massa, "Wavelet-based compressive imaging of sparse targets," *IEEE Transactions on Antennas and Propagation*, vol. 63, no. 11, pp. 4889-4900, Nov. 2015 (DOI: 10.1109/TAP.2015.2444423).

[R11] N. Anselmi, P. Rocca, M. Salucci, and A. Massa, "Optimisation of excitation tolerances for robust beamforming in linear arrays," *IET Microwaves, Antennas & Propagation,* vol. 10, no. 2, pp. 208-214, Jan. 2016 (DOI: 10.1049/IET-MAP .2015.0508).

[R12] P. Rocca, L. Poli, N. Anselmi, M. Salucci, and A. Massa, "Predicting antenna pattern degradations in microstrip reflectarrays through interval arithmetic" *IET Microwaves, Antennas & Propagation,* vol. 10, no. 8, pp. 817-826, May 2016 (DOI: 10.1049/IET-MAP.2015.0837).

[R13] N. Anselmi, M. Salucci, P. Rocca, and A. Massa, "Generalised interval-based analysis tool for pattern distortions in reflector antennas with bump-like surface deformations," *IET Microwaves, Antennas & Propagation,* vol. 10, no. 9, pp. 909-916, June 2016 (DOI: 10.1049/iet-map.2015.0583).

[R14] N. Anselmi, M. Salucci, P. Rocca, and A. Massa, "Power pattern sensitivity to calibration errors and mutual coupling in linear arrays through circular interval arithmetics," *Sensors*, vol. 16, no. 6, 791, 2016 (DOI: 10.3390/s16060791).

[R15] M. Salucci, N. Anselmi, G. Oliveri, P. Calmon, R. Miorelli, C. Reboud, and A. Massa, "Real-time NDT-NDE through an innovative adaptive partial least squares SVR inversion approach," *IEEE Transactions on Geoscience and Remote Sensing*, vol. 54, no. 11, pp. 6818-6832, Nov. 2016 (DOI: 10.1109/TGRS.2016.2591439).

[R16] L. Tenuti, N. Anselmi, P. Rocca, M. Salucci, and A. Massa, "Minkowski sum method for planar arrays sensitivity analysis with uncertain-but-bounded excitation tolerances," *IEEE Transactions on Antennas and Propagation*, vol. 65, no. 1, pp. 167-177, Jan. 2017 (DOI: 10.1109/TAP.2016.2627548).

[R17] F. Viani, A. Polo, P. Garofalo, N. Anselmi, M. Salucci, and E. Giarola, "Evolutionary optimization applied to wireless smart lighting in energy-efficient museums," *IEEE Sensors Journal*, vol. 17, no. 5, pp. 1213-1214, Mar. 2017 (DOI: 10.1109/JSEN.2017.2647827).

[R18] M. Salucci, L. Poli, N. Anselmi, and A. Massa, "Multi-frequency particle swarm optimization for enhanced multi-resolution GPR microwave imaging," *IEEE Transactions on Geoscience and Remote Sensing*, vol. 55, no. 3, pp. 1305-1317, Mar. 2017 (DOI: 10.1109/TGRS.2016.2622061).

[R19] N. Anselmi, G. Oliveri, M. A. Hannan, M. Salucci, and A. Massa, "Color compressive sensing imaging of arbitrary-shaped scatterers," *IEEE Transactions on Microwave Theory and Techniques*, vol. 65, no. 6, pp. 1986-1999, Jun. 2017 (DOI: 10.1109/TMTT.2016.2645570).

[R20] G. Oliveri, M. Salucci, N. Anselmi, and A. Massa, "Compressive sensing as applied to inverse problems for imaging: theory, applications, current trends, and open challenges," *IEEE Antennas and Propagation Magazine* – Special Issue on 'Electromagnetic Inverse Problems for Sensing and Imaging,' vol. 59, no. 5, pp. 34-46, Oct. 2017 (DOI: 10.1109/MAP.2017.2731204).

[R21] M. Salucci, G. Oliveri, N. Anselmi, F. Viani, A. Fedeli, M. Pastorino, and A. Randazzo, "Three-dimensional electromagnetic imaging of dielectric targets by means of the multiscaling inexact-Newton method," *Journal of Optical Society of America A*, vol. 34, no. 7, pp. 1119-1131, Jul. 2017 (DOI: 10.1364/JOSAA.34.001119).

[R22] N. Anselmi, P. Rocca, M. Salucci, and A. Massa, "Irregular phased array tiling by means of analytic schemata-driven optimization," *IEEE Transactions on Antennas and Propagation*, vol. 65, no. 9, pp. 4495-4510, Sep. 2017 (DOI:

10.1109/TAP.2017.2722539).

[R23] G. Oliveri, M. Salucci, N. Anselmi and A. Massa, "Multiscale system-by-design synthesis of printed WAIMs for waveguide array enhancement," *IEEE Journal on Multiscale and Multiphysics Computational Techniques*, vol. 2, pp. 84-96, 2017 (DOI: 10.1109/JMMCT.2017.2701833).

[R24] M. Salucci, G. Gottardi, N. Anselmi, and G. Oliveri, "Planar thinned array design by hybrid analytical-stochastic optimization," *IET Microwaves, Antennas & Propagation*, vol. 11, no. 13, pp. 1841-1845, Oct. 2017 (DOI: 10.1049/iet-map.2017.0349).

[R25] A. Massa, G. Oliveri, M. Salucci, N. Anselmi, and P. Rocca, "Learning-by-examples techniques as applied to electromagnetics," *Journal of Electromagnetic Waves and Applications, Invited Review Paper*, Invited Review Article, vol. 32, no. 4, pp. 516-541, 2018 (DOI: 10.1080/09205071.2017.1402713).

[R26] M. Salucci, G. Oliveri, N. Anselmi, G. Gottardi, and A. Massa, "Performance enhancement of linear active electronically-scanned arrays by means of MbD-synthesized metalenses," *Journal of Electromagnetic Waves and Applications*, vol. 32, no. 8, pp. 927-955, 2018 (DOI: 10.1080/09205071.2017.1410077).

[R27] S. Ahmed, M. Salucci, R. Miorelli, N. Anselmi, G. Oliveri, P. Calmon, C. Reboud and A. Massa, "Real time groove characterization combining partial least squares and SVR strategies: application to eddy current testing," *Journal of Physics: Conference Series*, (versione estesa e sottoposta a revisione da comitato internazionale di [C31]), vol. 904, pp. 1-8, 2017 (DOI: 10.1088/1742-6596/904/1/012017).

[R28] N. Anselmi and T. Moriyama, "An inversion strategy for energy saving in smart building through wireless monitoring," *Journal of Physics: Conference Series*, (versione estesa e sottoposta a revisione da comitato internazionale di [C32]), vol. 904, pp. 1-7, 2017 (DOI: 10.1088/1742-6596/904/1/012003).

[R29] N. Anselmi and G. Gottardi, "Recent advances and current trends in metamaterial-by-design," *Journal of Physics: Conference Series*, (versione estesa e sottoposta a revisione da comitato internazionale di [C53]), vol. 963, pp. 1-3, 2018 (DOI: 10.1088/1742-6596/963/1/012011).

[R30] S. Ahmed, R. Miorelli, C. Reboud, P. Calmon, N. Anselmi, and M. Salucci, "Fast characterization of multiple cracks in conductive media based on adaptive feature extraction and SVR," *Studies in Applied Electromagnetics and Mechanics - Electromagnetic Nondestructive Evaluation (XXI)*, (versione estesa e sottoposta a revisione da comitato internazionale di [C43]), vol. 43, pp. 191-198, 2018 (DOI: 10.3233/978-1-61499-836-5-191).

[R31] G. Oliveri, M. Salucci, and N. Anselmi, "Tomographic imaging of sparse low-contrast targets in harsh environments through matrix completion," *IEEE Transactions on Microwave Theory and Techniques*, vol. 66, no. 6, pp. 2714-2730, Jun. 2018 (DOI: 10.1109/TMTT.2018.2825393).

[R32] N. Anselmi, L. Poli, G. Oliveri, and A. Massa, "Iterative multi-resolution Bayesian CS for microwave imaging," *IEEE Transactions on Antennas and Propagation*, vol. 66, no. 7, pp. 3665-3677, Jul. 2018 (DOI: 10.1109/TAP.2018.2826574).

[R33] M. Salucci, F. Robol, N. Anselmi, M. A. Hannan, P. Rocca, G. Oliveri, M. Donelli, and A. Massa, "S-Band spline-shaped aperture-stacked patch antenna for air traffic control applications," *IEEE Transactions on Antennas and Propagation*, vol. 66, no. 8, pp. 4292-4297, August 2018 (DOI: 10.1109/TAP.2018.2838583).

[R34] M. Salucci, G. Oliveri, N. Anselmi, and A. Massa, "Material-by-design synthesis of conformal miniaturized linear phased arrays", *IEEE Access*, vol. 6, pp. 26367-26382, 2018 (DOI: 10.1109/ACCESS.2018.2833199).

[R35] N. Anselmi, P. Rocca, M. Salucci, and A. Massa, "Contiguous phase-clustering in multibeam-on-receive scanning arrays," *IEEE Transactions on Antennas and Propagation*, vol. 66, no. 11, pp. 5879-5891, November 2018 (DOI: 10.1109/TAP.2018.2864628).

[R36] M. Salucci, A. Gelmini, G. Oliveri, N. Anselmi, and A. Massa, "Synthesis of shaped beam reflectarrays with constrained geometry by exploiting non-radiating surface currents," *IEEE Transactions on Antennas and Propagation*, vol. 66, no. 11, pp. 5805-5817, November 2018 (DOI: 10.1109/TAP.2018.2869036).

[R37] N. Anselmi, L. Poli, P. Rocca, and A. Massa, "Design of simplified array layouts for preliminary experimental testing and validation of large AESAs," *IEEE Transactions on Antennas and Propagation*, vol. 66, no. 12, pp. 6906-6920, December 2018 (DOI: 10.1109/TAP.2018.2874433).

[R38] P. Rocca, M. H. Hannan, L. Poli, N. Anselmi, and A. Massa, "Optimal phase-matching strategy for beam scanning of sub-arrayed phased arrays," *IEEE Transactions on Antennas and Propagation*, vol. 67, no. 2, pp. 951-959, February 2019 (DOI: 10.1109/TAP.2018.2879778).

[R39] M. Salucci, N. Anselmi, G. Oliveri, P. Rocca, S. Ahmed, P. Calmon, R. Miorelli, C. Reboud, and A. Massa, "A nonlinear kernel-based adaptive learning-by-examples method for robust NDE-NDT of conductive tubes," *Journal of Electromagnetic Waves and Applications*, vol. 33, no. 6, pp. 669–696, February 2019 (DOI: 10.1080/09205071.2019.1572546).

[R40] G. Oliveri, L. Poli, N. Anselmi, M. Salucci, and A. Massa, "Compressive-sensing based Born iterative method for tomographic imaging," *IEEE Transactions on Microwave Theory and Techniques*, vol 67, no. 5, pp. 1753-1765, May 2019 (DOI: 10.1109/TMTT.2019.2899848).

[R41] M. Salucci, N. Anselmi, S. Goudos, and A. Massa, "Fast design of multiband fractal antennas through a system-by-design approach for NB-IoT applications," *EURASIP Journal on Wireless Communications and Networking* - Special Issue on 'Optimization Methods for Key Enabling Technologies: 5G, IoT and Big Data,' vol. 68, no. 1, pp. 1-15, Mar. 2019 (DOI: 10.1186/s13638-019-1386-4).

[R42] N. Anselmi, G. Gottardi, G. Oliveri, and A. Massa, "A total-variation sparseness-promoting method for the synthesis of contiguously clustered linear architectures," *IEEE Transactions on Antennas and Propagation*, vol. 67, no. 7, pp. 4589-4601, Jul. 2019 (DOI: 10.1109/TAP.2019.2911375).

[R43] G. Oliveri, G. Gottardi, M. A. Hannan, N. Anselmi, and L. Poli, "Autocorrelation-driven synthesis of antenna arrays - The case of DS-based planar isophoric thinned arrays," *IEEE Transactions on Antennas and Propagation*, vol. 68, no. 4, pp. 2895-2910, Apr. 2020 (DOI:10.1109/TAP.2019.2947180).

[R44] G. Oliveri, A. Gelmini, A. Polo, N. Anselmi, and A. Massa, "System-by-design multi-scale synthesis of task-oriented reflectarrays," *IEEE Transactions on Antennas and Propagation*, vol. 68, no. 4, pp. 2867-2882, Apr. 2020 (DOI:10.1109/TAP.2019.2955217).

[R45] P. Rocca, N. Anselmi, A. Polo, and A. Massa, “Modular design of hexagonal phased arrays through diamond tiles,” *IEEE Transactions on Antennas and Propagation*, vol.68, no. 5, pp. 3598-3612, May 2020 (DOI: 10.1109/TAP.2019.2963561).

[R46] P. Rocca, N. Anselmi, A. Polo, and A. Massa, “An irregular two-sizes square tiling method for the design of isophoric phased arrays,” *IEEE Transactions on Antennas and Propagation*, vol. 68, no. 6, pp. 4437-4449, Jun. 2020 (DOI: 10.1109/TAP.2020.2970088).

[R47] A. Massa, N. Anselmi, L. Dall’Asta, G. Gottardi, S. Goudos, A. Hannan, L. Huang, M. Li, G. Oliveri, L. Poli, A. Polo, P. Rocca, A. A. Salas-Sánchez, M. Salucci, and S. Yang, "Teaching electromagnetics to next-generation engineers - The ELEDIA recipe," *IEEE Antennas and Propagation Magazine*, vol. 62, no. 2, pp. 50-61, April 2020 (DOI: 10.1109/MAP.2020.2970307).

[R48] L. T. P. Bui, N. Anselmi, T. Isernia, P. Rocca and A. F. Morabito, “On Bandwidth maximization of fixed-geometry arrays through convex programming,” *Journal of Electromagnetic Waves and Applications*, vol. 34, no. 5, pp. 581-600, 2020 (DOI: 10.1080/09205071.2020.1724832).

[R49] N. Anselmi, A. Polo, M. Salucci, M. A. Hannan, and P. Rocca, “Maximum BCE synthesis of domino-tiled planar arrays for far-field wireless power transmission,” *Journal of Electromagnetic Waves and Applications*, vol. 34, no. 17, pp. 2349-2370, 2020 (DOI: 10.1080/09205071.2020.1814166).

[R50] P. Rocca, N. Anselmi, A. Benoni, and A. Massa, “Probabilistic interval analysis for the analytic prediction of the pattern tolerance distribution in linear phased arrays with random excitation errors,” *IEEE Transactions on Antennas and Propagation*, vol. 68, no. 2, pp. 7866-7878, December 2020 (DOI: 10.1109/TAP.2020.2998924).

[R51] P. Rocca, N. Anselmi, G. Oliveri, A. Polo, and A. Massa, “Antenna array thinning through quantum Fourier transform,” *IEEE Access*, vol. 9, pp. 124313-124323, 2021 (DOI: 10.1109/ACCESS.2021.3109938).

[R52] M. Salucci and N. Anselmi, “Multi-frequency GPR microwave imaging of sparse targets through a multi-task Bayesian compressive sensing approach,” *Journal of Imaging*, vol. 7, no. 11, pp. 247, November 2021 (DOI: 10.3390/jimaging7110247).

[R53] T. Torres, P. Nayeri, N. Anselmi, P. Rocca, and R. L. Haupt, “Low discrepancy sparse phased array antennas,” *Sensors*, vol. 21, no. 23 (7816), pp. 1-20, 2021 (DOI: 10.3390/s21237783).

[R54] P. Rocca, N. Anselmi, A. Polo, and A. Massa, “Pareto-optimal domino-tiling of orthogonal polygon phased arrays,” *IEEE Transaction on Antennas and Propagation*, vol. 70, no. 5, pp. 3329 - 3342, May 2022 (DOI: 10.1109/TAP.2021.3137298).

[R55] P. Rocca, L. Poli, N. Anselmi, and A. Massa, “Nested optimization for the synthesis of asymmetric shaped beam patterns in sub-arrayed linear antenna arrays,” *IEEE Transactions on Antennas and Propagation*, vol. 70, no. 5, pp. 3385 - 3397, May 2022 (DOI: 10.1109/TAP.2021.3137176).

[R56] G. Oliveri, G. Gottardi, N. Anselmi, and A. Massa, “Capacity-driven low-interference fast beam synthesis for next generation base stations,” *IEEE Transactions on Antennas and Propagation*, vol. 70, no. 6, pp. 4472-4484, June 2022 (DOI: 10.1109/TAP.2022.3140512).

[R57] L. T. P. Bui, N. Anselmi, G. M. Battaglia, T. Isernia, P. Rocca, and A. F. Morabito, Francesco, “Synthesis of wideband reconfigurable array antennas for monopulse radar applications,” *Progress in Electromagnetics Research*, vol. 106, p. 179-189 2021 (DOI: 10.2528/PIERM21090905).

[R58] P. Rocca, P. Da Rù, N. Anselmi, M. Salucci, G. Oliveri, D. Erricolo, and A. Massa, “On the design of modular reflecting EM skins for enhanced urban wireless coverage,” I*EEE Transactions on Antennas and Propagation* - Special Issue on ‘Smart Electromagnetic Environment,’ vol. 70, no. 10, pp. 8771-8784, October 2022 (DOI: 10.1109/TAP.2022.3146870).

[R59] N. Anselmi, P. Rocca, S. Feuchtinger, B. Biscontini, A. M. Barrera, and A. Massa, “Optimal capacity-driven design of aperiodic clustered phased arrays for multi-user MIMO communication systems,” *IEEE Transactions on Antennas and Propagation*, vol. 70, no. 7, pp. 5491-5505, Jul. 2022 (DOI: 10.1109/TAP.2022.3161550).

[R60] A. Benoni, P. Rocca, N. Anselmi, and A. Massa, “Hilbert-ordering based clustering of complex-excitations linear arrays,” *IEEE Transactions on Antennas and Propagation*, vol. 70, no. 8, pp. 6751-6762, Aug. 2022 (DOI: 10.1109/TAP.2022.3164161).

[R61] M. Salucci, N. Anselmi, M. D. Migliore and A. Massa, "A bayesian compressive sensing approach to robust near-field antenna characterization," *IEEE Transactions on Antennas and Propagation*, vol. 70, no. 9, pp. 8671-8676, Sep. 2022 (DOI: 10.1109/TAP.2022.3177528).

[R62] P. Rocca, N. Anselmi, M. A. Hannan, and A. Massa, “Conical frustum multi-beam phased arrays for air traffic control radars,” *Sensors*, vol. 22, no. 19, 7309, pp. 1-18, 2022 (DOI: 10.3390/s22197309).

[R63] L. Tosi, P. Rocca, N. Anselmi, and A. Massa, “Array antenna power pattern analysis through quantum computing,” *IEEE Transactions on Antennas and Propagation*, vol. 71, no. 4, pp. 3251-3259, April 2023 (DOI: 10.1109/TAP.2023.3242128).

[R64] N. Anselmi, L. Tosi, P. Rocca, G. Toso, and A. Massa, “A self-replicating single-shape tiling technique for the design of highly modular planar phased arrays - The case of L-shaped rep-tiles,” *IEEE Transactions on Antennas and Propagation*, vol. 71, no. 4, pp. 3335-3348, April 2023 (DOI: 10.1109/TAP.2023.3243793).

[R65] G. Oliveri, N. Anselmi, M. Salucci, L. Poli, and A. Massa, “Compressive sampling-based scattering data acquisition in microwave imaging,” *Journal of Electromagnetic Waves and Applications*, pp. 1-37, 2023 (DOI: 10.1080/09205071.2023.2188263).

[R66] N. Anselmi , P. Rocca, and A. Massa, “Tolerance analysis of reconfigurable monopulse linear antenna arrays through interval arithmetic,” *Journal of Electromagnetic Waves and Applications*, pp. 1-16, 2023 (DOI: 10.1080/09205071.2023.2224080).

[R67] L. Poli, P. Rocca, P. Rosatti, N. Anselmi, M. Salucci, S. Yang, F. Yang, and A. Massa, “AI-assisted design of printed edge-fed non-uniform zig-zag antenna for mm-wave automotive radar,” *Radio Science* - Special Issue on ‘Machine Learning-enabled Methods for Design, Modeling and Optimization of Microwave Antennas and RF Devices,’ vol. 59, no. 6, pp. 1-20 (DOI: 10.1029/2023RS007912).

[R68] G. Ding, N. Anselmi, W. Xu, P. Li, and P. Rocca, "Interval-bounded optimal power pattern synthesis of array

antenna excitations robust to mutual coupling," IEEE Antennas and Wireless Propagation Letters - Special Issue on 'Recent Advances in Applications Involving Mutual Coupling', *IEEE Antennas and Wireless Propagation Letters*, vol. 22, no. 11, pp. 2725-2729, November 2023 (DOI: 10.1109/LAWP.2023.3291428).

[R69] S. Seyedinnavadeh, N. Anselmi, M. Milanizadeh, F. Zanetto, A. Martinez, P. Rocca, F. Morichetti, A. Massa, and A. Melloni, "Adaptive optical thinned antenna array controlled by an integrated photonic processor", *Photonics Technology Letters*, vol. 36, no. 17, pp. 1037-1040, September 2024 (DOI: 10.1109/LPT.2024.3427413).

[R70] X. Yang, N. Anselmi, and P. Rocca, "Thinned linear optical phased array design through a pareto-optimal synthesis strategy," *Sensors*, vol. 25, no. 4 (1096), 2025 (DOI: https://doi.org/10.3390/s25041096).

[R71] N. Anselmi, L. Tosi, P. Rocca, D. W. Woo, and A. Massa, "Constrained design of aperiodic tiled phased arrays for LFoV antenna systems," *IEEE Transactions on Antennas and Propagation* (DOI: 10.1109/TAP.2025.3562065).

Refereed Conference Papers

[C1] M. Salucci, D. Sartori, N. Anselmi, A. Randazzo, G. Oliveri, and A. Massa, "Imaging buried objects within the second-order Born approximation through a multiresolution-regularized inexact-Newton method," 2013 International Symposium on Electromagnetic Theory (EMTS 2013) (ISBN 978-1-4673- 4939-0), Hiroshima, Japan, pp. 116-118, May 20-24, 2013 (Invited paper; Session title: "Inversion methods for electromagnetic imaging and applications" – M. Pastorino and A. Randazzo).

[C2] M. Carlin, N. Anselmi, L. Manica, P. Rocca, and A. Massa, "Exploiting interval arithmetic for predicting real arrays performances – The linear case," Proc. 2013 IEEE AP-S International Symposium (no. 978-1-4673-5317-5/13/$31.00©2013 IEEE), Lake Buena Vista, Florida, USA, pp. 298-299, July 7-12, 2013 (DOI: 10.1109/APS.2013.6710810).

[C3] L. Manica, P. Rocca, N. Anselmi, and A. Massa, "On the synthesis of reliable linear arrays through interval arithmetic," Proc. 2013 IEEE AP-S International Symposium (no. 978-1-4673-5317-5/13/$31.00©2013 IEEE), Lake Buena Vista, Florida, USA, pp. 296-297, July 7-12, 2013 (DOI: 10.1109/APS.2013.6710809).

[C4] N. Anselmi, L. Manica, P. Rocca and A. Massa, "Synthesis of robust linear antenna arrays exploiting an interval-based particle swarm optimizer," 8th European Conference on Antennas and Propagation (EUCAP 2014) (no. 978-88-907018-4-9/14/$31.00©2014 IEEE), The Hague, The Netherlands, pp. 2255-2258, April 6-11, 2014 (Invited paper; Session title: "Advanced design and optimization techniques for phased arrays" – P. Rocca, R. Haupt, and O. Quevedo-Teruel) (DOI: 10.1109/EuCAP.2014.6902262).

[C5] N. Anselmi, L. Manica, P. Rocca, and A. Massa, "Tolerance analysis of reconfigurable monopulse linear antenna arrays using interval arithmetic," 8th European Conference on Antennas and Propagation (EUCAP 2014) (no. 978-88-907018-4-9/14/$31.00©2014 IEEE), The Hague, The Netherlands, pp. 1509-1512, April 6-11, 2014 (DOI: 10.1109/EuCAP.2014.6902069).

[C6] N. Anselmi, G. Oliveri, and A. Massa, "A total variation compressive sensing technique for imaging large scatterers," 8th European Conference on Antennas and Propagation (EUCAP 2014) (no. 978-88-907018-4- 9/14/$31.00©2014 IEEE), The Hague, The Netherlands, pp. 1330-1333, April 6-11, 2014 (DOI: 10.1109/EuCAP.2014.6902022).

[C7] P.P. Ding, G. Oliveri, N. Anselmi, and Massa, "Non-destructive evaluation of anisotropic composites by bayesian compressive sensing," 19th International Workshop on Electromagnetic Nondestructive Evaluation (ENDE'14), Xi'an, China, pp. 88, June 25-28, 2014.

[C8] A. Massa, G. Oliveri, P. P. Ding, and N. Anselmi, "A CS-based approach for physical imaging," Proc. 2014 IPTA, Inverse Problems – From Theory to Applications, Bristol, UK, August 26-28, 2014.

[C9] P. Rocca, N. Anselmi, L. Poli, L. Manica, E. Giaccari, and A. Massa, "Modeling uncertainty in phased arrays thorugh the interval analysis," Proc. 2014 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-4799-3540-6/14/$31.00©2014 IEEE), Memphis, Tennessee, USA, pp. 1157-1158, July 6-12, 2014 (DOI: 10.1109/APS.2014.6904905).

[C10] N. Anselmi, P. Rocca, E. Giaccari, and A. Massa, "Synthesis of robust beamforming weights in linear antenna arrays," Proc. 2014 IEEE Antenna Conference on Antenna Measurements and Applications (IEEE CAMA 2014) (no. 978-1-4799-3678-6/14/$31.00©2014 IEEE), Antibes Juan-les-Pins, France, pp. 1-3, November 16-19, 2014 (DOI: 10.1109/CAMA.2014.7003325).

[C11] P. Rocca, N. Anselmi, T. Moriyama, D. Bresciani, and A. Massa, "Interval-based tolerance analysis with localized surface errors in parabolic reflectors," Proc. 2014 IEEE Antenna Conference on Antenna Measurements and Applications (IEEE CAMA 2014) (no. 978-1-4799-3678-6/14/$31.00©2014 IEEE), Antibes Juan-les-Pins, France, pp. 1-3, November 16-19, 2014 (DOI: 10.1109/CAMA.2014.7003337).

[C12] P. Rocca, T. Moriyama, N. Anselmi, and A. Massa, "Robust prediction of the radiated pattern features with uncertainties in reflectarray design," Proc. 2014 IEEE Antenna Conference on Antenna Measurements and Applications (IEEE CAMA 2014) (no. 978-1-4799-3678-6/14/$31.00©2014 IEEE), Antibes Juan-les-Pins, France, pp. 1-3, November 16-19, 2014 (DOI: 10.1109/CAMA.2014.7003440).

[C13] T. Moriyama, N. Anselmi, G. Oliveri, and A. Massa, "Innovative CS imaging methods in transformed domains," Proc. 2014 IEEE Antenna Conference on Antenna Measurements and Applications (IEEE CAMA 2014) (no. 978-1-4799-3678-6/14/$31.00©2014 IEEE), Antibes Juan-les-Pins, France, pp. 1- 3, November 16-19, 2014 (DOI: 10.1109/CAMA.2014.7003312).

[C14] T. Moriyama, L. Poli, N. Anselmi, P.-P. Ding, and G. Oliveri, "A compressive sensing approach to NDE/NDT," Proc. 2014 IEEE Antenna Conference on Antenna Measurements and Applications (IEEE CAMA 2014) (no. 978-1-4799-3678-6/14/$31.00©2014 IEEE), Antibes Juan-les-Pins, France, pp. 1-3, November 16-19, 2014 (DOI: 10.1109/CAMA.2014.7003340).

[C15] N. Anselmi, L. Poli, G. Oliveri, and A. Massa, "A Quantitative inverse scattering with sparseness constraints – The compressive sensing paradigm," 9th International Conference on Computational Physics (ICCP-9), Singapore, January 7-11, 2015.

[C16] L. Poli, N. Anselmi, M. Carlin, and P. Rocca, "Compressive sensing technique for multi-frequency sparse linear array design," 9th European Conference on Antennas and Propagation (EUCAP 2015), Lisbon, Portugal, April 12-17, 2015.

[C17] N. Anselmi, L. Poli, P. Rocca, F. Viani, and A. Massa, "Sensitivity analysis of mutual coupling effects in antenna arrays through interval analysis," Proc. 2015 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-4799-7815-1/15/$31.00©2015 IEEE), Vancouver, BC, Canada, pp. 426-427, July 19-25, 2015 (DOI: 10.1109/APS.2015.7304599).

[C18] N. Anselmi, L. Poli, L. Tenuti, P. Rocca, F. Viani, and A. Massa, "Tolerance analysis of planar arrays through minkowski-based interval analysis," Proc. 2015 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-4799-7815-1/15/$31.00©2015 IEEE), Vancouver, BC, Canada, pp. 2501-2502, July 19-25, 2015 (DOI: 10.1109/APS.2015.7305639).

[C19] F. Viani, N. Anselmi, M. Donelli, P. Garofalo, G. Gottardi, G. Oliveri, L. Poli, A. Polo, P. Rocca, M. Salucci, L. Tenuti, and A. Massa, "On the role of information in inversion and synthesis – challenges, tools, and trends," Proc. 2015 IEEE Mediterranean Microwave Symposium (MMS'2015) (no. 978-1-4673-7602-0/15/$31.00©2015 IEEE), Lecce, Italy, pp. 1-4, Novembre 30 – December 2, 2015 (DOI: 10.1109/MMS.2015.7375463).

[C20] N. Anselmi, L. Poli, G. Oliveri, P. Rocca and A. Massa, "Microwave Imaging of 2D scatterers through wavelet-based alphabet and compressive sensing," Assemblée générale Interférences d'Ondes (GDR Ondes), Lyon, France, Oct. 19-21, 2015.

[C21] G. Oliveri, P. Rocca, L. Poli, N. Anselmi, M. Salucci, T. Moriyama, T. Takenaka, A. Massa, "Real-time eddy-current-testing of metallic structures through statistical learning methodology," PIERS 2016 in Shanghai, Shanghai, China, August 8-11, pp. 3957-3958, 2016 (Invited paper; Session title: "Inverse scattering and applications" – M. Toshifumi and T. Takenaka) (DOI: 10.1109/PIERS.2016.7735490).

[C22] A. Massa, G. Oliveri, N. Anselmi, and L. Poli, "Compressive sensing as applied to electromagnetics - Challenges, solutions, and future trends," 10th European Conference on Antennas and Propagation (EUCAP 2016), Davos, Switzerland, pp. 1-4, April 11-15, 2016. (Invited paper; Session title: "Compressed sensing adopted to RF" – G. Del Galdo and J. Ender). (DOI: 10.1109/EuCAP.2016.7481145).

[C23] N. Anselmi, P. Rocca, and A. Massa, "A Minkowski-based interval analysis tool for pattern distortions in reflector antennas with localized surface deformations," 10th European Conference on Antennas and Propagation (EUCAP 2016), Davos, Switzerland, pp. 1-4, April 11-15, 2016 (DOI: 10.1109/EuCAP.2016.7481154).

[C24] A. Massa, G. Oliveri, N. Anselmi, L. Poli, and L. Tenuti, "CS-based computational imaging at microwave frequencies," Proc. 2016 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5090-2886-3/16/$31.00©2016 IEEE), Fajardo, Puerto Rico, pp. 1061-1062, June 26 - July 1, 2016 (Invited paper; Session title: "Computational imaging at microwave, millimeter wave, and terahertz frequencies" - M. F. Imani, O. Yurduseven, J. Gollub, and D. Smith) (DOI: 10.1109/APS.2016.7696238).

[C25] L. Poli, N. Anselmi, G. Gottardi, P. Rocca, and A. Massa, "Probabilistic interval method for phased array sensitivity analysis," Proc. 2016 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5090-2886-3/16/$31.00©2016 IEEE), Fajardo, Puerto Rico, pp. 919-920, June 26 - July 1, 2016 (DOI: 10.1109/APS.2016.7696168).

[C26] N. Anselmi, P. Rocca, and A. Massa, "An innovative optimization strategy for phased array tiling," Proc. 2016 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5090-2886-3/16/$31.00©2016 IEEE), Fajardo, Puerto Rico, pp. 769-770, June 26 - July 1, 2016. (DOI: 10.1109/APS.2016.7696093)

[C27] N. Anselmi, L. Poli, A. Randazzo, and G. Oliveri, "Alphabet CS for inverse scattering," 2016 International Symposium on Electromagnetic Theory (EMTS 2016) (no. 978-1-5090-2502-2/16/$31.00 ©2016 IEEE), Espoo, Finland, pp. 141-143, August 14-18, 2016 (Invited paper; Session title: "Inverse scattering and imaging" – M. Pastorino and L. Li) (DOI: 10.1109/URSI-EMTS.2016.7571335).

[C28] N. Ebrahimi, N. Anselmi, P. Rocca, and A. Massa, "Tolerance analysis of the reflectarray antenna through minkowski-based interval analysis," 11th European Conference on Antennas and Propagation (EUCAP 2017) (no. 978-88-907018-7-0/17/$31.00©2017 IEEE), Paris, France, pp. 2392-2395, March 19-24, 2017 (DOI: 10.23919/EuCAP.2017.7928234).

[C29] N. Anselmi, G. Oliveri, and A. Massa, "Synthesis of clustered linear arrays through a total variation compressive sensing approach," 11th European Conference on Antennas and Propagation (EUCAP 2017) (no. 978-88-907018-7-0/17/$31.00©2017 IEEE), Paris, France, pp. 862-864, March 19-24, 2017 (DOI: 10.23919/EuCAP.2017.7928540).

[C30] A. Massa, N. Anselmi, G. Gottardi, G. Oliveri, L. Poli, P. Rocca, M. Salucci, and L. Tenuti, "Unconventional techniques for the synthesis of modern antenna arrays," 11th European Conference on Antennas and Propagation (EUCAP 2017) (no. 978-88-907018-7-0/17/$31.00©2017 IEEE), Paris, France, pp. 2843-2845, March 19-24, 2017 (Invited paper; Session title: "Emerging Strategies for the Synthesis of Innovative Array-Antenna Architectures" – A. Morabito and P. Rocca) (DOI: 10.23919/EuCAP.2017.7928762).

[C31] S. Ahmed, M. Salucci, R. Miorelli, N. Anselmi, G. Oliveri, P. Calmon, C. Reboud, and A. Massa, "Real time groove characterization combining partial least squares and SVR strategies: application to eddy current testing," 7th International Workshop on New Computational Methods for Inverse Problems (NCMIP 2017), Cachan, France, May 12, 2017 (DOI: 10.1088/1742-6596/904/1/012017).

[C32] N. Anselmi and T. Moriyama, "An inversion strategy for energy saving in smart building through wireless monitoring," 7th International Workshop on New Computational Methods for Inverse Problems (NCMIP 2017), Cachan, France, May 12, 2017 (DOI: 10.1088/1742-6596/904/1/012003).

[C33] N. Anselmi, P. Rocca, M. Salucci, G. Gottardi, and A. Massa "A mask matching tiling optimization method for clustered phased arrays," 2017 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5386-3284-0/17/$31.00©2017 IEEE), San Diego, California, USA, pp. 1045-1046, July 9-15, 2017 (DOI: 10.1109/APUSNCURSINRSM.2017.8072565).

[C34] G. Oliveri, P. Rocca, L. Poli, G. Gottardi, N. Anselmi, M. Salucci, R. Lombardi, M. Chuan, M. Mattivi, P. Vinetti, F. Morgia, and A. Massa, "Innovative array architectures for 5G communications," 2017 IEEE AP-S International

Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5386-3284-0/17/$31.00©2017 IEEE), San Diego, California, USA, pp. 1801-1802, July 9-15, 2017 (DOI: 10.1109/APUSNCURSINRSM.2017.8072943)-

[C35] N. Anselmi, P. Rocca, G. Gottardi, M. Salucci, and A. Massa, "Tiling optimization of orthogonal-polygon shaped aperture for phased array antennas," 2017 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5386-3284-0/17/$31.00©2017 IEEE), San Diego, California, USA, pp. 2025-2026, July 9-15, 2017 (DOI: 10.1109/APUSNCURSINRSM.2017.8073055).

[C36] P. Rocca, N. Anselmi, M. Salucci, G. Gottardi, L. Poli, and A. Massa "A novel analytic beam steering approach for clustered phased array architectures," 2017 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5386-3284-0/17/$31.00©2017 IEEE), San Diego, California, USA, pp. 2013-2014, July 9-15, 2017 (DOI: 10.1109/APUSNCURSINRSM.2017.8073049).

[C37] M. Salucci, S. Ahmed, N. Anselmi, G. Oliveri, P. Calmon, R. Miorelli, C. Reboud, and A. Massa "Real-time crack characterization in conductive tubes through an adaptive partial least squares approach," 2017 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5386-3284-0/17/$31.00©2017 IEEE), San Diego, California, USA, pp. 21-22, July 9-15, 2017 (DOI: 10.1109/APUSNCURSINRSM.2017.8072053).

[C38] G. Gottardi, L. Turrina, N. Anselmi, G. Oliveri, and P. Rocca "Sparse conformal array design for multiple patterns generation through multi-task bayesian compressive sensing," 2017 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5386-3284-0/17/$31.00©2017 IEEE), San Diego, California, USA, pp. 429-430, July 9-15, 2017 (DOI: 10.1109/APUSNCURSINRSM.2017.8072257).

[C39] M. A. Hannan, N. Anselmi, G. Oliveri, and P. Rocca, "Joint DoA and bandwidth estimation of unknown signals through single snapshot data and MT-BCS approach," 2017 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5386-3284-0/17/$31.00©2017 IEEE), San Diego, California, USA, pp. 2389-2390, July 9-15, 2017 (DOI: 10.1109/APUSNCURSINRSM.2017.8073237).

[C40] L. T. P. Bui, N. Anselmi, G. Gottardi, L. Poli, and P. Rocca, "Wideband phased arrays synthesis with maximum bandwidth through iterative convex optimization," 2017 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5386-3284-0/17/$31.00©2017 IEEE), San Diego, California, USA, pp. 479-480, July 9-15, 2017 (DOI: 10.1109/APUSNCURSINRSM.2017.8072282).

[C41] A-M. Yao, N. Anselmi, and P. Rocca, "A novel planar frequency diverse array design approach for far-field wireless power transmission," 2017 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5386-3284-0/17/$31.00©2017 IEEE), San Diego, California, USA, pp. 1807-1808, July 9-15, 2017 (DOI: 10.1109/APUSNCURSINRSM.2017.8072946).

[C42] N. Anselmi, L. Poli, G. Oliveri, and A. Massa, "Compressive-processing microwave imaging," 6th Asia-Pacific Conference on Antennas and Propagation (APCAP 2017) (no. 978-1-5386-1608-6/17/$31.00©2017 IEEE), Xi'an, China, pp. 1-3, October 16-19, 2017 (Invited paper; Session title: "Current Trends and Advances in Computational Inverse Scattering: Theory, Techniques, and Application" – A. Massa, M. Li, and M. Salucci) (DOI: 10.1109/APCAP.2017.8420783).

[C43] S. Ahmed, R. Miorelli, P. Calmon, N. Anselmi, and M. Salucci, "Real time flaw detection and characterization in tube through partial least squares and SVR: application to eddy current testing," 44th Annual Review of Progress in Quantitative Nondestructive Evaluation (QNDE 2017), Provo, UT (USA), pp. 1-10, 16-21 July 2017 (DOI: 10.1063/1.5031523).

[C44] S. Ahmed, R. Miorelli, C. Reboud, P. Calmon, N. Anselmi, and M. Salucci, "Fast characterization of multiple cracks in conductive media based on adaptive feature extraction and SVR," 22th International Workshop on Electromagnetic Nondestructive Evaluation (ENDE'17), Saclay, France, pp. 1-2, 6-8 September 2017.

[C45] N. Anselmi, G. Oliveri, and A. Massa, "Power pattern matching through the hybrid Bayesian compressive sensing," 2018 IEEE Antenna Conference on Antenna Measurements and Applications (IEEE CAMA 2018) (no. 978-1-5386-5795-9/18/$31.00 ©2018 IEEE), Vasteras, Sweden, pp. 1-3, September 3-6, 2018 (DOI: 10.1109/CAMA.2018.8530538).

[C46] N. Anselmi, M. Donelli, G. Oliveri, L. Poli, P. Rocca, F. Viani, and A. Massa, "Compressive sensing for inverse problems," 12th European Conference on Antennas and Propagation (EUCAP 2018), London, United Kingdom, pp. 1-4, April 9-13, 2018 (Invited paper; Session title: "Inverse Problems: Theory, Techniques, and Applications" – M. Li, P. Rocca, and M. Salucci).

[C47] N. Anselmi, L. Poli, P. Rocca, and A. Massa, "Diamond tiling optimization for hexagonal shaped phased arrays," 12th European Conference on Antennas and Propagation (EUCAP 2018), London, United Kingdom, pp. 1-3, April 9-13, 2018.

[C48] L. T. P. Bui, M. A. Hannan, N. Anselmi, L. Poli, and P. Rocca, "Optimal synthesis of wideband planar phased arrays with maximum bandwidth," 12th European Conference on Antennas and Propagation (EUCAP 2018), London, United Kingdom, pp. 1-3, April 9-13, 2018.

[C49] A-M. Yao, N. Anselmi, and P. Rocca, "A multi-carrier frequency diverse array design method for wireless power transmission," 12th European Conference on Antennas and Propagation (EUCAP 2018), London, United Kingdom, pp. 1-4, April 9-13, 2018 (Invited paper; Session title: "Beamforming techniques for information and power transmission" – D. Masotti).

[C50] N. Anselmi, L. Poli, P. Rocca, and A. Massa, "Optimal CP-based synthesis of real linear arrays," 2018 IEEE AP-S International Symposium and USNC- URSI Radio Science Meeting (no. 978-1-5386-7102-3/18/$31.00©2018 IEEE), Boston, Massachussets, USA, pp. 2199-2200, July 8-13, 2018 (DOI: 10.1109/APUSNCURSINRSM.2018.8609273).

[C51] N. Anselmi, P. Rocca, L. Poli, and A. Massa, "Innovative method for designing multibeam-on-receive scanning arrays with optimized sub-array configuration and analytic phase synthesis," 2018 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-5386-7102- 3/18/$31.00©2018 IEEE), Boston, Massachussets, USA, pp. 2107-2108, July 8-13, 2018 (DOI: 10.1109/APUSNCURSINRSM.2018.8609316).

[C52] N. Anselmi, L. Poli, G. Oliveri, and A. Massa, "Compressive processing in inverse problems: Current advances and future trends," 2018 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978- 1-5386-7102-3/18/$31.00©2018 IEEE), Boston, Massachussets, USA, pp. 219-220, July 8-13, 2018 (Invited paper; Session

title: “Emerging Approaches and Future Trends in Electromagnetic Inverse Problems” – D. Erricolo, G. Oliveri, and M. Salucci) (DOI: 10.1109/APUSNCURSINRSM.2018.8608612).

[C53] N. Anselmi, P. Rocca, C. Castlunger, D. Marcantonio, P. Rosatti, L. Tosato, F. Zardi, E. Rajo-Iglesias, and A. Massa, “Domino-tiling in phased arrays through innovative computational/analytic strategies,” 2018 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978- 1-5386-7102-3/18/$31.00©2018 IEEE), Boston, Massachussets, USA, pp. 5-6, July 8-13, 2018 (Invited paper; Session title: “Innovative Phased Array Technology and Applications” – P. Rocca, J. Herd, and R. Mailloux) (DOI: 10.1109/APUSNCURSINRSM.2018.8608277).

[C54] N. Anselmi and G. Gottardi, “Recent advances and current trends in metamaterials-by-design,” 3rd International Workshop on Metamaterials-by-Design (IWMbD2017), Madrid, Spain, December 14-15, 2017.

[C55] N. Anselmi, L. Poli, G. Oliveri, and A. Massa, “Three-dimensional imaging with the contrast source compressive sensing,” 2018 International Applied Computational Electromagnetics Society Symposium, ACES 2018, Beijing, China, July 29 - August 1, 2018 (DOI: 10.23919/ACESS.2018.8669353).

[C56] N. Anselmi, M. A. Hannan, L. T. P. Bui, L. Dall'Asta, G. Gottardi, P. Rocca, and A. Massa, “Sparse wideband linear arrays synthesis via compressive processing methods,” 2018 International Applied Computational Electromagnetics Society Symposium, ACES 2018, Beijing, China, July 29 - August 1, 2018 (DOI: 10.23919/ACESS.2018.8669266).

[C57] G. Oliveri, M. Salucci, N. Anselmi, and A. Massa, “Recent advances in matrix completion techniques as applied to tomographic imaging,” 13th European Conference on Antennas and Propagation (EUCAP 2019) (ISBN 978-88-907018-8-7), Krakow, Poland, pp. 1-3, March 31 - April 5, 2019 (Invited paper; Session title: "Unconventional techniques and applications for inverse scattering problems" – R. Scapaticci and M. Bevacqua).

[C58] N. Anselmi, L. Poli, G. Oliveri, P. Rocca, and A. Massa, “Dealing with correlation and sparsity for an effective exploitation of the compressive processing,” 13th European Conference on Antennas and Propagation (EUCAP 2019) (ISBN 978-88-907018-8-7), Krakow, Poland, pp. 1-4, March 31 - April 5, 2019.

[C59] N. Anselmi, P. Rocca, and A. Massa, “Analytic-based synthesis of tiled arrays,” 13th European Conference on Antennas and Propagation (EUCAP 2019) (ISBN 978-88-907018-8-7), Krakow, Poland, pp. 1-3, March 31 - April 5, 2019.

[C60] M. Salucci, L. Poli, N. Anselmi, and A. Massa, “Multi-scale compressive processing for inverse scattering within the contrast source formulation,” 2019 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-7281-0692-2/19/$31.00©2019 IEEE), Atlanta, Georgia, USA, pp. 1017-1018, July 7-12, 2019 (DOI: 10.1109/APUSNCURSINRSM.2019.8889328).

[C61] N. Anselmi, P. Rocca, and A. Massa, “Modular phased array design through a tile-dimension tapering approach,” 2019 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-7281-0692-2/19/$31.00©2019 IEEE), Atlanta, Georgia, USA, pp. 1-2, July 7-12, 2019 (Invited paper; Session title: “Low-Cost Phased Array Technology” – P. Rocca, J. Herd, and R. Mailloux)(DOI: 10.1109/APUSNCURSINRSM.2019.8888715).

[C62] N. Anselmi, M. A. Hannan, and P. Rocca, “Optimal synthesis of maximally robust antenna arrays by means of circular interval arithmetics,” 2019 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-7281-0692-2/19/$31.00©2019 IEEE), Atlanta, Georgia, USA, pp. 749-750, July 7-12, 2019 (DOI: 10.1109/APUSNCURSINRSM.2019.8888575).

[C63] N. Anselmi and A. Massa, “Full sparsity in compressive processing for non-linear inverse scattering,” 2019 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-7281-0692-2/19/$31.00©2019 IEEE), Atlanta, Georgia, USA, pp. 1011-1012, July 7-12, 2019 (DOI: 10.1109/APUSNCURSINRSM.2019.8888470).

[C64] B. Li, G. Oliveri, N. Anselmi, A. Massa, W. Ke, W. Tang, “A total-variation compressive processing approach to two-dimensional field reconstruction,” 2019 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-7281-0692-2/19/$31.00©2019 IEEE), Atlanta, Georgia, USA, pp. 1467-1468, July 7-12, 2019 (DOI: 10.1109/APUSNCURSINRSM.2019.8888291).

[C65] N. Anselmi, G. Gottardi, P. Rocca, G. Oliveri, and A. Massa, “Unconventional M-MIMO phased array design for 5G wireless systems,” 2019 IEEE International Symposium on Phased Array Systems & Technology (no. 978-1-7281-3049-1/19/$31.00©2019 IEEE), Boston, MA, USA, 15-18 October 2019 (Invited paper; Special Session title: “Array design III" – B. Mailloux and P. Rocca) (DOI: 10.1109/PAST43306.2019.9020766).

[C66] A. Massa, N. Anselmi, G. Gottardi, R. Mailloux, G. Oliveri, L. Poli, and P. Rocca, “Optimal trade-off phased-arrays for future generation radars and communication Systems,” 2019 IEEE International Conference on Microwaves, Communications, Antennas & Electronic Systems (COMCAS 2019) (no. 978-1-5386-9549-4/19/$31.00©2019 IEEE), Tel Aviv, Israel, 4-6 November 2019 (Invited paper) (DOI: 10.1109/COMCAS44984.2019.8958154).

[C67] A. Massa, N. Anselmi, G. Oliveri, and M. Salucci, “Advanced microwave imaging with compressive processing - Concepts, methods, and applications,” 2019 IEEE International Conference on Microwaves, Communications, Antennas & Electronic Systems (COMCAS 2019) (no. 978-1-5386-9549-4/19/$31.00©2019 IEEE), Tel Aviv, Israel, 4-6 November 2019 (DOI: 10.1109/COMCAS44984.2019.8958087).

[C68] P. Rocca, N. Anselmi, F. Boulos, and a. Massa, "Optimality concepts and solutions in next-generation antenna arrays," 2019 IEEE Asia-Pacific Microwave Conference (APMC 2019) (no. 978-1-7281-3516-8/19/$31.00©2019 IEEE), Singapore, Singapore, pp. 444-445, December 10-13, 2019 (Invited paper) (DOI: 10.1109/APMC46564.2019.9038679).

[C69] L. Poli, A. Polo, M. Salucci, N. Anselmi, and G. Oliveri, “Recent advances and current trends in compressive processing as applied to inverse scattering,” 14th European Conference on Antennas and Propagation (EuCAP 2020) Copenhagen, Denmark, March 15-20, 2020.

[C70] N. Anselmi, A. Polo, and P. Rocca, “Optimization of modular multi-function RADAR architectures for two-way pattern sidelobe minimization,” 14th European Conference on Antennas and Propagation (EuCAP 2020), Copenhagen, Denmark, March 15-20, 2020.

[C71] N. Anselmi, P. Rocca, and A. Massa, “Tiled arrays: low cost solutions for next generation communication and sensing systems,” 14th European Conference on Antennas and Propagation (EuCAP 2020), Copenhagen, Denmark, March 15-20, 2020.

[C72] N. Anselmi, A. Polo, P. Rocca, and A. Massa, “A novel probabilistic interval arithmetic method for tolerance analysis of phased arrays beamforming networks,” 14th European Conference on Antennas and Propagation (EuCAP 2020), Copenhagen, Denmark, March 15-20, 2020.

[C73] A. Massa, P. Rocca, M. Salucci, and N. Anselmi, “Towards joint sensing and communication for 5G and beyond systems,” 14th European Conference on Antennas and Propagation (EuCAP 2020), Copenhagen, Denmark, March 15-20, 2020.

[C74] B. Li, Z. Huang, N. Anselmi, and L. Poli, “Bayesian compressive sensing approach for phaseless microwave imaging,“ 4th International Applied Computational Electromagnetics Society Symposium in China, ACES-China 2021, Chengdu2 8 - 31 July 2021 (DOI:10.23919/ACES-China52398.2021.9581710).

[C75] N. Anselmi, P. Rocca, B. Biscontini, A. M. Barrera, and A. Massa, “Capacity-driven optimization of tiled arrays for multi-user MIMO communication base stations,” 2021 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-7281-4670-6/21/$31.00©2021 IEEE), Marina Bay Sands, Singapore, pp. 799-800, December 4-10, 2021 (Invited paper; Session title: “Unconventional Design Approaches for Low Cost Antennas” – N. Anselmi, P. Rocca, and R. Mailloux) (DOI: 10.1109/APS/URSI47566.2021.9704547).

[C76] N. Anselmi, A. Benoni, P. Rocca, and A. Massa, “Tolerance analysis of continuous and discrete apertures through a novel probabilistic interval arithmetic method,” 2021 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-7281-4670-6/21/$31.00©2021 IEEE), Marina Bay Sands, Singapore, pp. 1259-1260, December 4-10, 2021 (Invited paper; Session title: “Innovative Trends in Antenna Tolerance Analysis and Robust Design” – P. Rocca, J. Huang and P. Li) (DOI: 10.1109/APS/URSI47566.2021.9704190).

[C77] N. Anselmi, P. Rocca, F. Morichetti, A. I. Melloni, and A. Massa, “Planar phased array design for quantum free space optical communications,” 2021 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-7281-4670-6/21/$31.00©2021 IEEE), Marina Bay Sands, Singapore, pp. 1807-1808, December 4-10, 2021 (DOI: 10.1109/APS/URSI47566.2021.9703701).

[C78] A. Polo, N. Anselmi, R. Azaro, G. Gottardi, M. A. Hannan, G. Oliveri, L. Poli, P. Rocca, M. Salucci, H. Ahmadi, J. Huang, P. Li, M. Li, S. K. Goudous, S. Yang, and A. Massa, “Online EM teaching: E-XAM tool for students’ self-evaluation and final assessment,” 2021 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-7281-4670-6/21/$31.00©2021 IEEE), Marina Bay Sands, Singapore, pp. 1477-1478, December 4-10, 2021 (DOI: 10.1109/APS/URSI47566.2021.9704286).

[C79] P. Da Rù, N. Anselmi, P. Rocca, and A. Massa, “Passive and modular surface design for tailoring EM propagation in urban scenarios,” 16th European Conference on Antennas and Propagation (EUCAP 2022), Madrid, Spain, pp. 27 March - 1 April, 2022 (DOI: 10.23919/EuCAP53622.2022.9769073).

[C80] L. Tosi, N. Anselmi, A. Polo, and P. Rocca, “Array antenna power pattern analysis through quantum computing,” 16th European Conference on Antennas and Propagation (EUCAP 2022), Madrid, Spain, pp. 27 March - 1 April, 2022 (DOI: 10.23919/EuCAP53622.2022.9769330).

[C81] L. Poli, G. Oliveri, N. Anselmi, M. Salucci, M. A. Hannan, F. Zardi, M. D. Migliore, and P. Rocca “Advances on CS-processing applied to phased arrays synthesis, processing, and characterization,” 16th European Conference on Antennas and Propagation (EUCAP 2022), Madrid, Spain, pp. 27 March - 1 April, 2022 2022 (DOI: 10.23919/EuCAP53622.2022.9769366).

[C82] A. Massa, N. Anselmi, A. Benoni, P. Da Rù, G. Oliveri, P. Rocca, M. Salucci, and F. Zardi, “The road to smart electromagnetic environments: the future of wireless communications,” 2022 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-6654-9658-2/22/$31.00 ©2022 IEEE), Denver, Colorado, USA, pp. 1516-1517, July 10-15, 2022 (Invited paper; Session title: “Towards a Smart EM Environment – Network, Hardware and Electromagnetic perspectives” – Roberto Flamini and Renato Lombardi) (DOI: 10.1109/AP-S/USNC URSI47032.2022.9886831).

[C83] A. Polo, N. Anselmi, R. Azaro, G. Oliveri, L. Poli, P. Rocca, M. Salucci, F. Zardi, H. Ahmadi, J. Huang, P. Li, M. Li, S. K. Goudous, S. Yang, and A. Massa, “Online examination and self-assessment tool for EM teaching,” 2022 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-6654-9658-2/22/$31.00 ©2022 IEEE), Denver, Colorado, USA, pp. 1572-1573, July 10-15, 2022 (DOI: 10.1109/AP-S/USNC-URSI47032.2022.9887198).

[C84] P. Rocca, L. Tosi, N. Anselmi, and A. Massa, “On the use of quantum fourier transform for array antenna analysis,” 2022 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 978-1-6654-9658-2/22/$31.00 ©2022 IEEE), Denver, Colorado, USA, pp. 699-700, July 10-15, 2022 (DOI: 10.1109/AP-S/USNC-URSI47032.2022.9886119).

[C85] N. Anselmi, P. Rocca, A. Benoni, L. Poli, and A. Massa, ‘Unconventional array design for efficient wireless power transmision’, in 2023 17th European Conference on Antennas and Propagation (EuCAP), Florence, Italy, 2023, pp. 1-4. (DOI: 10.23919/EuCAP57121.2023.10133457).

[C86] L. Tosi, N. Anselmi, P. Rocca, and A. Massa, ‘Analysis and synthesis of phased antenna arrays through quantum computing’, in 2023 17th European Conference on Antennas and Propagation (EuCAP), Florence, Italy, 2023. (Invited paper; Session title: “Quantum Electromagnetics - From Photonics to Quantum Computing” – N. Anselmi, A. Boag, and P. Rocca) (DOI: 10.23919/EuCAP57121.2023.10133320).

[C87] N. Anselmi, A. Melloni, F. Morichetti, P. Rocca, and A. Massa, ‘On the design of unconventional optical phased array antennas’, in 2023 17th European Conference on Antennas and Propagation (EuCAP), Florence, Italy, 2023, pp. 1-4 (DOI: 10.23919/EuCAP57121.2023.10132971).

[C88] N. Anselmi, L. Tosi, P. Rocca, and A. Massa, ‘On the design of next generation phased array antennas - methods, architectures, and trends’, in 2023 17th European Conference on Antennas and Propagation (EuCAP), Florence, Italy, 2023 (DOI: 10.23919/EuCAP57121.2023.10133211)

[C89] N. Anselmi, A. Benoni, P. Da Ru, G. Oliveri, P. Rocca, M. Salucci, F. Zardi, and A. Massa, "Design and Planning of Static and Reconfigurable EM Skins for Smart Electromagnetic Environments," MMS 2022, pp. 1-4. (DOI: 10.1109/MMS55062.2022.9825515).

[C90] N. Anselmi, P. Rosatti, L. Tosi, F. Zardi, P. Rocca, G. Toso, and A. Massa., ‘Modular phased array architecture

optimization for space antenna systems', in 2023 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (USNC-URSI), Portland, OR, USA,2023. (DOI: 10.1109/USNC-URSI52151.2023.10238209).

[C91] N. Anselmi, P. Rocca, G. Toso and A. Massa, "Modular Phased Array Antennas for Modern Applications," 2024 IEEE International Conference on Microwaves, Communications, Antennas, Biomedical Engineering and Electronic Systems (COMCAS 2024) (no. 979-8-3503-4818-7/24/$31.00 ©2024 IEEE), Tel Aviv, Israel, 9-11 July 2024 (DOI: 10.1109/COMCAS58210.2024.10666245).

[C92] N. Anselmi, S. Seyedinnavadeh, P. Rocca, A. Massa, M. Milanizadeh, F. Morichetti, and A. Melloni, "Unconventional Optical Phased Array Antennas Integrated in a Programmable Photonic Integrated Circuit," Proceedings of 24th European Conference on Integrated Optics (ECIO 2023), University of Twente, Netherlands, 19 - 21 April 2023.

[C93] N. Anselmi, A. Benoni, L. Poli, P. Rocca, L. Tosi, and A. Massa, "Unconventional array architectures for next generation non-terrestrial networks," 2024 IEEE AP-S International Symposium and USNC-URSI Radio Science Meeting (no. 979 – 8 – 3503 – 6990 – 8/24/$31.00 ©2024 IEEE), Florence, Italy, pp. 517-518, July 14-19, 2024 (Invited paper; Session title: "Innovative antenna solutions for next-gen non-terrestrial networks" – Aakash Bansal and William Whittow) (DOI: 10.1109/AP-S/INC-USNC-URSI52054.2024.10687023).

[C94] P. Rocca, N. Anselmi, L. Poli, C. Germani, M. Albertini, G. Toso, and A. Massa, "Polyomino-tiled AESA for LEO satcom on-the-move connectivity," 2024 IEEE International Symposium on Phased Array Systems and Technology (ARRAY), Boston, MA, USA, 15-18 October 2024 (DOI: 10.1109/ARRAY58370.2024.10880397).

[C95] N. Anselmi, P. Rocca, A. Benoni, and A. Massa, "Generalized Interval Arithmetic for Electromagnetic Sensitivity Analysis," 2025 IEEE International Symposium on Antennas and Propagation and INC/USNC – URSI Radio Science Meeting (AP-S/INC-USNC-URSI), Ottawa, Canada, pp. NA-NA, July 13-18, 2025 (accepted).

[C96] N. Anselmi, P. Rocca, L. Poli, A. Benoni, L. Tosi, F. Jaroszewski, and A. Massa, "Design of Aperiodic Tiled Arrays with Feeding Network Constraints," 2025 IEEE International Symposium on Antennas and Propagation and INC/USNC – URSI Radio Science Meeting (AP-S/INC-USNC-URSI), Ottawa, Canada, pp. NA-NA, July 13-18, 2025 (accepted).

National Conference Papers

[N1] M. Donelli, N. Anselmi, G. Oliveri, L. Poli, P. Rocca, L. Tenuti, M. Salucci, and A. Massa, "Imaging and inverse scattering @ ELEDIA Research Center," Atti XX Riunione Nazionale di Elettromagnetismo (XX RiNEm) (ISBN 978-88-907599-4-9), Padova, pp. 501-504, 15-18 Settembre 2014.

[N2] M. Donelli, N. Anselmi, E. Bekele, M. Carlin, L. Manica, G. Oliveri, L. Poli, P. Rocca, M. Salucci, L. Tenuti, L. Zambiasi, and A. Massa, "Antenna synthesis and analysis @ ELEDIA Research Center," Atti XX Riunione Nazionale di Elettromagnetismo (XX RiNEm) (ISBN 978-88-907599-4-9), Padova, pp. 509-512, 15-18 Settembre 2014.

[N3] N. Anselmi, M. Donelli, M. A. Hannan, G. Oliveri, L. Poli, P. Rocca, M. Salucci, L. Tenuti, and A. Massa, "Inverse scattering methodologies and applications @ ELEDIA Research Center," Atti XXI Riunione Nazionale di Elettromagnetismo (XXI RiNEm), Parma, pp. 152-155, 12-14 Settembre 2016.

[N4] N. Anselmi, M. Donelli, A. Gelmini, G. Gottardi, G. Oliveri, L. Poli, P. Rocca, L. Tenuti, and A. Massa, "Design and optimization of advanced radar and communications systems and architectures @ ELEDIA Research Center," Atti XXI Riunione Nazionale di Elettromagnetismo (XXI RiNEm), Parma, pp. 164-167, 12-14 Settembre 2016.

[N5] N. Anselmi, "Optimal tiling for new generation radar systems," Atti XXI Riunione Nazionale di Elettromagnetismo (XXI RiNEm), Parma, pp. 485-488, 12-14 Settembre 2016.

[N6] N. Anselmi, A. Gelmini, G. Gottardi, G. Oliveri, L. Poli, P. Rocca, M. Salucci, and A. Massa, "Inverse Scattering Methodologies and Applications @ ELEDIA Research Center," Atti XXII Riunione Nazionale di Elettromagnetismo (XXII RiNEm), Cagliari, pp. 325-328, 3-6 Settembre 2018.

[N7] N. Anselmi, R. Azaro, P. Bui, A. Gelmini, G. Gottardi, A. Hannan, G. Oliveri, L. Poli, A. Polo, F. Robol, P. Rocca, M. Salucci, and A. Massa, "Antenna Synthesis and Optimization @ ELEDIA Research Center," Atti XXII Riunione Nazionale di Elettromagnetismo (XXII RiNEm), Cagliari, pp. 333-336, 3-6 Settembre 2018.

[N8] N. Anselmi, G. Oliveri, L. Poli, A. Polo, F. Robol, P. Rocca, M. Salucci, and A. Massa, "EM Education Tools & Programs @ ELEDIA Research Center," Atti XXII Riunione Nazionale di Elettromagnetismo (XXII RiNEm), Cagliari, pp. 329-332, 3-6 Settembre 2018.

[N9] N. Anselmi, L. Poli, A. Benoni, P. Rosatti, L. Tosi, F. Zardi, P. Rocca, G. Oliveri, and A. Massa, "Unconventional phased array design methodologies for communication and sensing @ ELEDIA Research Center," Atti XXIV Riunione Nazionale di Elettromagnetismo (RiNEm 2022), Catania, 18-21 Settembre 2022.

[N10] G. Oliveri, P. Rocca, L. Tosi, N. Anselmi, A. Polo, and A. Massa, "Quantum computing for engineering electromagnetics," Atti XXIV Riunione Nazionale di Elettromagnetismo (RiNEm 2022), Catania, 18-21 Settembre 2022.

Thesis

[TLT] N. Anselmi, *Analisi per l'implementazione digitale di un ricevitore UWB*, Bachelor Thesis, Advisor: Dr. T. Erseghe, Faculty of Engineering, University of Padova, 2009.

[TLM] N. Anselmi, *Interval analysis as applied to the robust design of linear antenna arrays*, Master Thesis, Advisor: Prof. A. Massa, Co-Advisor: Dr. P. Rocca, Faculty of Engineering, University of Trento, 2012.

[TD] N. Anselmi, *Innovative Tiling Methodologies for the Synthesis of Phased Array Antennas for Advanced Radar and Communications Systems*" Advisor: Prof. G. Oliveri, University of Trento, 2018.

Book Chapters

[L1] A. Massa, G. Oliveri, P. Rocca, N. Anselmi, and M. Salucci, "Technologies of antenna and phased array for wireless

power transfer via radio waves," Wireless Power Transfer – Theory, Technology, and Applications – Series "IET Energy Engineering", The Institution of Engineering and Technology London UK, vol. 112, ISBN 978-1-78561-346-0, Ed. N. Shinohara, pp. 129-154, 2018.

[L2] N. Anselmi, A. Massa, G. Oliveri, L. Poli, P. Rocca, M. Salucci, and A. Polo, "Optimal trade-off synthesis for future generation phased arrays @ ELEDIA Research Center," CNIT Technical Reports – Technical Report-04 on 'Italian Perspectives on Antennas for Next Generation Communications,' Eds. G. Di Massa and S. Costanzo, pp. 81-98, February 2020 (ISBN: 9788894982312).

[L3] N. Anselmi, G. Oliveri, L. Poli, A. Polo, P. Rocca, M. Salucci, and A. Massa, "On the Role and the Exploitation of the Information in Inverse Scattering Problems for Microwave Imaging - Theory, Numerical Tools, and Applications," Technical Report-10 on 'Microwave Imaging based on Inverse Scattering: Techniques, Systems and Applications,' Eds. M. Pastorino and A. Randazzo, pp. 1-16, April 2023 (ISBN: 9788894982633).

[L4] N. Anselmi, S. Goudos, G. Oliveri, L. Poli, P. Rocca, M. Salucci, and A. Massa, "Unconventional array architectures for next generation wireless communications," Sparse Arrays for Radar, Sonar, and Communications, Wiley-IEEE Press, Hoboken, New Jersey, ch. 14, ISBN 978139419017. Ed. Moeness G. Amin, pp. 423-454, 2024 (DOI: 10.1002/9781394191048.ch14).

[L5] N. Anselmi, G. Oliveri, L. Poli, A. Polo, P. Rocca, M. Salucci, and A. Massa, "Breaking the curse of dimensionality in electromagnetics design through optimization empowered by machine learning," Advances in Electromagnetics Empowered by Artificial Intelligence and Deep Learning, Wiley-IEEE Press, Hoboken, New Jersey, ch. 3, ISBN 9781119853893, Eds. S. D. Campbell and D. Werner, pp. 83-104, 2023 (DOI: 10.1002/9781119853923.ch3).