ANDREA QUIRINI
Curriculum Vitae

Part I – General Information

Full Name	Andrea QUIRINI
Spoken Languages	Italian, English, French

Part II – Education

Type	Year	Institution	Notes (Degree, Experience,…)
PhD	2024	Sapienza University of Rome	PhD in Information and Communication Technologies (ICT). Thesis title: *Signal Processing Techniques and Design Strategies for Passive Radar Systems Based on Non-Uniform Linear Arrays.* Tutor: Prof. P. Lombardo.
Master's degree	2020	Sapienza University of Rome	Master's degree in telecommunications engineering*, cum laude.*
Master's degree	2020	Georgia Institute of Technology	Master's degree in electrical and computer engineering. Georgia Tech Lorraine (GLT) campus (1st semester) + Georgia Tech Atlanta (GTA) campus (2nd semester). GPA: 3.875/4.
Bachelor's degree	2018	Sapienza University of Rome	Bachelor's degree in telecommunications engineering, *cum laude*

Furthermore, I have obtained the following language certifications:

Year	Language	Level	Certification
2019	English	N/A	ETS – Graduate Record Examination (GRE)
2018	English	C1	Test Of English as a Foreign Language (TOEFL)
2017	English	C1	Cambridge Certificate in Advanced English (CAE)
2015	French	B1	Diplôme d' Études en Langue Française (DELF)

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
Nov. 2023	Ongoing	Sapienza University of Rome	Research Associate – selected with the call AR-B 8/2023 published on June 20, 2023, for research activity on "*Development of Advanced Techniques and Enabling Methodologies for Passive Radar on Moving Platforms"*.
Nov. 2020	Oct. 2023	Sapienza University	PhD in Information and Communication

of Rome	Technologies – selected for his PhD with a scholarship with the call published on June 30, 2020, cycle XXXVI.

Part IV – Teaching experience

Year	Institution	Lecture/Course
2024	Sapienza University of Rome	Selected for the call 5/2023 for tutoring and teaching activity, published on May 17, 2023. **Course**: Radar Systems, prof. P. Lombardo.
2024	Sapienza University of Rome	Tutoring and teaching assistance. **Course**: Conceptual design of a space mission, prof. L. Iess.
2024	Sapienza University of Rome	Support for experimental activity **Course**: Radar & Remote Sensing Laboratory, prof. F. Colone.
2024	Sapienza University of Rome	**Co-advisor of #2 Bachelor's degree theses** • G. Vender, *Analisi delle Micro-Doppler radar generate da un'elica in rotazione,* March 2024 • G. Mortillaro, on the topic "Passive radars on moving platforms exploiting DVB-S-based illuminator of opportunity", *in progress*.
2024	Sapienza University of Rome	**Co-advisor of #5 Master's degree theses** • F. Diana, *Analisi delle prestazioni di moduli SDR a basso costo per applicazioni di Integrated Communications and Sensing,* January 2024. • L. Maraschi, *Analisi e utilizzo di codici di fase P4 per l'implementazione di sistemi intergrati di comunicazione e sorveglianza mediante dispositivi Software-Defined Radio*, May 2024. • E. Verduci, *Analisi di un sistema RadCom basato su forme d'onda OFDM: dalla simulazione alla sperimentazione*, May 2024. • L. Tasciotti, on the topic "drones' detection and classification exploiting microDoppler signatures", *in progress.*
		• M. Scafoni, on the topic "drones' detection and classification exploiting microDoppler signatures", *in progress.*
2024	Sapienza University of Rome	**Co-advisor and collaborator of #1 Graduate research student and #1 PhD student** • B. Iafrate on the topic "Peak-to-Average Power Ratio reduction in OFDM-based JRC systems" • M. AminNasrabadi, on the topic "drones' detection and classification exploiting microDoppler signatures", *in progress*

Part V - Society memberships, Awards and Honors

Year	Title
2024	Recipient of the IEEE AESS Micheal Wicks Travel Award for the IEEE Radar Conference (RadarConf'), May 2024, Denver.
2023	Recipient of the IEEE AESS Travel Grant for the IEEE International Radar

	Conference, November 2023, Sydney.
2022	2nd prize for the Young Scientist Award at 2022 23rd International Radar Symposium (IRS), October 2022, Gdansk.
2023-2024	IEEE AESS membership.
2021-2024	IEEE Graduate Student membership #id: 98002756
2019	Recipient of the Sapienza mobility scholarship for the Double Degree program at the *Georgia Institute of Technology*.
2015-2020	Exemption from university fees for outstanding students.

Part VI - Funding Information [grants as PI-principal investigator or I-investigator]

Year	Title	Program	Grant value
2022-2025	Rome Technopole PNRR – FP5 **Role**: I-Investigator	The research activities within the Rome Technopole PNRR, Flagship Project 5 – "*Transizione digitale attraverso la tecnologia radar AESA (Active Electronally Scanned Array), la crittografia quantistica e le comunicazioni quantistiche*" focus on developing approaches and methodologies for the full exploitation of the new generation of fully digital Active Electronically Scanning Array (AESA) Radars: • exploitation of MicroDopplers by AESA Radar. • flexible exploitation of the overall antenna aperture also in transmission through the use of multiple transmitting beams (MIMO), possibly operating with different waveforms and potentially in continuous wave and/or shared with communication signals. • Use of machine learning techniques for processing and extracting information from the massive amount of radar images potentially available with AESA Radar.	363000.00€
2023-2025	PNRR Restart, PE-14, ISaCAGE Project, Spoke 7 **Role**: I-Investigator	The Integrating Sensing and Communication (ISaCAGE) Project funded under the National Recovery and Resilience Plan (PNRR), in the PE14 Extended Partnerships call aims to develop methodologies and enabling techniques for Integrated Sensing and Communications (ISAC) systems for stationary or moving platforms operating with multiple channels in different operational geometries. Partners: University of Naples Federico	589559.00€

		II (Spoke Leader), Sapienza University of Rome, Polytechnic of Milan, Polytechnic of Turin, University of Bologna, University of Catania.	
2023-2025	PRIN, CIRCE Project **Role**: I-Investigator	The focus of the CommunIcations and Radar Co-Existence (CIRCE) project, financed by the Ministry of Research under the PRIN 2022 call, is to study innovative solutions for Radar and Communication systems coexistence, based on the shared use of spectral resources, enabled by the exploitation of a single waveforms, e.g. based on Orthogonal Frequency Division Multiplexing (OFDM) modulation, to simultaneously enable the sensing and the communication functionality. Partners: Univ. of Pisa (PI), University of Naples Federico II, Sapienza University of Rome, University of Lecce, University of Cassino.	50400.00€
2023-2025	Research project *RADCOM* **Role**: I-Investigator	The RADCOM project (collaboration between Sapienza University of Rome and Rheinmetall SpA) focuses on defining waveforms to be used in a joint Radar-Communications system.	391660.00€
2023	*Joint radar and communication strategies for autonomous driving applications* (Medium Size Research Project, Sapienza) **Role**: I-Investigator	This research project focuses on joint radar and communication systems for autonomous driving applications, exploiting communication waveforms, as Orthogonal Frequency Division Multiplexing (OFDM) modulations, and exploring innovative approaches to enhance sensing capabilities while maintaining reliable communication links. Specific areas of investigation include designing ad-hoc OFDM-based waveforms to mitigate radar ambiguity, developing efficient signal processing techniques for real-time implementation, exploring multi-antenna configurations for clutter suppression, possibly considering the use of non-uniformly spaced sensor distributions, and leveraging multi-dimensional signal processing for advanced radar tasks such as imaging of the detected obstacles.	9390€
2022	*Passive Radar on Moving Platforms: Advanced Techniques*	This research project focuses on innovative signal processing techniques for passive radar (PR) systems installed	36890.08€

and Enabling Methodologies (Medium Size Research Project, Sapienza)	onboard vehicles or aircrafts. PR technology has reached a state of relative maturity for what concerns stationary sensor operations, widely proving the ability to detect, localize and track targets exploiting the transmissions of illuminators of opportunity. The extension of PR technology to mobile platforms has been recently gaining remarkable attention as an emerging research area and is opening new perspectives in the framework of both defence and civil surveillance applications. However, the potential strategic advantages offered by a PR mounted on a moving platform are paid in terms of motion induced Doppler distortions of the received signal, which can adversely affect system performance. Specifically, the detection of slowly moving targets is hindered by the Doppler-spread clutter returns, due to platform motion, and typically requires the use of space-time processing techniques, applied to signals collected by multiple receiving channels. Although the feasibility of this concept has lately been demonstrated, mobile passive radar technology is still far from being mature and several issues must be addressed, mostly connected to the peculiar characteristics of the passive bistatic scenario. With the proposed research project, we aim at investigating the potentialities of mobile PR in three main application scenarios: (i) airborne-based PR for ground and maritime surveillance, (ii) PR onboard ground-based (vehicles) or maritime platforms, for guidance assistance and situational awareness in maritime and automotive environments, (iii) PR onboard handheld devices for indoor localization and surveillance. Each of these scenarios, characterized by distinctive features and specific challenges, will be separately addressed, and innovative signal processing techniques and operational methodologies will be developed to enable their reliable
Role: I-Investigator	

		operation and to address the identified limitations while maintaining the paradigm of a simple system architecture.	
2022	*Non-Uniform Linear Array Design Strategies for Passive Radar Systems on Moving Platform for Clutter Cancellation and DoA Estimation* (Research Initiation Project, Sapienza) **Role**: Co-PI – Principal Investigator	Recently, mobile passive radar systems gained considerable attention in the scientific community. In such systems, existing sources are exploited as signals of opportunity and the radar receiver is based on a phased array mounted either on air or land vehicles. Due to the relative motion between the radar and the stationary scene, one of the main challenges of these systems is to filter the interferences produced by the so-called clutter, which refers to all the reflections caused by non-moving scatterers located within the radar coverage. In this perspective, in this proposal we aim at illustrating the role that Non-Uniform Linear Arrays (NULA) can play in the context of mobile passive radar systems, and we aim at deriving a design strategy NULA-based radar receiver. The interest toward NULAs is fostered by the civilian radar industry, which is recently focusing on low-cost radar systems. Thus, NULA configurations can play a significant role, as they could be used to obtain satisfactory target detection and Direction of Arrival (DoA) estimation performances without needing many receiving sensors. The need to keep the number of sensors low is crucial in a low-budget system, as the number of receiving elements has a huge impact on both the system complexity and the weight and physical dimensions of the radar system. Within the scope of the project, we aim at validating the NULA-based cancellation techniques through both numerical analysis and experimental campaigns. The experimental framework developed allows to test the filtering techniques in the case study of a passive radar exploiting DVB-T signals, moving the radar along with the entire acquisition system so as to simulate a vehicle with a previously configured speed pattern.	2000.00€

		This will allow us to test the proposed cancellation techniques in an extremely realistic environment, giving rise to strong and closed conclusions regarding the use of NULAs in state-of-the-art technologies.	
2021	*Clutter Cancellation Through Non-Uniform Linear Arrays in DVBT-Based Passive Radar on Moving Platforms* (Research Initiation Project, Sapienza) **Role**: Co-PI – Principal Investigator	Currently there is a strong interest in transported radar systems, in which the radar receiver can be mounted either on air or land vehicles. One of the main challenges of these systems is to properly filter the interferences produced by the so-called clutter, which refers to all the reflections given by non-moving scatterers located within the radar coverage. In this perspective, the aim of the proposed project is to develop filtering techniques for clutter cancellation based on the use of Non-Uniform Linear Arrays (NULAs). These arrays are particularly suited for low-budget radar applications, due to their lightness and their low economic and computational costs. The interest in transported radar systems is being fostered by industries such as the security and the automotive ones. On the one hand, the recent advancements in the development of unmanned vehicles has completely revolutionised the way of thinking about security systems, which in turn has generated great interest in the use of radar systems that have to deal with moving unmanned vehicles. On the other hand, the automotive industry has defined the concept of automotive radar: a radar that, in addition to classical tasks such as detection and tracking, has to be designed with a view to the avoidance of vehicle collisions. Within the scope of the project, we also aim at validating the proposed cancellation techniques through experimental campaigns, exploiting a mechanical and electronic testing system that is already 90% developed. The experimental framework developed allows to test the filtering techniques in the case study of a passive radar exploiting DVB-T signals, moving the radar along with the	1700.00€

entire acquisition system so as to simulate a vehicle with a previously configured speed pattern. This will allow us to test the proposed cancellation techniques in an extremely realistic environment, giving rise to strong and closed conclusions regarding the use of NULAs in state-of-the-art technologies.

Part VII – Research Activities

Keywords	Brief Description
MIMO Radar NULA Fully digital AESA DoA estimation	**Three-element Non-Uniform Linear Array (NULA) design strategy for Direction of Arrival (DoA) estimation in Single Input Multiple Output (SIMO) and Multiple Input Multiple Output (MIMO) radar systems.** This research activity focuses on the exploitation of linear array configurations with non-uniform spacings aimed at DoA estimation. Specifically, a preliminary study was conducted for developing a flexible design strategy for a three-element NULA. By constraining the maximum probability of DoA estimation ambiguity and by leveraging the non-uniform sensor spacings, the proposed design strategy allows to exploit linear antenna arrays with a small number of receiving elements for estimating the DoA of an emitting source, allowing for flexible trade-offs between performance and system complexity. Currently, an extended version of this work aimed at the design of a MIMO radar equipped with three transmitters and three receivers is being developed. This activity also involves experimental campaigns carried out for validating the NULA design strategy and to demonstrate the achieved research results. This research activity aligns with the goals of the Rome Technopole PNRR FP5 project, which is dedicated to developing strategies and techniques to maximize the potential of next-generation fully digital AESA (Active Electronically Scanning Array) radars. As a matter of fact, the capability of operating digitally at the single antenna element both in transmission and in reception is fundamental, as it allows us to employ orthogonal waveforms at the level of the single antenna element. **Research results:** [1] A. Quirini, F. Filippini, C. Bongioanni, F. Colone, and P. Lombardo, "A Flexible Design Strategy for Three-Element Non-Uniform Linear Arrays", 2023, Sensors 23, no. 10: 4872, https://doi.org/10.3390/s23104872. [2] A. Quirini, F. Filippini, C. Bongioanni, F. Colone and P. Lombardo, "Outlier Rejection Approach for Direction of Arrival Estimation in Low SNR Conditions," 2021 18th European Radar Conference (EuRAD), London, United Kingdom, 2022, pp. 141- 144, https://doi.org/10.23919/EuRAD50154.2022.9784542. [3] A. Quirini, F.Colone, P.Lombardo, “A Flexible Design Strategy for a MIMO radar based on Three-Element Non-Uniform Linear Arrays”, in preparation.

OFDM radar Mobile passive radar Reciprocal range compression filtering NULA clutter cancellation DPCA STAP	**OFDM radar and passive radar installed onboard moving platforms.** As well known, detecting moving targets from radar onboard a vehicle or an aircraft is often challenging, due to the Doppler spread returns from the stationary scene. To suppress the strong clutter component, space-time processing techniques such as Displaced Phase Centre Antennas (DPCA) or Space-Time Adaptive Processing (STAP) can be employed, provided that the radar is equipped with multiple receiving channels. The effectiveness of these techniques has been extensively demonstrated in active pulsed radar and widely reported in the open literature. However, when dealing with active/passive radar based on continuous wave (CW) transmissions such as Orthogonal Frequency Division Multiplexing (OFDM) signals, the performance of space-time techniques can be affected by the peculiar characteristics of both the considered system and waveform. Particularly, within this research activity, the benefits of operating with a reciprocal range compression filter over batches of arbitrary length, not necessarily corresponding to individual symbols, has been investigated. Furthermore, to effectively enable the use of non-OFDM batches, innovative architectures for evaluating the output range-Doppler map in both stationary and mobile OFDM radar systems have been investigated. In addition, the additional advantages of array configurations with non-uniformly displaced elements have been studied. The innovative processing architectures have also been validated via *ad-hoc* experimental activities carried out at the POMOS *(polo per la mobilità sostenibile)* site, Cisterna di Latina (LT), Italy. Moreover, in the framework of this research activity, I have been co-advising #1 Bachelor's degree Thesis. This research activity covers a major portion of my PhD activity, and it is funded by the following research projects: • the Sapienza 2022 - Medium Size Research project: "Passive Radar on Moving Platforms: Advanced Techniques and Enabling Methodologies", • the research initiation projects "*Clutter Cancellation Through Non-Uniform Linear Arrays in DVBT-Based Passive Radar on Moving Platforms"* (2021) and "*Non-Uniform Linear Array Design Strategies for Passive Radar Systems on Moving Platform for Clutter Cancellation and DoA Estimation"* (2022) The research activity also aligns with the goals of the PNRR Restart, PE-14 project. **Research results**: [1] A. Quirini, G. P. Blasone, F. Colone, and P. Lombardo, "Low-cost solutions for mobile passive radar based on multichannel DPCA and NULA configurations," International Journal of Microwave and Wireless Technologies, pp. 1–16, 2024. https://doi.org/10.1017/S1759078724000035. [2] A. Quirini, G. P. Blasone, F. Colone and P. Lombardo, "An apodization approach for passive GMTI Radar with NonUniform Linear Arrays," 2022 19th European Radar Conference (EuRAD), Milan, Italy, 2022, pp. 109-112, https://doi.org/10.23919/EuRAD54643.2022.9924646. [3] A. Quirini, G. P. Blasone, F. Colone and P. Lombardo, "Non-Uniform Linear Arrays for Target Detection and DoA Estimation in Passive Radar STAP," 2022 23rd International Radar Symposium (IRS), Gdansk, Poland,

2022, pp. 224-228, https://doi.org/10.23919/IRS54158.2022.9904996.
[4] A. Quirini, G. P. Blasone, F. Colone and P. Lombardo, "A simple NULA design strategy for target detection and DoA estimation in mobile passive radar," International Conference on Radar Systems (RADAR 2022), Hybrid Conference, Edinburgh, UK, 2022, pp. 570-575, https://doi.org/10.1049/icp.2023.1295.
[5] A. Quirini, F. Colone and P. Lombardo, "Impact of supervised reciprocal filter on clutter cancellation in OFDM radar," 2023 IEEE International Radar Conference (RADAR), Sydney, Australia, 2023, pp. 1-6, doi: https://doi.org/10.1109/RADAR54928.2023.10371135.
[6] A. Quirini, F. Colone, P.Lombardo, "Enabling DPCA via supervised reciprocal filter in OFDM radar onboard moving platforms", accepted for publication in the proceedings of the IEEE 2024 Radar Conference, Denver, USA, May 2024.
[7] A. Quirini, F. Colone, P.Lombardo, "Clutter suppression using Thresholded Reciprocal Filter in OFDM radar", submitted to the IEEE Transactions on Aerospace and Electronic Systems, (second revision round).
[8] A. Quirini, G. P. Blasone, F.Colone, P.Lombardo, "Supervised DPCA Scheme based on Reciprocal Filter for Clutter Cancellation from Moving OFDM Radar", in preparation.

OFDM radar	**Joint Radar and Communications based on OFDM waveforms.**
JRC	Joint Radar and Communication (JRC) and Integrated Sensing and Communication (ISAC) are emerging applications, facilitating the sharing of spectral resources, and thereby holding the potential to reduce electromagnetic pollution. Within this framework, employing OFDM waveforms, typically used in communications, for radar purposes represents a promising solution. As a matter of fact, OFDM waveforms have already been extensively studied for radar purposes, especially in the context of passive radar. However, its adaptation to JRC systems presents several challenges, since the OFDM waveform is not specifically designed for radar purposes. One significant concern is the high Peak to Average Power Ratio (PAPR), leading to power inefficiency. This issue is particularly crucial for the radar subsystem, where Signal-to-Noise Ratio (SNR) is fundamental for target detection. One of the preliminary steps of this ongoing research activity is to investigate several techniques for PAPR reduction, such as leveraging Golay complementary sequences as OFDM codewords, or employing Selected Mapping (SLM) technique, which operate on the information content within OFDM data subcarriers to minimize the PAPR value. This research activity is partially funded by the PRIN – CIRCE and also related to the following research projects: • the Sapienza 2023 - Medium Size research project "Joint radar and communication strategies for autonomous driving applications". • the PNRR Restart, PE-14, ISaCAGE Project, Spoke 7. This research activity also involves laboratory tests with Software Defined Radios (SDR) aimed at validating the achieved research results. Additional experimental campaigns in an open environment are planned with the aim of demonstrating the achieved research results. In this framework, I have been co-advising #3 Master's Degree Thesis, and #1 Graduate Research students.
ISAC	
PAPR reduction	
Golay complementary sequences.	
Selected Mapping	

	Research results: [1] A. Quirini, B. Iafrate, F. Colone, P. Lombardo, "Pilot tones injection in Golay sequences for PAPR reduction in OFDM-based JRC systems", accepted for publication in the proceedings of the 2024 25rd International Radar Symposium (IRS), Wroklaw, Poland, July 2024.
Radar	**UAVs detection and classification exploiting microDoppler signatures.**
Drone classification Micro-Doppler signatures rotation rate estimation	The classification of unmanned aerial vehicles (UAV) poses significant challenges for modern radar systems. As a matter of fact, operating at moderate speeds and low altitudes, UAVs are elusive targets for radar, and can often be detected at relatively short ranges, where clutter returns are prevalent. Furthermore, their radar cross-section is often close to the birds so that, even when the UAV is detected and firmly tracked, its discrimination from the birds, as well as the drone type classification requires the exploitation of micro-Doppler signatures. The goal of this research activity, is to develop a model-based UAV classifier, exploiting on micro-Doppler signatures for estimating the rotation rates of UAV propellers. Leveraging on this parameter provides hints both on the motion capability of the UAV and on its type. This activity involves laboratory tests as well as experimental campaigns in an open environment to demonstrate the achieved research results. In this framework, I have been co-advising #1 Bachelor's degree Thesis, #2 Master's Degree Thesis, and #1 PhD Student. This research activity aligns and is partially funded by the Rome Technopole PNRR- Flagship Project 5 - *Transizione digitale attraverso la tecnologia radar AESA (Active Electronally Scanned Array), la crittografia quantistica e le comunicazioni quantistiche.* **Research results:** [1] A. Quirini, M. AminNasrabadi, C. Bongioanni, P. Lombardo, "Estimating the rotation rate of UAV propellers using pitch estimation techniques", accepted for publication in the proceedings of the 2024 21th European Radar Conference (EuRAD), Paris, France, September 2024. [2] A. Quirini, M. AminNasrabadi, C. Bongioanni, P. Lombardo, "Rotation rate estimation of dual propellers drones with opposite direction using a multistatic radar", submitted to the 2024 International Radar Conference, Rennes, France, October 2024.

Part VIII – Summary of Scientific Achievements

Product type	Total number	In Scopus database	Start	End
Journal Papers [international, peer review]	2	2	2021	2024
Conference proceedings [international, peer review]	6	5	2021	2024
Workshop speech	4	-	2023	2024

For the research product in the Scopus database:

Total Impact factor	5.3
Total Citations	10

Average Citations per Product	1.429
Hirsch (H) index	2
Normalized H index*	0.5

*H index divided by the academic seniority (time span from graduation).

In addition, the following papers are in progress:

Accepted for publication**:**

- A. Quirini, B. Iafrate, F.Colone, P.Lombardo, "Pilot tones injection in Golay sequences for PAPR reduction in OFDM-based JRC systems", in the proceedings of the 2024 25rd International Radar Symposium (IRS), Wroklaw, Poland, July 2024.
- A. Quirini, M. AminNasrabadi, C. Bongioanni, P. Lombardo, "Estimating the rotation rate of UAV propellers using pitch estimation techniques", in the proceedings of the 2024 21th European Radar Conference (EuRAD), Paris, France, September 2024.

Under review**:**

- A. Quirini, M. AminNasrabadi, C. Bongioanni, P. Lombardo, "Rotation rate estimation of dual propellers drones with opposite direction using a multistatic radar", submitted to the 2024 International Radar Conference, Rennes, France, October 2024.
- A. Quirini, F.Colone, P.Lombardo, "Clutter suppression using Thresholded Reciprocal Filter in OFDM radar", submitted to the IEEE Transactions on Aerospace and Electronic Systems, (second revision round).

In preparation**:**

- A. Quirini, G. P. Blasone, F.Colone, P.Lombardo, "Supervised DPCA Scheme based on Reciprocal Filter for Clutter Cancellation from Moving OFDM Radar", in preparation.
- A. Quirini, F.Colone, P.Lombardo, "A Flexible Design Strategy for a MIMO radar based on Three-Element Non-Uniform Linear Arrays", in preparation.

Furthermore, I have been speaker at the following workshops.

Date	Event / Location	Presentation title
Apr. 2024	Rome Technopole PNRR - FP5 workshop, Consiglio Nazionale delle Ricerche (CNR), via Fosso del Cavaliere, 100, Rome, Italy.	Innovative Signal Processing Techniques for AESA RADAR
Oct. 2023	9th Multistatic and Passive Coherent Location (PCL) Focus Days 2023, Fraunhofer FHR, Wachtberg, Germany.	Clutter cancellation in OFDM radars through Supervised Reciprocal Filter
Oct. 2023	Rome Technopole PNRR - FP5 workshop, Leonardo S.p.A., Via Tiburtina Km. 12.400, Rome, Italy.	A Flexible Design Strategy for Three-Element Non-Uniform Linear Arrays
Sept. 2023	NanoInnovation 2023 Conference and Exibition, Sapienza University of Rome *(Rome Technopole PNRR - FP5)*.	A Flexible Design Strategy for Three-Element Non-Uniform Linear Arrays

Lastly, I served as a reviewer for several journals and conferences, including:

- IEEE Transactions on Aerospace and Electronic Systems
- IEEE Transactions on Signal Processing
- IEEE Geoscience and Remote Sensing Letters
- IEEE Access: The Multidisciplinary Open Access Journal
- IEEE International Radar Conference 2023, Sydney

Part IX – Selected Publications

List of the publications selected for the evaluation. For each publication report title, authors, reference data, journal IF (if applicable), citations, press/media release (if any).

Journal papers

[J1] - A. Quirini, F. Filippini, C. Bongioanni, F. Colone, and P. Lombardo, "A Flexible Design Strategy for Three-Element Non-Uniform Linear Arrays", 2023, Sensors 23, no. 10: 4872, https://doi.org/10.3390/s23104872.
Citations: 1. Journal IF: 3.9

[J2] - A. Quirini, G. P. Blasone, F. Colone, and P. Lombardo, "Low-cost solutions for mobile passive radar based on multichannel DPCA and NULA configurations," International Journal of Microwave and Wireless Technologies, pp. 1–16, 2024. https://doi.org/10.1017/S1759078724000035
Citations: 0. Journal IF: 1.4

Conference proceedings

[C1] - A. Quirini, F. Filippini, C. Bongioanni, F. Colone and P. Lombardo, "Outlier Rejection Approach for Direction of Arrival Estimation in Low SNR Conditions," 2021 18th European Radar Conference (EuRAD), London, United Kingdom, 2022, pp. 141- 144, https://doi.org/10.23919/EuRAD50154.2022.9784542.
Citations: 2.

[C2] - A. Quirini, G. P. Blasone, F. Colone and P. Lombardo, "An apodization approach for passive GMTI Radar with NonUniform Linear Arrays," 2022 19th European Radar Conference (EuRAD), Milan, Italy, 2022, pp. 109-112, https://doi.org/10.23919/EuRAD54643.2022.9924646.
Citations: 1.

[C3] - A. Quirini, G. P. Blasone, F. Colone and P. Lombardo, "Non-Uniform Linear Arrays for Target Detection and DoA Estimation in Passive Radar STAP," 2022 23rd International Radar Symposium (IRS), Gdansk, Poland, 2022, pp. 224-228, https://doi.org/10.23919/IRS54158.2022.9904996.
Citations: 4.

[C4] - A. Quirini, G. P. Blasone, F. Colone and P. Lombardo, "A simple NULA design strategy for target detection and DoA estimation in mobile passive radar," International Conference on Radar Systems (RADAR 2022), Hybrid Conference, Edinburgh, UK, 2022, pp. 570-575, https://doi.org/10.1049/icp.2023.1295.
Citations: 2.

[C5] - A. Quirini, F. Colone and P. Lombardo, "Impact of supervised reciprocal filter on clutter cancellation in OFDM radar," 2023 IEEE International Radar Conference (RADAR), Sydney, Australia, 2023, pp. 1-6, doi: https://doi.org/10.1109/RADAR54928.2023.10371135.
Citations: 0.

[C6] - A. Quirini, F.Colone, P.Lombardo, “Enabling DPCA via supervised reciprocal filter in OFDM radar onboard moving platforms”, in the proceedings of the IEEE 2024 Radar Conference, Denver, USA, May 2024, pp. 1-6.
Citations: 0.

PhD Thesis

[T] - A. Quirini, "Impact of supervised reciprocal filter on clutter cancellation in OFDM radar," Sapienza University of Rome.
Citations: 0.

Luogo e data: Roma, 18/05/2024

Il dichiarante
Andrea Quirini