Curriculum Vitae of
Fabiola COLONE

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GENERAL INFORMATION

Family Name:	**COLONE**
First Name:	**FABIOLA**

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SHORT BIOGRAPHY

Fabiola Colone received the degree in Telecommunications Engineering and the Ph.D. degree in Remote Sensing from Sapienza University of Rome, Italy, in 2002 and 2006, respectively. She joined the DIET Dept. of Sapienza University of Rome as a Research Associate in January 2006. From December 2006 to June 2007, she was a Visiting Scientist at the Electronic and Electrical Engineering Dept. of the University College London, London, UK. She is currently a Full Professor at the Faculty of Information Engineering, Informatics, and Statistics of Sapienza University of Rome, where she holds the role of Chair of the degree programs in Communications Engineering.

The majority of Dr. Colone's research activity is devoted to radar systems and signal processing. She has been involved, with scientific responsibility roles, in research projects funded by the European Commission, the European Defense Agency, the Italian Space Agency, the Italian Ministry of Research, and many radar/ICT companies. Her research has been reported in over 190 publications in international technical journals, book chapters, and conference proceedings. Dr. Colone is co-editor of the book "Radar Countermeasures for Unmanned Aerial Vehicles", IET Publisher. She has been co-recipient of the 2023 Harry Rowe Mimno Award for best paper published in IEEE Aerospace & Electronic Systems Magazine and the 2018 Premium Award for Best Paper in IET Radar, Sonar & Navigation.

From 2017 she is member of the Board of Governors of the IEEE Aerospace and Electronic System Society (AESS) in which she has served as Vice-President for Member Services, and Editor in Chief for the IEEE AESS QEB Newsletters. She is IEEE Senior Member from 2017 and member of the IEEE AESS Radar System Panel from 2019. Dr. Colone is the Editor in Chief for the IEEE Transactions on Radar Systems and where she served as Associate EiC from 2022 to 2025. She was Associate Editor for the IEEE Transactions on Signal Processing from 2017 to 2020 and she is member of the Editorial Board of the Int. Journal of Electronics and Communications (Elsevier). She was Technical co-Chair of the IEEE 2021 Radar Conference (Atlanta, USA) and of the European Radar Conference EuRAD 2022 (Milan, Italy) and she served in the organizing committee and in the technical program committee of many international conferences.

EDUCATION

2006 **PHD IN REMOTE SENSING** obtained at the University of Rome "La Sapienza". Title of the thesis: "*Target detection and localization from air- or space- borne multichannel radar data* ".

2002 **DEGREE IN TELECOMMUNICATIONS ENGINEERING** achieved with a score of 110/110 cum laude from the University of Rome "La Sapienza". Title of the thesis: "*Analysis and synthesis of reduced order STAP techniques for the detection of slow moving targets* ".

ACADEMIC APPOINTMENTS

Positions held at Sapienza University

2022-PRESENT CHAIR of the Degree Programs (BSc, MSc) in Telecommunication Engineering at the University of Rome "La Sapienza".

2022-PRESENT FULL PROFESSOR at the Faculty of Information Engineering, Informatics and Statistics of the University of Rome "La Sapienza".

2017-2022 **ASSOCIATE PROFESSOR** at the Faculty of Information Engineering, Informatics and Statistics of the University of Rome "La Sapienza".

2010-2017 **ASSISTANT PROFESSOR** (permanent position) at the Faculty of Information Engineering, Informatics and Statistics of the University of Rome "Sapienza".

2007-2010 **RESEARCH ASSOCIATE** at the INFOCOM Dept. of the University of Rome "La Sapienza" (3-year contract for Young Researchers as part of a research project funded by the Ministry of Research entitled "Innovative Methodologies and Technologies for Airborne Radar with Electronic Scanning Antenna").

2006-2007 **RESEARCH ASSOCIATE** at the INFOCOM Dept. of the University of Rome "La Sapienza" (research grant for research activity on "*Bistatic and passive radars*").

Positions held at qualified foreign universities and research institutes

2024 **VISITING PROFESSOR** at Cranfield University at the School of Defense and Security (Shrivenham, Swindon, UK) for the period 20 July 2024-2 August 2024.

2019-2024 **HONORARY ASSOCIATE PROFESSOR** at the Department of Security and Crime Science of the University College London (UCL, London, UK) for the period 14 October 2019-14 October 2024.

2020-2023 **VISITING PROFESSOR** at Cranfield University at the School of Defense and Security (Shrivenham, Swindon, UK) for the period 1 March 2020-28 February 2023.

2006-2007 **HONORARY RESEARCH ASSOCIATE (POST-DOCTORAL)**, at the University College London (UCL, London, UK) from December 2006 to June 2007. During this period, she worked on topics related to passive radar at the Electronic and Electrical Engineering Department, in the team led by Prof. CJ Baker.

SCIENTIFIC RESPONSIBILITY IN RESEARCH PROJECTS

Research projects selected for funding on the basis of competitive calls

- Since January 2023 she has been **PRINCIPAL INVESTIGATOR** for the Research Unit of Sapienza University of Rome of the Integrating Communication and Sensing (ISaCAGE) Project funded under the National Recovery and Resilience Plan (**PNRR**), in the PE14 Extended Partnerships **RESTART**, call (CUP: B53C22004050001), through Spoke 7. Funding received: 589559 Euros.
- Since June 2023 she has been **PRINCIPAL INVESTIGATOR** for the Research Unit of Sapienza University of Rome of the **"CommunIcations and Radar Co-Existence (CIRCE)" project financed by the Ministry** of Research under the PRIN 2022 call. Financing received: 50400 Euros.
- In the period 2021-2023 she is **PRINCIPAL INVESTIGATOR** for the Research Unit of the DIET department of the Univ. of Rome "Sapienza" of the **Regional Project** "WiFi-SUITE – WiFi-based Sensing of hUman actIviTiEs" (A0375-2020-36625) financed by the Lazio Region as part of the 2020 Research Group Projects call. Funding received for the research unit: 74550 Euros (entire project 147037 Euros).
- In the period 2009-2012 she was **SCIENTIFIC LEADER** of the **Work-Package** WP5 "People detection and localization using passive radar" in the **European Project** FP7-AAT-2007-RTD-1 ATOM - "*Airport detection and Tracking Of dangerous Materials by passive and active sensors arrays*" financed as Capability Project within of the VII Framework Program (Theme 7 - Transport), and relating to the research activity on the potential of passive radars based on wireless transmissions and related demonstration.
- In 2004 she was **SCIENTIFIC LEADER** of the **Work-Package** WP3100 "MTI (Moving Target Indication)" as part of the "*Preliminary Project for second generation Multi-Beam SAR (MSAR2G)*" financed by the **Italian Space Agency** and aimed at defining a multi-channel system starting from the SAR of 1st generation COSMO-SkyMed. Fabiola Colone also took part in the activities planned for WP2000 "System" and collaborated in the coordination of the entire project. Funding received by the Research Unit: 100k Euros (entire project 250k Euros).
- In 2007 she was **SCIENTIFIC LEADER** of two **Work-Packages**, WP3200 "Broadband nulling techniques" and WP3400 "Adaptivity and secondary data", as part of the project entitled "Feasibility *study and development of enabling technologies for SAR ECCM (SAR ECCM)* " financed by the **Italian Space Agency** and aimed at evaluating the feasibility of an ECCM system based on antenna nulling for the second generation COSMO-SkyMed SAR and identifying the enabling technologies for its implementation. Funding received by the Research Unit: 145k Euros (entire project 305k Euros) .

Projects funded by private companies and technology transfer activities

- Since 2023 she has been **SCIENTIFIC CO-LEADER** of the **research contract** between the DIET department of the Univ. of Rome "La Sapienza" and **Rheinmetall SpA** entitled "RADCOM". The planned activities are aimed at defining waveforms to be used in a joint Radar-Communications system. Funding received: Phase 1: 162190 Euros, Phase 2: 202536 Euros, Phase 3: 26934 Euros.
- From 2020 to 2022 she was **SCIENTIFIC LEADER** of the **research sub-contract** between the DIET department of the Univ. of Rome "La Sapienza" and **University College London (UCL)** , subject to the contract stipulated between **Huawei Technologies** Co. and UCL entitled "Next Generation Multistatic Wi-Fi Sensing". Financing received: 160k Euros.

- From 2017 to 2019 she was **SCIENTIFIC LEADER** of the **research contract** between the DIET department of the Univ. of Rome "La Sapienza" and **Leonardo SpA** on " *Passive radar based on broadcast transmissions for aerial surveillance applications* ". Financing received: 110k Euros.
- From 2015 to 2017 she was **SCIENTIFIC LEADER** of the **research contract** between the DIET department of the Univ. of Rome "La Sapienza" and **Finmeccanica** SpA (now Leonardo) on "*Passive PCL radars in FM and DVB-T bands for the detection and tracking of aerial targets* ". Part of the planned activities were part of a research project conducted by Finmeccanica and co-financed by **Temasek Laboratories at Nanyang Technological University (NTU) in Singapore** on behalf of the **Future Systems and Technology Directorate (FSTD) of the Singaporean Ministry of Defence**. Financing received: 150k Euro.
- From 2014 to 2015 she was **SCIENTIFIC LEADER** of the **research contract** between the DIET department of the Univ. of Rome "La Sapienza" and **Selex-ES** on " *PCL passive radars in DVB-T band for the detection and tracking of naval targets*". Financing received: 50k Euro .
- In 2019 she was **SCIENTIFIC CO-LEADER** of the **research contract** between the DIET department of the Univ. of Rome "La Sapienza" and **Seastema SpA** whose activity is centered on the classification capacity of commercial drones using X-band radar operating with fixed beams and very long integration times. Financing received: 20k Euros .
- From 2012 to 2014 she participated, in the role of **coordination of the work team**, in the **research agreement** between the DIET department of the Univ. of Rome "La Sapienza" and **Intecs SpA** on "*Passive acoustic antenna based on array of microphones on flexible membrane*". Financing received: 125k Euros .

SERVICES AND HONORS

Participation in directive boards and steering/evaluation committees

- She has been an elected member of the **BOARD OF GOVERNORS** of the IEEE Aerospace and Electronic System Society for three terms: 2017-2019, 2020-2022, and 2024-2026. Within the BoG she was a member of the 'Publications', 'Member Services', 'Education' and 'Nomination & Appointments' commissions.
- From 2019 to 2021 she was **VICE-PRESIDENT** for Member Services of the IEEE Aerospace and Electronic System Society. For her efforts in this and other roles within the IEEE Aerospace and Electronic System Society, she was awarded the **Exceptional Service Award in 2021**.
- She is an **elected member of the Radar System Panel** of the IEEE Aerospace and Electronic System Society for two consecutive three-year periods 2018-2021 and 2021-2024 (maximum duration eligible for this role).
- From 2024 to 2026 she was a member of the **2025 IEEE Dennis J. Picard Medal** for radar technologies and applications **Committee.**

Editorial activity

- She is **EDITOR IN CHIEF** for the journal **IEEE Transactions on Radar Systems** from 2026.
- She was **ASSOCIATE EDITOR IN CHIEF** for the journal **IEEE Transactions on Radar Systems** from 2022.

- She was **ASSOCIATE EDITOR** for the journal **IEEE Transactions on Signal Processing** for two consecutive two-year periods 2017-2018 and 2019-2020 (maximum duration admissible for this role). For this role she received the **2019 Outstanding Editorial Board Award** in recognition of the excellence in the service provided.
- Since 2011 she has been **AREA EDITOR** for "Radar Signal Processing", on the editorial board of the **Int. Journal of Electronics and Communications** (AEÜ) (Elsevier).
- Since 2021 she has been **ASSOCIATE EDITOR** for the journal **Frontiers in Signal Processing** as member of the Editorial Board of the section on Radar Signal Processing.
- She was **EDITOR IN CHIEF** of the IEEE Aerospace and Electronic System Society Newsletter, the **IEEE AESS Quarterly Email Blast** (QEB), for the four-year period 2018-2021.
- She is **CO-EDITOR** of an internationally distributed volume entitled "*Radar Countermeasures for Unmanned Aerial Vehicles*", Eds. C. Clemente, F. Fioranelli, F. Colone, G. Li, The Institution of Engineering and Technology, 2021, ISBN-13: 978-1-83953-190-3.
- In 2021 she was **GUEST EDITOR** for a Special Issue in the journal Frontiers in Signal Processing, section on Radar Signal Processing, on "Advances on signal processing techniques for Counter UAV Radars".
- In 2021 she was **GUEST EDITOR** for a Special Issue in the journal Frontiers in Signal Processing, section on Radar Signal Processing, on "Multistatic Passive Radar for Target Detection and Imaging".
- In 2022 she was **GUEST EDITOR** for a Special Issue in the IEEE Open Journal of the Communications Society on "*Integrated Sensing and Communications for Multi-functional Networks in 6G Era*".

Leadership roles in conferences and workshops

- She was **TECHNICAL PROGRAM CHAIR** of the *2021 IEEE Radar Conference*, held in Atlanta (GA, USA).
- She was **TECHNICAL PROGRAM CHAIR** of the *19th European Radar Conference (EuRAD 2022)* held in Milan (Italy) in October 2022, as part of the European Microwave Week 2022.
- She is **CHAIR** of the *24th European Radar Conference (EuRAD 2027)* to be held in Milan (Italy) in October 2027, as part of the European Microwave Week 2027.
- She is part of the **technical-scientific committee for the organization of the IEEE 2026 Radar Conference** (Phoenix, AZ, USA, May 2026), as **TUTORIAL CO-CHAIR**.
- She was part of the **technical-scientific committee for the organization of the IEEE 2020 Radar Conference** (Florence – Italy, September 2020), as **SPECIAL SESSIONS CO-CHAIR**.
- She was part of the **technical-scientific committee for the organization of the IEEE 2023 International Radar Conference** (Sydney – Australia, 2023), as **SPECIAL SESSIONS CO-CHAIR**.
- She is part of the **technical-scientific committee for the organization of the IEEE 2026 Radar Conference** (Phoenix – USA, May 2026), as **TUTORIAL CO-CHAIR**.
- In the period 2006-2008 she was part of the **technical-scientific committee for the organization of the IEEE 2008 Radar Conference** (Rome – Italy, May 2008), as **STUDENT FORUM CO-CHAIR** .

Awards and Recognitions

- She received the **2023 Harry Rowe Mimno Award for BEST PAPER** published in **IEEE Aerospace & Electronic Systems Magazine** with the article "Passive Radar: Past, Present, and Future Challenges", by Fabiola Colone, Francesca Filippini, and Debora Pastina. The award is to author(s) of a paper which is primarily tutorial (including surveys), speculative, or which advocates new ideas or principles tending to promote debate.
- She received the **2018 Premium Award for BEST PAPER in IET Radar, Sonar & Navigation** with the article "Experimental results of polarimetric detection schemes for DVB-T-based passive radar", Francesca Filippini, Fabiola Colone, Diego Cristallini, Georgia Bournaka. The prize is awarded in recognition of the best scientific article published in the journal in the last two years.
- She is co-author of the article "MUSIC Algorithm for Amplitude-based Array Processing in Multi-Channel Forward Scatter Radar" by Y. Qin, A. Ajorloo, F. Colone, awarded as "**BEST PAPER**" at the International Radar Symposium 2025 (IRS 2025), Hamburg (Germany), 21-23 May 2025.
- She is co-author of the article "Polarimetric Detection Scheme for Passive Radar based on a 2D Auto-Regressive Disturbance Model" by F. Filippini, F. Colone, awarded as "**BEST PAPER**" at the IEEE/IET/SEE International Conference on Radar (RADAR 2019), Toulon (France), 23-27 September 2019.
- She is co-author of the article "Experimental results for a Passive Forward Scatter Radar based on OFDM waveforms of opportunity" by F. Colone, C. Bongioanni, P. Lombardo, awarded as "**BEST PAPER"** at the International Radar Symposium 2021 (IRS 2021), Berlin (Germany), 21-22 June 2021.
- In 2011 she received the **SAPIENZA RICERCA PRIZE (Under 40)** for the excellence achieved in the research activity entitled "Green Radar Technology (GRT): passive radar sensors for surveillance applications without em emissions".
- In 2007 she received the **"FRANCESCO CARASSA" AWARD** for the best article in the sector "Signal Processing and Remote Sensing" within the Annual Meeting of the Telecommunications and Information Technologies Group – GTTI 2007 (Rome 18-20 June 2007). Title of the work: "Passive radar prototypes for multifrequency target detection".
- She received the **2019 Outstanding Editorial Board Award** in recognition of excellence in her service as an Associate Editor for the journal IEEE Transactions on Signal Processing.
- In 2021 she received the **Exceptional Service Award** from the IEEE Aerospace and Electronic System Society, recognizing excellence in service as Vice-President for Member Services, EiC for Newsletters, and Chair of several committees.
- She is co-author of the article "Performance Analysis of a Multi-Frequency FM Based Passive Bistatic Radar" by C. Bongioanni, F. Colone, P. Lombardo, awarded as "**BEST STUDENT PAPER** " at the 2008 IEEE Radar Conference, Rome, Italy, 26-30 May 2008.
- She was **Advisor** for the doctoral thesis of Dr. Francesca Filippini entitled " *Multichannel Passive Radar Systems: Signal Processing Techniques And Design Strategies* ", awarded in 2020 with the **Best PhD Thesis Award of the IEEE AES Society** and with the **GTTI Doctorate Award of the year 2020.**
- She is co-author of the work "Exploiting polarimetric diversity in passive radar: Recent advances and applications" by F. Filippini, F. Colone, awarded as part of the 1st GTTI Radar and Remote Sensing Workshop of 2017 as **best oral presentation** under 35 (Naples 25-26 May 2017).

TEACHING ACTIVITIES AND OTHER INSTITUTIONAL ACTIVITIES

Courses taught at the home university

- Starting from AY 2019/2020 she is **co-teacher** (3 CFU) of the "*Radio-technics and Radio-localization"* course at the University of Rome "La Sapienza". The 6 CFU course is scheduled for the 3rd year of the degree program in Communications Engineering.
- From AY 2018/2019 to AY 2023/2024 she was **co-teacher** (3 CFU) of the "*Fundamentals of Communications Engineering*" course at the University of Rome "La Sapienza". The 6 CFU course is scheduled for the 1st year of the degree program in Communications Engineering.
- In the AY 2017/2018 and 2018/2019 she was **lecturer** in the "*Remote Sensing*" course at the Latina teaching center of the University of Rome "La Sapienza". The teaching was scheduled for the 3rd year of the degree course in Information Engineering (Telecommunications specialization).
- Starting from AY 2010/2011 to date, she is **lecturer** in the **"***Multibeam and Multifunction Radar*" course at the University of Rome "La Sapienza". The 6 CFU course is scheduled for the 2nd year of the Master's Degree program in Communications Engineering.
- Starting from AY 2014/2015 to date, she is **co-lecturer (3 CFU)** of the **"***Radar Remote Sensing Laboratory*" course at the University of Rome "La Sapienza". The 6 CFU course is scheduled for the 2nd year of the Master's Degree program in Communications Engineering.
- In the AY 2013/2014 she was **co-lecturer (3 CFU)** of the "*Remote Sensing Laboratory*" course at the University of Rome "La Sapienza". The 6 CFU course was scheduled for the 2nd year of the Master's Degree program in Communications Engineering.
- In the AY 2011/2012 and 2012/2013 she was **co-lecturer (2 CFU)** of the "*Remote Sensing Laboratory*" course at the University of Rome "La Sapienza". The 6 CFU course was scheduled for the 2nd year of the Master's Degree program in Communications Engineering.
- In the AY 2009/2010, 2008/2009, 2007/2008, 2005/2006, she was a **contract professor** of the "*Remote Sensing*" course at the Latina teaching center of the University of Rome "La Sapienza". The teaching was scheduled for the 3rd year of the degree program for Telecommunications Engineering and Information Engineering.

Scientific supervision of doctoral theses

- Since 2012 she has been Advisor of 5 doctoral students.
- From 2007 to today she has been Co-Advisor for 9 students of the PhD courses in Remote Sensing, in Electronic Engineering and Remote Sensing or in Information and Communications Technologies (ICT).
- Since 2006 she has carried out scientific support activities, alongside the relevant Advisor, for other 6 doctoral students in Remote Sensing or Electronic Engineering and Remote Sensing.

Supervision of theses

- In 2016 she was **advisor** for a Master's thesis at the École Centrale de Marseille (France) carried out at the DIET department of the University of Rome "La Sapienza" during a period of the

student's stay (internship). Thesis title: "*Range migration compensation for a long coherent integration time applied to passive bistatic radar*".

- In 2018 she was **advisor** for a Master's thesis at the Escola Tècnica d'Enginyeria de Telecomunicació de Barcelona, Universitat Politècnica de Catalunya (Spain). The thesis was carried out at the DIET department of the University of Rome "La Sapienza" during a period of stay of the student as part of the Erasmus programme. Thesis title: "DVB-T based Passive Radar for Aerial surveillance".
- In 2020 she was **supervisor** for a student from the École de l'Air (French Air Force Academy) as part of an internship at the DIET department of the University of Rome "La Sapienza". Thesis title: "Telecommunication: Digital Video Broadcast by Satellite".
- Since 2012 she has been **supervisor** for 24 Master's theses in Communications Engineering at the University of Rome "La Sapienza".
- Since 2009 she has been **supervisor** for 9 degree theses (Level I) in Information Engineering at the University of Rome "La Sapienza" (Latina Campus).
- Since 2002 she has been **co-supervisor** for 49 Master's degree theses in Communications Engineering at the University of Rome "La Sapienza".

SCIENTIFIC PRODUCTION AND BIBLIOMETRIC INDICATORS

- Fabiola Colone is the author or co-author of :
  - 61 articles published in international journals with anonymous peer review (all indexed in the Scopus database).
  - 124 articles published in international conference proceedings with anonymous peer review (all indexed in the Scopus database).
- Fabiola Colone's scientific production also includes:
  - 1 book with international distribution
  - 11 chapters in internationally distributed books;
  - 2 chapters in nationally distributed books;
  - 4 submitted patents
  - 44 contributions to national and international conferences and workshops in the form of tutorials or presentations;
  - 42 technical reports, as final delivery documents of the research projects she coordinated or participated in.
- Based on the content of the Scopus database as of today, the bibliometric indicators are shown in the following table:

Indicators in common use or required by the tender	
Total number of works on databases	204
Total number of citations	5235
Hirsch (H) index	35

Publications in international journals

[J1] P. Lombardo, F. Colone, D. Pastina, "Monitoring and Surveillance Potentialities obtained by splitting the antenna of the COSMO-SkyMed SAR into multiple sub-apertures", **IEE Proceedings on Radar, Sonar and Navigation** , April 2006, Volume 153, Issue 2, pp. 104-116, ISSN: 1350-2395, doi: 10.1049/ip-rsn:20045122.

[J2] D. Pastina, F. Colone , P. Lombardo, "Effect of Apodization on SAR Image understanding", **IEEE Transactions on Geoscience and Remote Sensing** , Volume 45, Issue 11, Part 1, Nov. 2007, Page(s): 3533 – 3551, ISSN: 0196-2892, doi: 10.1109/TGRS.2007.905309.

[J3] F. Colone , D. W. O'Hagan, P. Lombardo, C. J. Baker "A multistage processing algorithm for disturbance removal and target detection in Passive Bistatic Radar", **IEEE Transactions on Aerospace and Electronic Systems** , Volume 45, Issue 2, April 2009, pp . 698-722, ISSN: 0018-9251, doi: 10.1109/TAES.2009.5089551.

[J4] F. Colone , R. Cardinali, P. Lombardo, O. Crognale, A. Cosmi, A. Lauri, T. Bucciarelli, "Space-Time CMA for multipath removal on the reference signal exploited by Passive Bistatic Radar", IET Radar **Sonar and Navigation** , June 2009, Volume 3, Issue 3, pp. 253-264, ISSN: 1751-8784, doi: 10.1049/iet-rsn:20080102.

[J5] G. Fabrizio, F. Colone , P. Lombardo, A. Farina, "Adaptive beamforming for high-frequency over-the-horizon passive radar", **IET Radar Sonar and Navigation** , August 2009, Volume 3, Issue 4, pp. 384 – 405, ISSN: 1751-8784, doi: 10.1049/iet-rsn.2008.0159.

[J6] M. Sedehi, F. Colone , D. Cristallini, P. Lombardo, "Reduced order jammer cancellation scheme based on double adaptivity", **IEEE Transactions on Aerospace and Electronic Systems** , 46, Issue 4, October 2010, pp. 1762–1781, ISSN: 0018-9251, doi: 10.1109/TAES.2010.5595593.

[J7] F. Colone , K. Woodbridge, H. Guo, D. Mason and CJ Baker "Ambiguity Function Analysis of Wireless LAN transmissions for passive radar", **IEEE Transactions on Aerospace and Electronic Systems** , Vol. 47, Issue 1, January 2011, pp . 240-264, ISSN: 0018-9251, doi: 10.1109/TAES.2011.5705673.

[J8] F. Colone , "Spectral slope-based approach for mitigating bistatic STAP clutter dispersion", **IET Radar Sonar and Navigation** , Volume 5, Issue 5, June 2011, pp. 593-603, ISSN: 1751-8784, doi: 10.1049/iet-rsn.2010.0264.

[J9] F. Colone , P. Falcone, C. Bongioanni, P. Lombardo, "WiFi-Based Passive Bistatic Radar: Data Processing Schemes and Experimental Results", **IEEE Transactions on Aerospace and Electronic Systems** , vol. 48, no. 2, April 2012, pp. 1061-1079, ISSN: 0018-9251, doi: 10.1109/TAES.2012.6178049.

[J10] P. Falcone, F. Colone , P. Lombardo, "Potentialities and challenges of WiFi-based passive radar," **IEEE Aerospace and Electronic Systems Magazine** , vol. 27, no. 11, pp. 15-26, November 2012, ISSN: 0885-8985, doi: 10.1109/MAES.2012.6380822.

[J11] D. Cristallini, D. Pastina, F. Colone , P. Lombardo, "Efficient detection and imaging of moving targets in SAR images based on chirp scaling", **IEEE Transactions on Geoscience and Remote Sensing** , Volume 51, Issue 4, Part 2, April 2013, pp. 2403-2416, ISSN: 0196-2892, doi: 10.1109/TGRS.2012.2210556.

[J12] F. Colone , C. Bongioanni, P. Lombardo, "Multi-Frequency Integration in FM Radio Based Passive Bistatic Radar. Part II: Direction of Arrival Estimation", **IEEE Aerospace and**

Electronic Systems Magazine , vol. 28, no. 4, pp. 40-47, April 2013, ISSN: 0885-8985, doi: 10.1109/MAES.2013.6506828.

[J13] F. Colone , C. Bongioanni, P. Lombardo, "Multi-Frequency Integration in FM Radio Based Passive Bistatic Radar. Part I: Target Detection", **IEEE Aerospace and Electronic Systems Magazine** , vol. 28, no. 4, pp. 28-39, April 2013, ISSN: 0885-8985, doi: 10.1109/MAES.2013.6506827.

[J14] M. Villano, F. Colone , P. Lombardo, "Antenna Array for Passive Radar: Configuration Design and Adaptive Approaches to Disturbance Cancellation," **International Journal of Antennas and Propagation** , vol. 2013, 16 pp., 2013, ISSN: 1687-5869, doi: 10.1155/2013/920639.

[J15] F. Colone , D. Cristallini, D. Cerutti-Maori, P. Lombardo, "Direction of arrival estimation performance comparison of dual canceled channels space-time adaptive processing techniques", **IET Radar Sonar and Navigation** , vol.8, no.1 , pp. 17-26, January 2014, ISSN: 1751-8784, doi: 10.1049/iet-rsn.2012.0368.

[J16] P. Falcone, F. Colone , A. Macera, P. Lombardo, "Two-dimensional location of moving targets within local areas using WiFi-based multistatic passive radar", **IET Radar Sonar and Navigation** , vol.8, no.2, pp. 123-131, February 2014, ISSN: 1751-8784, doi: 10.1049/iet-rsn.2013.0207.

[J17] F. Colone , D. Pastina, P. Falcone, P. Lombardo, "WiFi-based passive ISAR for high resolution cross-range profiling of moving targets", **IEEE Transactions on Geoscience and Remote Sensing** , vol. 52, no. 6, pp. 3486-3501, June 2014, ISSN: 0196-2892, doi: 10.1109/TGRS.2013.2273099.

[J18] H. Kuschel, M. Ummenhofer, P. Lombardo, F. Colone , C. Bongioanni, "Passive radar components of ARGUS 3D", **IEEE Aerospace and Electronic Systems Magazine** , vol. 29, no. 3, pp. 15-25, March 2014, ISSN: 0885-8985, doi: 10.1109/MAES.2014.6805362.

[J19] F. Colone , D. Langellotti, P. Lombardo, "DVB-T signal ambiguity function control for passive radars", **IEEE Transactions on Aerospace and Electronic Systems** , vol.50, no.1, pp. 329-347, January 2014, ISSN: 0018-9251, doi: 10.1109/TAES.2013.120616.

[J20] V. Anastasio, A. Farina, F. Colone , P. Lombardo, "Cramér-Rao lower bound with Pd < 1 for target localization accuracy in multistatic passive radar," **IET Radar, Sonar & Navigation** , vol. 8, no. 7, pp. 767-775, Aug. 2014, ISSN: 1751-8784, doi: 10.1049/iet-rsn.2013.0213.

[J21] D. Pastina, F. Colone , T. Martelli, P. Falcone, "Parasitic exploitation of WiFi signals for indoor radar surveillance", **IEEE Transactions on Vehicular Technology** , vol. 64, no. 4, pp. 1401-1415, April 2015, ISSN: 0018-9545, doi: 10.1109/TVT.2015.2392936.

[J22] F. Colone , P. Lombardo, "Polarimetric passive coherent location", **IEEE Transactions on Aerospace and Electronic Systems** , vol. 51, no. 2, pp. 1079 - 1097, April 2015, ISSN: 0018-9251, doi: 10.1109/TAES.2014.130775.

[J23] S. Scardapane, M. Scarpiniti, M. Bucciarelli, F. Colone , MV Mansueto and R. Parisi, "Microphone Array Based Classification for Security Monitoring in Unstructured Environments", **AEU – International Journal of Electronics and Communications** , Vol. 69, N 11, pp. 1715-1723, November 2015, ISSN: 1434-8411, doi: 10.1016/j.aeue.2015.08.007.

[J24] F. Colone , P. Lombardo, "Noncoherent adaptive detection in passive radar exploiting polarimetric and frequency diversity", **IET Radar, Sonar & Navigation** , Vol. 10, Issue 1, January 2016, pp. 15 – 23, ISSN: 1751-8784, doi: 10.1049/iet-rsn.2015.0104.

[J25] F. Colone , C. Palmarini, T. Martelli, E. Tilli, "Sliding Extensive Cancellation Algorithm for disturbance removal in passive radar", **IEEE Transactions on Aerospace and Electronic**

Systems , vol. 52, no. 3, pp. 1309-1326, June 2016, ISSN: 0018-9251, doi: 10.1109/TAES.2016.150477.

[J26] T. Martelli, F. Colone , E. Tilli, A. Di Lallo, "Multi-frequency target detection techniques for DVB-T based passive radar sensors", **Sensors** , vol. 16, no. 10, article no. 1594, 2016, ISSN: 1424-8220, doi: 10.3390/s16101594.

[J27] F. Colone , D. Pastina and V. Marongiu, "VHF Cross-Range Profiling of Aerial Targets Via Passive ISAR: Signal Processing Schemes and Experimental Results," **IEEE Transactions on Aerospace and Electronic Systems** , vol. 53, no. 1, pp. 218-235, Feb. 2017, ISSN: 0018-9251, doi: 10.1109/TAES.2017.2649999.

[J28] F. Colone , T. Martelli, C. Bongioanni, D. Pastina, P. Lombardo, "WiFi-based PCL for monitoring private airfields", **IEEE Aerospace and Electronic Systems Magazine** , vol. 32, no. 2, pp. 22-29, February 2017, ISSN: 0885-8985, doi: 10.1109/MAES.2017.160022.

[J29] F. Colone , M. Contu, P. Lombardo, "Antenna sidelobe level control in transmit sub-aperturing MIMO radar", **IEEE Transactions on Aerospace and Electronic Systems** , vol. 53, no. 3, pp. 1321-1340, June 2017, ISSN: 0018-9251, doi: 10.1109/TAES.2017.2670898.

[J30] F. Filippini, F. Colone , D. Cristallini, G. Bournaka, "Experimental results of Polarimetric Detection Schemes for DVB-T based Passive Radar", **IET Radar Sonar and Navigation** , vol. 11, issue 6, pp. 883 – 891, July 2017, ISSN: 1751-8784, doi: 10.1049/iet-rsn.2016.0486.

[J31] F. Colone , T. Martelli, P. Lombardo, "Quasi Monostatic versus Near Forward Scatter geometry in WiFi-based passive radar sensors", **IEEE Sensors Journal** , vol. 17, issue 15, pp. 4757-4772, ISSN: 1530-437X, doi: 10.1109/JSEN.2017.2713450.

[J32] F. Pignol, F. Colone , T. Martelli, "Lagrange polynomial interpolation based Keystone Transform for passive radar", **IEEE Transactions on Aerospace and Electronic Systems** , vol. 54, issue 3, pp. 1151-1167, June 2018, ISSN: 0018-9251, doi: 10.1109/TAES.2017.2775924.

[J33] P. Wojaczek, F. Colone , D. Cristallini, P. Lombardo, "Reciprocal Filter-based STAP for Passive Radar on moving platforms", **IEEE Transactions on Aerospace and Electronic Systems** , vol. 55, issue 2, pp. 967-988, ISSN: 0018-9251, doi: 10.1109/TAES.2018.2867688.

[J34] F. Filippini, F. Colone , A. De Maio, " Threshold Region Performance of Multi-Carrier Maximum Likelihood Direction of Arrival Estimator ", **IEEE Transactions on Aerospace and Electronic Systems** , vol. 55, issue 6, pp. 1557-9603, December 2019, ISSN: 0018-9251, doi: 10.1109/TAES.2019.2909335 .

[J35] T. Martelli, F. Colone , R. Cardinali, "DVB-T based Passive Radar for simultaneous counter drone operations and civil air traffic surveillance", **IET Radar Sonar and Navigation** , vol. 14, no. 4, pp. 505-515, April 2020 , ISSN: 1751-8784, doi: 10.1049/iet-rsn.2019.0309.

[J36] F. Colone , F. Filippini, "Auto-Regressive Model Based Polarimetric Adaptive Detection Scheme. Part I: Theoretical Derivation and Performance Analysis", **IEEE Transactions on Aerospace and Electronic Systems** , vol. 56, issue 5, pp. 3762-3778, October 2020, ISSN: 0018-9251 , doi: 10.1109/TAES.2020.2977795.

[J37] F. Colone , F. Filippini, "Auto-Regressive Model Based Polarimetric Adaptive Detection Scheme. Part II: Performance Assessment under Spectral Model Mismatch", **IEEE Transactions on Aerospace and Electronic Systems** , vol. 56, issue 5, pp. 3779-3795, October 2020, ISSN: 0018-9251 , doi: 10.1109/TAES.2020.2977794.

[J38] GP Blasone, F. Colone , P. Lombardo, P. Wojaczek, D. Cristallini, "Passive Radar DPCA Schemes with Adaptive Channel Calibration", **IEEE Transactions on Aerospace and Electronic Systems** , vol. 56, issue 5, pp. 4014-4034, October 2020, ISSN: 0018-9251 , doi: 10.1109/TAES.2020.2987478.

[J39] F. Filippini, F. Colone , "Polarimetric Passive Radar: a Practical Approach to Parametric Adaptive Detection", **IEEE Transactions on Aerospace and Electronic Systems** , vol. 56, issue 6, pp. 4930-4946, December 2020, ISSN: 0018-9251 , doi: 10.1109/TAES.2020.3008548.

[J40] P Wojaczek, D. Cristallini, DW O'Hagan, F. Colone , GP Blasone, P. Lombardo, "A Three-Stage Inter-Channel Calibration Approach for Passive Radar on Moving Platforms Exploiting the Minimum Variance Power Spectrum", Sensors **,** vol . 21, issue 1, 69, January 2021, ISSN 1424-8220, doi: 10.3390/s21010069.

[J41] F. Colone , "DVB-T-Based Passive Forward Scatter Radar: Inherent Limitations and Enabling Solutions," **IEEE Transactions on Aerospace and Electronic Systems** , vol. 57, no. 2, pp. 1084-1104, April 2021, ISSN: 0018-9251, doi: 10.1109/TAES.2020.3035435.

[J42] F. Filippini, F. Colone , "Multi-carrier and multi-polarimetric model-based adaptive target detector for passive radar systems", **IET Radar Sonar and Navigation** , 2021, vol. 15, issue 8, pp. 853-866, ISSN: 1751-8792, doi: 10.1049/rsn2.12061.

[J43] GP Blasone, F. Colone , P. Lombardo, P. Wojaczek, and D. Cristallini, "Dual Canceled Channel STAP for Target Detection and DOA Estimation in Passive Radar", **Sensors** , vol. 21, issue 13, ISSN 1424-8220, doi: 10.3390/s21134569.

[J44] I. Milani, C. Bongioanni, F. Colone , P. Lombardo, "Fusing Measurements from Wi-Fi Emission-Based and Passive Radar Sensors for Short-Range Surveillance", **Remote Sensing** vol. 13 , issue 18, 3556, 2021, ISSN: 2072-4292, doi: 10.3390/rs13183556.

[J45] GP Blasone, F. Colone , P. Lombardo, P. Wojaczek and D. Cristallini, "Passive Radar STAP Detection and DoA Estimation Under Antenna Calibration Errors," in **IEEE Transactions on Aerospace and Electronic Systems** , vol. 57, no. 5, pp. 2725-2742, Oct. 2021, ISSN: 0018-9251, doi: 10.1109/TAES.2021.3061803.

[J46] F. Santi, GP Blasone, D. Pastina, F. Colone, P. Lombardo, "Parasitic surveillance potentialities based on a GEO-SAR illuminator", **Remote Sensing** (MDPI), vol. 13 , issue 23, 4817, 2021, ISSN: 2072-4292, doi: 10.3390/rs13234817.

[J47] An Liu, Zhe Huang, Min Li, Yubo Wan, Wenrui Li, Tony Xiao Han, Chenchen Liu, Rui Du, Danny Tan Kai Pin, Jianmin Lu, Yuan Shen, Fabiola Colone and Kevin Chetty, "A Survey on Fundamental Limits of Integrated Sensing and Communication", **IEEE Communications Surveys and Tutorials**, Volume: 24, Issue: 2, pp. 994-1034, ISSN: 1553-877X, doi: 10.1109/COMST.2022.3149272.

[J48] F. Colone , F. Filippini, M. Di Seglio, K. Chetty, "On the Use of Reciprocal Filter against WiFi packets for passive radar", **IEEE Transactions on Aerospace and Electronic Systems** vol. 58, issue 4, pp. 2746-2761, August 2022, ISSN: 0018-9251, doi: 10.1109/TAES.2021.3138711.

[J49] F. Colone, F. Filippini and D. Pastina, "Passive Radar: Past, Present, and Future Challenges", **IEEE Aerospace and Electronic Systems Magazine**, vol. 38, no. 1, pp. 54-69, 1 Jan. 2023, ISSN: 0885-8985, doi: 10.1109/MAES.2022.3221685.

[J50] A. Quirini, F. Filippini, C. Bongioanni, F. Colone, P. Lombardo, "A Flexible Design Strategy for Three-Element Non-Uniform Linear Arrays", **Sensors**, vol. 23, issue 10, 4872, May 2023, ISSN: 1424-8220, doi: 10.3390/s23104872.

[J51] J. Trujillo Rodriguez, F. Colone, P. Lombardo, "Supervised Reciprocal Filter for OFDM radar signal processing", **IEEE Transactions on Aerospace and Electronic Systems**, vol. 59, issue 4, pp. 3871-3889, August 2023, ISSN: 0018-9251, doi: 10.1109/TAES.2023.3235317.

[J52] G. P. Blasone, F. Colone and P. Lombardo, "Forward-Looking Passive Radar With Non-Uniform Linear Array for Automotive Applications," **IEEE Transactions on Vehicular**

Technology, vol. 72, no. 9, pp. 11132-11146, Sept. 2023, ISSN: 0018-9545, doi: 10.1109/TVT.2023.3266789.

[J53] F. Colone, F. Filippini, M. Di Seglio, P. V. Brennan, R. Du and T. X. Han, "Reference-Free Amplitude-Based WiFi Passive Sensing," **IEEE Transactions on Aerospace and Electronic Systems**, vol. 59, no. 5, pp. 6432-6451, Oct. 2023, ISSN: 0018-9251, doi: 10.1109/TAES.2023.3276738.

[J54] J. T. Rodriguez, G. P. Blasone, F. Colone and P. Lombardo, "Exploiting the Properties of Reciprocal Filter in Low-Complexity OFDM Radar Signal Processing Architectures," **IEEE Transactions on Aerospace and Electronic Systems**, vol. 59, no. 5, pp. 6907-6922, Oct. 2023, ISSN: 0018-9251, doi: 10.1109/TAES.2023.3283489.

[J55] J. Trujillo Rodriguez, G.P. Blasone, F. Colone, P. Lombardo, "A fast disturbance cancellation scheme for orthogonal frequency division multiplexing-based passive radar exploiting reciprocal filter", **IET Radar Sonar Navigation**, vol. 18, no. 1, pp. 56–67, January 2024, ISSN: 1751-8784, doi: 10.1049/rsn2.12480.

[J56] M. Di Seglio, F. Filippini, C. Bongioanni, F. Colone, "Comparing reference-free WiFi radar sensing approaches for monitoring people and drones", **IET Radar Sonar and Navigation**, vol. 18, no. 1, pp. 107–124, January 2024, ISSN: 1751-8784, doi:10.1049/rsn2.12506.

[J57] A. Quirini, G. Blasone, F. Colone, P. Lombardo, "Low-cost solutions for mobile passive radar based on multichannel DPCA and NULA configurations", **International Journal of Microwave and Wireless Technologies**, 2024, doi:10.1017/S1759078724000035. [

[J58] A. Quirini, G. P. Blasone, F. Colone, P. Lombardo, "Clutter suppression using Thresholded Reciprocal Filter in OFDM radar", **IEEE Transactions on Aerospace and Electronic Systems**, vol. 60, no. 6, pp. 8316-8331, December 2024, ISSN: 0018-9251, doi: 10.1109/TAES.2024.3427089.

[J59] A. Quirini, G. P. Blasone, F. Colone and P. Lombardo, "Supervised DPCA Scheme Based on Reciprocal Filter for Clutter Cancelation From Moving OFDM Radar," **IEEE Transactions on Aerospace and Electronic Systems**, vol. 61, no. 3, pp. 6154-6172, June 2025, ISSN: 0018-9251, doi: 10.1109/TAES.2025.3527953.

[J60] A. Quirini, F. Colone, P. Lombardo, "Three-Element Non-Uniform Linear Array Design Strategy for Mobile Orthogonal Frequency Division Multiplexing Radar Using Supervised Displaced Phase Centre Antenna", **IET Radar Sonar Navigation**, e70049 (2025), ISSN: 1751-8784, doi: 10.1049/rsn2.70049.

[J61] A. Quirini, F. Colone, P. Lombardo, "Outlier-Robust Three-Element Non-Uniform Linear Arrays Design Strategy for Direction of Arrival Estimation in MIMO Radar", **Sensors**, 2025, vol. *25*, 5062, ISSN: 1424-8220, doi: 10.3390/s25165062.

Pursuant to Law 675/96 on the confidentiality of personal data, I declare that I have been fully informed of the purposes and methods of processing the data knowingly provided in this curriculum and I authorize its processing and storage in a database.
Furthermore, aware that according to the provisions of the art. 76 of Presidential Decree n. 445 of 12.28.2000, false declarations are punished pursuant to the penal code and special laws on the matter, I declare that what is contained in this curriculum corresponds to the truth.

Rome, 22 January 2026