

Andrés GÓMEZ ÁLVAREZ

Telecommunications Engineer

EDUCATION

- 2021 - Present **PhD**
University of Oviedo
- Title: Design of reflectarray-based, reconfigurable and multi-beam antennas for high-throughput satellite applications
 - Funded by the FPU state grant
 - 4-month internship at the University of Pavia (Italy), funded by the European Microwave Association (EuMA) Internship Awards
- 2019 - 2021 **MSc Telecommunications Engineering**
University of Oviedo
- Diploma to the best records in the graduating class
 - 'José Riera' award to the best records among all enrolled students (2020)
 - Average grade: 9.7/10
- 2015 - 2019 **BSc Telecommunication Engineering**
University of Oviedo
- End-of-degree award to the best records in the graduating class
 - 'José Riera' award to the best records among all enrolled students (2019)
 - Full exchange year (2018-19) at Technical University of Denmark (DTU)

EXPERIENCE

- 2021 - Present **University of Oviedo**
Pre-doctoral researcher
Design, manufacturing, and measurement of multibeam & reconfigurable reflectarray antennas for satellite and 5G-and-beyond applications.
Key aspects: EM simulation, antenna design & optimization, additive manufacturing, antenna measurements.
- 2021 **Rohde & Schwarz (Munich)**
MSc Thesis Student – 6 months
Development of GNSS antenna test suite in simulated and measured environments.
Key aspects: GNSS simulation, Antenna measurements, C# development.
- 2020 **Rohde & Schwarz (Munich)**
Working student – 2 months
Raw GNSS measurement evaluation on Android devices.
Key aspects: GNSS simulation, Android development, C# development.
- 2019 - 2020 **University of Oviedo**
Research collaborator – 8 months
Reflectarray unit cell modelling using machine learning.
Key aspects: EM simulation, unit-cell analysis, support vector machines (SVM).



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ABOUT ME

Throughout my years of education, I have developed a growing range of tools in different telecommunication fields. This has helped me achieve great adaptability to new challenges, as well as new working methodologies and techniques. I feel comfortable working both in group environments, where proper organization and cooperation is often key, as well as in individual, more self-driven projects.

SKILLS

Professional

- Reflector antennas
- Ansys HFSS
- Radio link analysis
- Additive manuf.
- Python
- Matlab
- C#
- Fortran

Languages

- Spanish Native
- English C1-C2
- Japanese A1

RESEARCH PROJECTS

- 2024 **Research on Advanced Location Based Services Technologies**
[Private project with Rohde & Schwarz](#)
PI: Manuel Arrebola
Reference: FUU-24-035
- 2023 **LBS-GNSS Field to lab GNSS Applications**
[Private project with Rohde & Schwarz](#)
PI: Manuel Arrebola
Reference: FUU-257-23
- 2022-2024 **High-resolution on-board antenna systems for radiometric monitoring of climate change impact on coastal fluvial areas (ANT4CLIM)**
[State-funded project](#)
PI: Manuel Arrebola
Reference: MCINN-22-TED2021-130650B-C22
- 2022-2023 **LBS-GNSS high-accuracy GNSS applications**
[Private project with Rohde & Schwarz](#)
PI: Manuel Arrebola
Reference: FUU-241-22
- 2021-2025 **Pre-doctoral contract for University Professorship Training (FPU2020)**
[State grant](#)
PI: Andrés Gómez Álvarez
Reference: MU-21-FPU20/07267
- 2021-2024 **Antennas and Techniques for Smart Connectivity in 5G and Beyond**
[State-funded project](#)
PI: Manuel Arrebola, Rafael Ayestarán
Reference: MCI-21-PID2020-114172RB-C21
- 2020-2023 **Grants for Research Groups of Organizations in the Principality of Asturias**
[Regional grant](#)
PI: Fernando Luis Las Heras
Reference: SV-PA-21-AYUD/2021/51706

RECENT PUBLICATIONS

- A. Gómez-Álvarez, Á. F. Vaquero, M. Arrebola and M. R. Pino, "Multibeam Compact Reflectarray Antenna with Low Scan Loss and Wide-Angle Performance Using a Multi-Feed Configuration," *IEEE Open Journal of Antennas and Propagation*, Aug. 2024. DOI: 10.1109/OJAP.2024.3410678**
- A. Gómez-Álvarez, N. Delmonte, L. Silvestri, M. Bozzi, M. Arrebola, M. R. Pino, "Dual-Resonance SIW-Based Reflectarray Unit Cell for Broadband Applications," *The 18th European Conference on Antennas and Propagation (EuCAP 2024)*, 2024.**
- A. Gómez-Álvarez, M. Arrebola, M. R. Pino, "Evaluation of Low-Cost Compact Multi-beam Reflectarray Antenna," *The 17th European Conference on Antennas and Propagation (EuCAP 2023)*, 2023.**
- A. Gómez-Álvarez, Á. F. Vaquero, M. Arrebola and M. R. Pino, "Preliminary Geometry Analysis for Compact Scanning and Multi-Beam Reflectarray Antennas," *Simposio Nacional de la Unión Científica Internacional de Radio (URSI 2022)*, 2022.**
- A. Gómez-Álvarez, B. Imaz-Lueje, D. R. Prado, M. Arrebola and M. R. Pino, "Comparative Study of Different Approaches to Analyze Unit Cells of Reflectarray Antennas," *The 15th European Conference on Antennas and Propagation (EuCAP 2021)*, 2021.**