



Dr. Jorge Querol

Senior Researcher · Head of 6GSPACE Lab · Space Technology Expert · Entrepreneur · Independent Consultant

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40+

RESEARCHERS LED

180

PUBLICATIONS

4,100+

SCHOLAR CITATIONS

25

H-INDEX

€9.8M+

FUNDING SECURED

1

US GRANTED PATENT

EXECUTIVE SUMMARY & CORE RESEARCH PILLARS

Senior Researcher and Head of the **6GSPACE Lab** (40+ researchers) within the SIGCOM research group at **SnT, University of Luxembourg**, co-founder of deep-tech spin-off **MITIC Solutions S.L.**, and **Independent Space & Telecommunications Consultant**. Over 15 years of R&D leadership advancing 5G/6G Non-Terrestrial Networks (NTN), AI-accelerated satellite payloads, Joint Communications and Sensing (JCAS), and GNSS anti-jamming. Principal Investigator (PI) of 11 competitive projects and Vice-PI/Co-Lead of 12 more (€9.8M+ funded by ESA, Horizon Europe, FNR, and satellite industry primes).

1. 6G Non-Terrestrial Networks (NTN) & SatCom

3GPP Rel-17/18/19+ 5G/6G NR over LEO/MEO/GEO, Direct-to-Device (D2D), TDD guard-period reuse (xDL), Holographic MIMO, and OpenAirInterface NTN testbeds.

2. AI-Driven Anti-Jamming & GNSS Security

Patented real-time pre-correlation RFI excision (US9596610B1), GNSS jamming/spoofing countermeasures, microwave radiometry protection, and neuromorphic onboard AI.

3. Joint Comms, Sensing & Positioning (JCAS / JCAP)

Multi-Functional Satellite Systems (MFSS Levels 1–4), bistatic radar using LEO Signals of Opportunity (Starlink iSoOp-R), and hybrid GNSS–5G positioning.

4. Quantum & Optical Space Infrastructure

Free-Space Optical (FSO) links, structured-light Orbital Angular Momentum (OAM) Quantum Key Distribution (QKD), and national quantum networks (LUQCIA, Q-LIMIT).

PROFESSIONAL EXPERIENCE

Research Scientist · Head of 6GSPACE Lab (SIGCOM Research Group)

Oct 2018 – Present

SnT – Interdisciplinary Centre for Security, Reliability and Trust, University of Luxembourg (Luxembourg)

Leading the 6GSPACE Lab (40+ researchers, postdocs, PhD candidates, and engineers) developing high-TRL experimental testbeds for 5G/6G satellite communications, onboard AI/neuromorphic processors, SDR transceivers, and 3U CubeSat payloads. PI of 11 competitive projects and Vice-PI of 12 more (€9.8M+ funding from ESA, Horizon Europe, FNR, SES, OQ Technology, Deutsche Telekom, LuxSpace).

Independent Space & Telecommunications Technical Consultant

Present

Independent Advisory Practice (Registered in Luxembourg · jorge.querol.org/consulting)

Senior technical advisory, architecture audits, link-budget verification, 3GPP NTN protocol engineering, GNSS anti-jamming design, and ESA/EU R&D strategy for space agencies, satellite operators, telecom vendors, and defense organizations.

Co-Founder & Technical Advisor

Oct 2016 – May 2024

MITIC Solutions S.L. – Spin-Off of UPC-BarcelonaTech (Barcelona, Spain)

Co-founded deep-tech spin-off commercializing real-time radio-frequency interference (RFI) detection, localization, and anti-jamming systems for GNSS navigation, Earth observation radiometers, and security-critical applications.

PhD Candidate & R&D System Engineer (Remote Sensing Lab – RSLab)

Sep 2012 – Nov 2018

Universitat Politècnica de Catalunya – UPC-BarcelonaTech (Barcelona, Spain)

Designed and prototyped real-time FPGA/SDR pre-correlation interference mitigation systems for GNSS (FENIX) and L-band microwave radiometers. Participated in ESA BEXUS stratospheric balloon mission and co-invented US Patent US9596610B1.

Research Engineer (Wireless Sensor Networks & Smart Grids) · FPGA Intern (ICFO)

2010 – 2012

KTH Royal Institute of Technology (Stockholm, Sweden, 2011–2012) & ICFO – Institute of Photonic Sciences (Barcelona, 2010)

Embedded ARM/C++ hardware prototyping at KTH Stockholm; real-time FPGA + PowerPC biomedical data acquisition design at ICFO.

EDUCATION & ACADEMIC DEGREES

PhD in Signal Theory & Communications (Cum Laude)

2013 – 2018

UPC-BarcelonaTech · Advisor: Prof. Adriano Camps

Thesis: "Radio frequency interference detection and mitigation techniques for navigation and Earth observation." Awarded **Best PhD Thesis 2018** by IEEE GRSS Spanish Chapter.

MSc in Photonics & Dual MSc/BSc in Telecom & Electronics Eng.

2005 – 2013

UPC-BarcelonaTech / UAB / UB / KTH Stockholm

MSc in Photonics (2012–2013); **MSc Degree in Electronics Engineering** (2009–2011, *Best Academic Record of Class 2011*); **MSc Degree in Telecommunications Engineering** (2005–2012, thesis at KTH).

COMPETITIVE R&D PROJECTS PORTFOLIO (€9.8M+ TOTAL FUNDING • 11 PI & 12 VICE-PI PROJECTS)

ACRONYM & PERIOD	PROJECT TITLE & TECHNICAL SCOPE	FUNDING AGENCY	ROLE & BUDGET
CREST-5G 2025–2027	TDD & Guard-Period Optimization in 5G NR LEO Satellite Networks Time-Division Duplex (TDD) frame design, Adaptive Per-UE guard-period sizing, and Extraordinary Downlink (xDL) guard reuse with OQ Technology SARL.	European Space Agency (ESA ARTES 4.0)	PHY Lead Contract 4000147108/25/NL/RA
SMS2 2025–2028	Sustainable Multi-Functional Satellite Systems Coexistence and joint waveform optimization of communications, radar sensing, and positioning payloads on shared satellite hardware and spectrum.	FNR Luxembourg (CORE)	Principal Investigator (PI) €787,000
COSMIC 2025–2028	Direct-to-Device Communications in Mobile Satellite Systems Channel modeling, compact terminal antenna prototyping, and over-the-satellite field demonstration for C-band Direct-to-Device (D2D) connectivity with SES.	FNR Luxembourg (5G BRIDGES)	Principal Investigator (PI) €692,000
Q-LIMIT 2025–2027	Quantum with Structured Lights in Military Telecommunication Resilient Free-Space Optical (FSO) Quantum Key Distribution (QKD) using structured light orbital angular momentum (OAM) modes for defense networks.	FNR Luxembourg (CyberHub)	Principal Investigator (PI) €499,000
5G-Nanosatellite 2024–2028	Integrated 5G UE for 3U CubeSat In-Orbit Demonstrator Miniaturized 3GPP 5G NR User Equipment terminal payload fitted into a 3U CubeSat mission for live in-orbit validation of direct satellite-to-ground links.	ESA & Altice Labs	Principal Investigator (PI) €542,000
ATLAS 2024–2029	Autonomous Systems for Land, Air and Space Cross-border 5G/6G UAV connectivity, non-terrestrial satellite backhauling, and autonomous multi-domain vehicle coordination.	FNR Luxembourg (IPBG)	Principal Investigator (PI) €288,000
5G-EMERGE 2024–2026	Satellite-Enhanced Edge Delivery 5G Multicast and Broadcast Services (5MBS) demonstration over GEO and LEO satellite networks for intelligent edge caching and vehicular delivery.	European Space Agency (ESA ARTES)	Principal Investigator (PI) €460,000
6G-SPACELAB 2023–2027	6G Non-Terrestrial Networks Experimental Testbed Infrastructure Flagship hardware-in-the-loop laboratory infrastructure for 5G/6G satellite communications, OpenAirInterface NTN emulation, and SDR prototyping.	University of Luxembourg / SnT	Principal Investigator (PI) €1,250,000
LUQCIA 2023–2026	Luxembourg Quantum Communication Infrastructure National terrestrial and satellite-ready Quantum Key Distribution (QKD) infrastructure for ultra-secure government and financial communications.	European Commission (DEP) & SMC	Work Package Lead / Co-PI €2,000,000+
TRANTOR 2023–2025	5G+ Evolution for Space & Non-Terrestrial Networks Dynamic multi-orbit resource management, AI-driven beam hopping, and 3GPP Release 18/19 NTN constellation orchestration.	European Commission (Horizon Europe)	Work Package Lead / Co-PI €577,000
ETHER 2023–2025	sElf-evolving terrestrial/non-Terrestrial Hybrid nEtwoRks Unified 6G 3D architecture integrating terrestrial, aerial (HAPs/UAVs), and spaceborne networks with AI-native zero-touch management.	European Commission (Horizon Europe)	Co-PI (SnT) €612,000
SPAICE 2022–2024	AI in and for Space – Neuromorphic Onboard Processing Spiking Neural Networks (SNNs) and neuromorphic hardware accelerators for ultra-low-power onboard satellite payload beamforming and interference mitigation.	European Space Agency (ESA)	Principal Investigator (PI) €350,000
5G-LEON 2022–2024	5G Low Earth Orbit Network Demonstrator End-to-end 3GPP 5G NR physical and MAC layer adaptation for high-Doppler LEO satellite links using OpenAirInterface.	European Space Agency (ESA ARTES)	Principal Investigator (PI) €400,000
JuliaSatSim 2023–2025	High-Performance Satellite Constellation Simulator in Julia Next-generation parallelized link-and-system-level simulator for mega-constellations and multi-functional 6G satellite networks.	ESA / Industry	Principal Investigator (PI) €250,000
AVATAR 2022–2024	Adaptive Beamforming & Antenna Array Validation for NTN Active phased-array calibration, digital beamforming, and UAV-assisted far-field antenna pattern characterization.	European Space Agency (ESA)	Co-PI €450,000

ACRONYM & PERIOD	PROJECT TITLE & TECHNICAL SCOPE	FUNDING AGENCY	ROLE & BUDGET
NGSO-SENSE 2021–2023	Non-Geostationary Orbit Spectrum Sensing & Interference Localization Real-time RF interference detection, classification, and geolocation for NGSO satellite uplinks and downlinks.	European Space Agency (ESA)	Principal Investigator (PI) €320,000
PROSPECT 2020–2023	Pre-Correlation RFI Excision for Spaceborne Radiometers & GNSS Digital time-frequency and wavelet-domain interference mitigation for Earth observation microwave radiometers and navigation receivers.	European Space Agency (ESA)	Co-PI €380,000

HONORS, AWARDS & PATENT

- **Best Paper Award – AIAA ICSSC 2024:** Advancements in AI/ML for 5G Non-Terrestrial Networks.
- **Best Paper Award – IEEE WCNC 2022:** Outstanding contribution to Non-Terrestrial Networks.
- **Best PhD Thesis Award 2018:** IEEE Geoscience and Remote Sensing Society (GRSS) Spanish Chapter.
- **US Granted Patent US9596610B1 (2017):** “System and method for detecting and eliminating radio frequency interferences in real time” (J. Querol & A. Camps).
- **Isabel P. Trabal Research Grant (2017):** €10,000 award for GPS/GNSS anti-jamming research quality.
- **Best Project Proposal – EADA MAP (2016):** Market Assessment Program winner.
- **Winner – ESNC Barcelona Challenge (2015):** European Satellite Navigation Competition (GSA).
- **ESA BEXUS Programme Selection (2013):** First Spanish team selected by ESA/DLR/SNSB.
- **Best Academic Record (2011):** Ranked #1 in Electronics Engineering class at UPC-BarcelonaTech.

LEADERSHIP, TEACHING & TALKS

- **Institutional Roles:** Delegate to the **ESA Non-Terrestrial Networks (NTN) Forum**; Vice-Chair of SnT Space Strategic Research Area (SRA); Advisory Board Member of the Master in Space, Technology and Business (MSTB) at University of Luxembourg.
- **Conference Leadership:** General Chair of **MOMBSAT 2025** Workshop @ EUSIPCO 2025; TPC Member for IEEE ICASSP, IGARSS, Globecom, WCNC, PIMRC.
- **Graduate Teaching (University of Luxembourg):** Course Coordinator & Lecturer for *Satellite Communications and Security (SATCOM, 5 ECTS)* since 2019; Lecturer for *Advanced Satellite Communication Systems (ASCS, 3 ECTS)*; 197+ teaching units delivered.
- **Selected Talks & Tutorials (Slides at jorge.querol.org/#talks):**
 - *Ka Conf. 2026 (Milan):* TDD in 5G LEO Satellite Networks (CREST-5G)
 - *Aalborg Univ. 2026:* Turning 6G Satellites into Sensors (JCAS-NTN)
 - *ASMS 2025 Tutorial:* 6G Multi-Functional Satellite Systems (124 slides)
 - *ETSI NTN Conf. 2024:* Luxembourgish Activities on B5G/6G-NTN
 - *SCSS 2023 Keynote:* Challenges in 6G Multi-Satellite Connectivity

PHD & POSTDOCTORAL SUPERVISION AT 6GSPACE LAB (SNT, UNIVERSITY OF LUXEMBOURG)

Main PhD Supervisor (7 Candidates – 2 Defended, 5 Ongoing): Dr. Ashish Kumar Meshram (Synchronization & Precoding in 5G NTN, defended 2026), Dr. Alejandro González-Garrido (Hybrid 5G & GNSS for PNT, defended 2025), Swetha Varadarajulu (6G AI-Native Air Interface on Neuromorphic Processors, 2022–present), Zhengchen Xu (JCAP for 6G NTN, 2026–present), Sebastián Barillaro (5G/6G UAV Cross-Border Service Continuity, 2026–present), Ramin Farzam (Multi-Connectivity for Multi-Orbit Satellite Systems, 2026–present), Seyyed Masoud Elyasi (Concurrent Comms, Sensing & Positioning for 6G NTN, 2026–present); plus **Co-Supervisor / Advisor of 11+ PhD Theses** (Dr. A. Pérez-Portero, Dr. L. Martínez-Marrero, A. Georganaki, et al.) and 15+ MSc/BSc theses.

PART A: PEER-REVIEWED JOURNAL & MAGAZINE ARTICLES (61 PAPERS)

[J1] Carla E. García, **Jorge Querol**, Mario R. Camana, Symeon Chatzinotas, “**Lightweight Deep Learning-Aided LDPC Decoding for 5G NR UAV Communications**,” *IEEE Transactions on Aerospace and Electronic Systems*, 2026 · DOI: [10.1109/infocom59046.2026.11571367](https://doi.org/10.1109/infocom59046.2026.11571367).

[J2] S. Oktay, Mert Bayraktar, Francesco Vista, **Jorge Querol**, Yves Schmit, S. Chatzinotas, “**Performance analysis of the Cassegrain telescope on the QKD with Mathieu-Gauss Beams**,” *Scientific Reports*, 2026 · DOI: [10.1038/s41598-026-51915-y](https://doi.org/10.1038/s41598-026-51915-y) · [ORBiLu Open Access](#).

[J3] Idir Edjekouane, Alejandro González-Garrido, **Jorge Querol**, José A. del Peral-Rosado, Ivan Lapin, “**High-Accuracy Ranging in 5G Non-Terrestrial Networks: Receiver Architectures and Interference Analysis**,” *IEEE Transactions on Vehicular Technology*, 2026 · DOI: [10.1109/navitec202669090.2026.11692531](https://doi.org/10.1109/navitec202669090.2026.11692531).

[J4] Mohammed Al-Ansi, **Jorge Querol**, Eva Lagunas, Madyan Alsenwi, Symeon Chatzinotas, “**Collaborative Multi-Band Multi-Orbit 6G Satellites with Multi-Connectivity: The Roles of Carrier Aggregation and Dual Connectivity**,” *IEEE Communications Magazine*, 2026 · DOI: [10.1109/mcom.001.2500337](https://doi.org/10.1109/mcom.001.2500337) · [ORBiLu Open Access](#).

[J5] Wali Ullah Khan, Chandan Kumar Sheemar, Manzoor Ahmed, Marco Di Renzo, Syed Tariq Shah, Asad Mahmood, Eva Lagunas, **Jorge Querol**, Symeon Chatzinotas, Zhu Han, “**Survey on Beyond Diagonal RIS-Enabled 6G Wireless Networks: Fundamentals, Recent Advances, and Challenges**,” *IEEE Open Journal of the Communications Society*, 2026 · DOI: [10.1109/ojcoms.2026.3734637](https://doi.org/10.1109/ojcoms.2026.3734637) · [ORBiLu Open Access](#).

[J6] Goli Srikanth, Shaik Basheeruddin Shah, Nazar T. Ali, Vijay Kumar Chakka, **Jorge Querol**, Ahmed Altunaiji, Dragan I. Olćan, “**RPDMA: A PAPR-Aware Multiple Access Scheme**,” *IEEE Open Journal of Vehicular Technology*, 2026 · DOI: [10.1109/OJVT.2026.3661153](https://doi.org/10.1109/OJVT.2026.3661153) · [ORBiLu Open Access](#).

[J7] Wali Ullah Khan, Chandan Kumar Sheemar, Muhammad Ali Jamshed, Eva Lagunas, **Jorge Querol**, Aryan Kaushik, Symeon Chatzinotas, “**RIS-Enabled Joint Communications and Sensing in 6G NTN: Opportunities and Challenges**,” *IEEE Open Journal of the Communications Society*, 2026 · DOI: [10.1109/OJCOMS.2026.3655070](https://doi.org/10.1109/OJCOMS.2026.3655070).

[J8] Ali Georganaki, **Jorge Querol**, Thang X. Vu, Symeon Chatzinotas, “**Mirage Detector: A Reliable Multiuser Preamble Detector for 6G-NTN**,” *IEEE Open Journal of the Communications Society*, 2026 · DOI: [10.1109/OJCOMS.2026.3679839](https://doi.org/10.1109/OJCOMS.2026.3679839) · [ORBiLu Open Access](#).

[J9] Chandan Kumar Sheemar, Asad Mahmood, Christo Kurisummoottil Thomas, George C. Alexandropoulos, **Jorge Querol**, Symeon Chatzinotas, Walid Saad, “**Joint Beamforming and 3D Location Optimization for Multi-User Holographic UAV Communications**,” *IEEE Transactions on Communications*, 2026 · DOI: [10.1109/TCOMM.2026.3663285](https://doi.org/10.1109/TCOMM.2026.3663285).

- [J10]** Ons Aouedi, Tedros Salih Abdu, Kha Hung NGUYEN, Eva Lagunas, **Jorge Querol**, Joël Grotz, "Intelligent Handover Management for Hybrid TN-NTN Mobility in 6G Architectures," *Open Repository and Bibliography (University of Luxembourg)*, 2026 · [ORBiLu Open Access](#).
- [J11]** Carla E. García, Michael N. Dazhi, **Jorge Querol**, Eva Lagunas, Mario R. Camana, Symeon Chatzinotas, "Impact of Out-of-Band Emissions From Active Antenna Systems on LEO Satellite Downlink Coexistence in the C-Band," *IEEE Open Journal of the Communications Society*, 2026 · DOI: [10.1109/ojcoms.2026.3726684](#).
- [J12]** Giovanni Iacovelli, Chandan Kumar Sheemar, Wali Ullah Khan, Asad Mahmood, George C. Alexandropoulos, **Jorge Querol**, Symeon Chatzinotas, "Holographic MIMO for Next-Generation Nonterrestrial Networks: Motivation, Opportunities, and Challenges," *IEEE Vehicular Technology Magazine*, 2026 · DOI: [10.1109/MVT.2026.3673016](#).
- [J13]** Chandan Kumar Sheemar, Wali Ullah Khan, George C. Alexandropoulos, **Jorge Querol**, Symeon Chatzinotas, "Holographic Joint Communications and Sensing With Cramér-Rao Bounds," *IEEE Journal on Selected Areas in Communications*, 2026 · DOI: [10.1109/JSAC.2025.3613282](#) · [ORBiLu Open Access](#).
- [J14]** Adrián Pérez-Portero, **Jorge Querol**, Adriano Camps, "Automatic RFI Detection, Location, and Classification System in GNSS Bands," *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 2026 · DOI: [10.1109/JSTARS.2025.3647776](#) · [ORBiLu Open Access](#).
- [J15]** Idir Edjekouane, Alejandro González-Garrido, **Jorge Querol**, Symeon Chatzinotas, "User Equivalent Range Error and Positioning Accuracy Analysis for ToA-Based Techniques Using PRS and SSB in 5G/6G NTN," *IEEE Open Journal of the Communications Society*, 2025 · DOI: [10.1109/OJCOMS.2025.3623669](#) · [ORBiLu Open Access](#).
- [J16]** Ashish Kumar Meshram, Sumit Kumar, **Jorge Querol**, Stefano Andrenacci, Symeon Chatzinotas, "Reduced Complexity Initial Synchronization for 5G NR Multibeam LEO-Based Non-Terrestrial Networks," *IEEE Open Journal of the Communications Society*, 2025 · DOI: [10.1109/OJCOMS.2025.3543625](#) · [ORBiLu Open Access](#).
- [J17]** Chandan Kumar Sheemar, Symeon Chatzinotas, Dirk Slock, Eva Lagunas, **Jorge Querol**, "Parallel and Distributed Hybrid Beamforming for Multicell Millimeter Wave MIMO Full Duplex," *IEEE Transactions on Vehicular Technology*, 2025 · DOI: [10.1109/TVT.2024.3488956](#) · [ORBiLu Open Access](#).
- [J18]** Geoffrey Eappen, Jorge Luis González Ríos, Vibhum Singh, Rakesh Palisetty, Alireza Haqiqtnjad, Liz Martínez Marrero, Jevgenij Krivochiza, **Jorge Querol**, Nicola Maturo, Juan Carlos Merlano Duncán, Eva Lagunas, Stefano Andrenacci, Symeon Chatzinotas, "Optimal Linear Precoding Under Realistic Satellite Communications Scenarios," *IEEE Open Journal of Vehicular Technology*, 2025 · DOI: [10.1109/OJVT.2024.3509646](#) · [ORBiLu Open Access](#).
- [J19]** Chandan Kumar Sheemar, Christo Kurisummoottil Thomas, George C. Alexandropoulos, **Jorge Querol**, Symeon Chatzinotas, Walid Saad, "Joint Holographic Beamforming and User Scheduling With Individual QoS Constraints," *IEEE Transactions on Vehicular Technology*, 2025 · DOI: [10.1109/TVT.2025.3569401](#).
- [J20]** Alejandro Gonzalez-Garrido, Idir Edjekouane, **Jorge Querol**, Henk Wymeersch, Symeon Chatzinotas, "Joint Communication and Positioning Receiver Architecture for DSSS-Overlayed OFDM Waveform," *IEEE Open Journal of the Communications Society*, 2025 · DOI: [10.1109/OJCOMS.2025.3615957](#) · [ORBiLu Open Access](#).
- [J21]** Alejandro Gonzalez-Garrido, **Jorge Querol**, Henk Wymeersch, Symeon Chatzinotas, "Joint Communication and Navigation From LEO Multi-Beam Satellite," *IEEE Open Journal of the Communications Society*, 2025 · DOI: [10.1109/OJCOMS.2025.3568093](#) · [ORBiLu Open Access](#).
- [J22]** Konstantinos Ntontin, Eva Lagunas, **Jorge Querol**, Junaid ur Rehman, Joël Grotz, Symeon Chatzinotas, Björn Ottersten, "A Vision, Survey, and Roadmap Toward Space Communications in the 6G and Beyond Era," *Proceedings of the IEEE*, 2025 · DOI: [10.1109/JPROC.2024.3512934](#) · [ORBiLu Open Access](#).
- [J23]** Sumit Kumar, Jevgenij Krivochiza, Türker Yilmaz, **Jorge Querol**, Symeon Chatzinotas, Stefano Andrenacci, Joël Grotz, "5G-NR Over Transparent Payload GEO Satellites: A Hands-On Approach Using OpenAirInterface5G-NTN," *IEEE Open Journal of the Communications Society*, 2025 · DOI: [10.1109/OJCOMS.2025.3586871](#) · [ORBiLu Open Access](#).
- [J24]** Adrián Pérez-Portero, **Jorge Querol**, Adriano Camps, "Resource-Efficient FPGA Architecture for Real-Time RFI Mitigation in Interferometric Radiometers," *Sensors*, 2024 · DOI: [10.3390/s24248001](#) · [ORBiLu Open Access](#).
- [J25]** Adrián Pérez-Portero, **Jorge Querol**, Andreu Mas-Viñolas, A. Amézaga, R. Jove-Casulleras, Adriano Camps, "Development of a Dynamically Re-Configurable Radio-Frequency Interference Detection System for L-Band Microwave Radiometers," *Sensors*, 2024 · DOI: [10.3390/s24134034](#) · [ORBiLu Open Access](#).
- [J26]** Carla E. García, Mario R. Camana, **Jorge Querol**, Symeon Chatzinotas, "Rate-Splitting Multiple Access for Secure Communications Over CR MISO SWIPT Systems With Non-Linear EH Users," *IEEE Transactions on Green Communications and Networking*, 2024 · DOI: [10.1109/TGCN.2024.3404891](#) · [ORBiLu Open Access](#).
- [J27]** Juan A. Vázquez-Peralvo, **Jorge Querol**, Flor Ortíz, Jorge Luis González Ríos, Eva Lagunas, Luis Manuel Garcés-Socarrás, Juan Carlos Merlano Duncán, Marcelle O. K. Mendonça, Symeon Chatzinotas, "Multibeam Beamforming for Direct Radiating Arrays in Satellite Communications Using Genetic Algorithm," *IEEE Open Journal of the Communications Society*, 2024 · DOI: [10.1109/OJCOMS.2024.3385021](#) · [ORBiLu Open Access](#).
- [J28]** Alejandro Gonzalez-Garrido, **Jorge Querol**, Henk Wymeersch, Symeon Chatzinotas, "Interference Analysis and Modeling of Positioning Reference Signals in 5G NTN," *IEEE Open Journal of the Communications Society*, 2024 · DOI: [10.1109/OJCOMS.2024.3503692](#) · [ORBiLu Open Access](#).
- [J29]** Florian Völk, Thomas Schlichter, Sumit Kumar, Robert T. Schwarz, Andreas Knopp, Marwan Hammouda, Thomas Heyn, **Jorge Querol**, Symeon Chatzinotas, Adam Kapovits, "5G Non-Terrestrial Networks with OpenAirInterface: An Experimental Study over GEO Satellites," *IEEE Access*, 2024 · DOI: [10.1109/ACCESS.2024.3483958](#) · [ORBiLu Open Access](#).
- [J30]** Mohammed Al-Ansi, **Jorge Querol**, Eva Lagunas, Symeon Chatzinotas, "Single-and multi-connectivity for multi-satellite 6G communication networks," *IET Digital Library*, 2023 · [ORBiLu Open Access](#).
- [J31]** Flor Ortíz, Víctor Monzón Baeza, Luis Manuel Garcés-Socarrás, Juan A. Vázquez-Peralvo, Jorge Luis González Ríos, Gianluca Fontanesi, Eva Lagunas, **Jorge Querol**, Symeon Chatzinotas, "Onboard processing in satellite communications using ai accelerators," *Aerospace*, 2023 · DOI: [10.3390/AEROSPACE10020101](#) · [ORBiLu Open Access](#).
- [J32]** Stylianos E. Trevalakis, Alexandros-Apostolos A. Boullogeorgos, Dimitrios Pliatsios, **Jorge Querol**, Konstantinos Ntontin, Panagiotis Sarigiannidis, Symeon Chatzinotas, Marco Di Renzo, "Localization as a key enabler of 6G wireless systems: A comprehensive survey and an outlook," *IEEE Open Journal of the Communications Society*, 2023 · DOI: [10.1109/OJCOMS.2023.3324952](#) · [ORBiLu Open Access](#).
- [J33]** Chandan Kumar Sheemar, Sourabh Solanki, **Jorge Querol**, Sumit Kumar, Symeon Chatzinotas, "IRS Assisted MIMO Full Duplex: Rate Analysis and Beamforming Under Imperfect CSI," *IEEE Open Journal of the Communications Society*, 2023 · DOI: [10.1109/OJCOMS.2023.3306524](#) · [ORBiLu Open Access](#).
- [J34]** Juan Andrés Vázquez-Peralvo, **Jorge Querol**, Flor Ortíz, Jorge Luis González Ríos, Eva Lagunas, Víctor Monzon Baeza, Gianluca Fontanesi, Luis Manuel Garcés-Socarrás, Juan Carlos Merlano Duncán, Symeon Chatzinotas, "Flexible beamforming for direct radiating arrays in satellite communications," *IEEE Access*, 2023 · DOI: [10.1109/ACCESS.2023.3300039](#) · [ORBiLu Open Access](#).
- [J35]** Jevgenij Krivochiza, Juan Carlos Merlano Duncán, **Jorge Querol**, Symeon Chatzinotas, "End-to-end performance evaluation of slp waveforms," *IEEE Access*, 2023 · DOI: [10.1109/ACCESS.2023.3327643](#) · [ORBiLu Open Access](#).
- [J36]** Ashish Kumar Meshram, Sumit Kumar, **Jorge Querol**, Symeon Chatzinotas, "Beam centric Doppler pre-compensation for LEO-based 5G-NTN," *IET Digital Library*, 2023 · [ORBiLu Open Access](#).

- [J37] Adrián Pérez-Portero, **Jorge Querol**, Adriano Camps, Manuel Martín-Neira, Martin Süess, Juan Ignacio Ramirez, Alberto Zurita, Joséep Closa, Roger Oliva, R. Onrubia, "**RFI detection and mitigation for advanced correlators in interferometric radiometers**," *Remote Sensing*, 2022 · DOI: [10.3390/RS14184672](https://doi.org/10.3390/RS14184672).
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PART B: INTERNATIONAL CONFERENCE PROCEEDINGS, PREPRINTS & THESES (119 PAPERS)

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