



Giovanni Pettorru

CONTACT

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PROFESSIONAL EXPERIENCE

Tutor, teaching assistant | 2024–2025

University of Cagliari, Italy – Tutor for the Network Security course for Master's students in Internet Engineering.

Tutor, teaching assistant | 2021–2023

University of Cagliari, Italy – Tutor for the course Telecommunication Networks for first-year Electrical, Electronic, and Computer Engineering students.

Freelance Worker | Jul 2021– Jan 2023

University of Cagliari, Italy – Support for the development of data acquisition algorithms on wireless networks and design of monitoring system for alerting in the presence of critical situations in urban environment

EDUCATION

University of Cagliari, Italy | 2022–Present

Doctor of Philosophy (Ph.D.) – Electronic and Computer Engineering

Instituto Politécnico de Viana do Castelo, Portugal | May 2024 – Sep 2024

Visiting Ph.D student

University of Cagliari | 2020–2022

Master degree – Internet Engineering

- Final degree mark: 110/110 cum laude
- Thesis title: Secure and Low-Latency Communications Based on WebSocket over QUIC in Internet of Things Scenarios

University of Cagliari | 2016–2020

Bachelor degree – Electrical, Electronic and Computer Engineering

- Final degree mark: 96/110
- Thesis title: Implementation of a Magnetometer Based Vehicle Detection System for Smart Parking Applications

Secondary School Diploma | 2011–2016

Technical Commercial Institute (ITC) G.P Ch.ironi, Nuoro, Italy

- Economics sector, Administration, Finance and Marketing – Specialisation in Business information systems

**OTHER ACTIVITIES
AND CERTIFICATES**

Training Course in European Project Design | 2023

Intellera Consulting S.p.a

- The course provides knowledge and skills on directly managed European funds 2021-2027, focusing on methodologies and techniques for writing, developing and managing a project proposal to be submitted in response to a European call for proposals.

English B2 Level Certification | 2023

CLA - University of Cagliari, Italy

Student Grant | Apr 2020- Sep 2020

University of Cagliari, Italy

- Educational Project 'M2M Comm- M2M Communication Standards in Smart Cities Environment

AWARDS

Three-Minute-Thesis (3MT) Competition | Jun 2023

IEEE ComSoc

- Placed 3rd in the 1st Three-Minute Thesis (3MT) Competition by IEEE ComSoc at ICC 2023, where PhD students were challenged to present their research to a non-specialist audience in just three minutes. This experience enhanced my skills in effectively communicating research, explaining findings to diverse audiences, and networking within the research community.

Start Cup Sardegna | Oct 2024

University of Sassari, University of Cagliari and INNOIS

- Selected as one of the top 10 finalists in Start Cup Sardegna 2024, the competition recognizes the best innovative business ideas to develop in Sardinia.
- We achieved second prize at the University of Cagliari for our project AGROS, which focused on Location-Based Services applied to Smart Agriculture. As part of Spoke 7 of the e.INS (Ecosystem of Innovation for Next Generation Sardinia) project.

**PUBLICATIONS
JOURNAL ARTICLES**

[R1] **A Cross-Layer Survey on Secure and Low-Latency Communications in Next-Generation IoT**; M. Martalò, G. Pettorru, and L. Atzori ; Transactions on Network and Service Management ; IEEE (2024)

[R2] **Trustworthy Localization in IoT Networks: A Survey of Localization Techniques, Threats, and Mitigation**; G. Pettorru, V. Pilloni, and M. Martalò ; Sensors ; MDPI (2024)

**CONFERENCE
PROCEEDINGS**

[C1] **Obfuscating Sensor-Based Activity Recognition in eHealth Applications: Is Encryption Enough Secure?**; F. Marcello; G. Pettorru; M. Martalò; V. Pilloni ; International Conference on Communications ; IEEE (2024)

- [C2] **QUIC and WebSocket for Secure and Low-Latency IoT Communications: an Experimental Analysis**; G. Pettorru, and M. Martalò ; International Conference on Communications; IEEE (2023)
- [C3] **Using Artificial Intelligence and IoT Solution for Forest Fire Prevention**; G. Pettorru, M. Fadda, R. Girau, M. Sole, M. Anedda, D. Giusto ; ICNC 2023 ; IEEE (2023)
- [C4] **A Hybrid WiFi/Bluetooth RSS Dataset with Application to Multilateration-Based Localization**; G. Pettorru, V. Pilloni, and M. Martalò ; MeditCom 2023 ; IEEE (2023)
- [C5] **An IoT-based electronic sniffing for forest fire detection**; G. Pettorru, M. Fadda, R. Girau, M. Anedda, D. Giusto ; ICCE 2023 ; IEEE (2023)
- [C6] **Pedestrian and vehicular tracking based on Wi-Fi sniffing: a real-world case study**; M. Bertolusso, G. Pettorru, M. Spanu, M. Fadda, M. Sole, M. Farina, M. Anedda, D. D. Giusto ; FITCE 2022 ; IEEE (2022)
- [C7] **A passive Wi-Fi based monitoring system for urban flows detection**; M. Bertolusso, G. Pettorru, M. Spanu, M. Fadda, M. Sole, M. Anedda, D. Giusto. ; IAICT 2022 ; IEEE (2022)
- [C8] **A Machine Learning-based Approach for Vehicular Tracking in Low Power Wide Area Networks**; M. Bertolusso, M. Spanu, G. Pettorru, M. Anedda, M. Fadda, R. Girau, M. Farina, D. Giusto ; BMSB 2022 ; IEEE (2022)
- [C9] **Implementation of a Multisensors Fire-Fighting Monitoring System for Forest Protection**; G. Pettorru, M. Bertolusso, M. Spanu, M. Sole, M. Anedda, D. Giusto ; CSCI 2023 ; IEEE (2022)
- [C10] **Implementation of a Magnetometer based Vehicle Detection System for Smart Parking applications**; A. Floris, R. Girau, S. Porcu, G. Pettorru, L. Atzori ; IEEE (2020)