Giovanni Pettorru

CONTACT

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in giovannipettorru

🌐 https://giovannipettorru.github.io/

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

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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 | 2022

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

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AWARDS

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.

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.

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)

CONFERENCE PROCEEDINGS

[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)