

Giacomo CALABRIA

Master Student in Telecommunications Engineering

[in linkedin.com/in/giacomo-calabria](https://www.linkedin.com/in/giacomo-calabria) github.com/giacomocalabria
+39 348 388 5099 @ giacomo.calabria.01@gmail.com







An updated version of this CV is always available at giacomocalabria.github.io

Final-year Master's student in Telecommunications Engineering with a solid foundation in Computer Engineering. Highly precise, methodical, and detail-oriented, with experience in team work. Great for communication skills, fostering group cohesion, and delivering results in team-oriented environments.

EDUCATION

- Present** **Final year of MSc in Telecommunications Engineering, GPA : 30/30, UNIVERSITY OF PADUA, Padua, Italy**
Sep. 2023 > Wireless Networks, Internet of Things, Digital Communications, Digital Signal Processing.
- Present** **University College Student, UNIVERSITY COLLEGE DON NICOLA MAZZA, Padua, Italy**
Sep. 2022 > Head of the computer committee for the second year : schedule activities and supervisor of the learning courses. Lecturer of the Arduino course.
> Deployer of the PaperCut printing management system.
> Member of the college student's council.
- Jun. 2024** **Erasmus+ exchange program, UNIVERSITAT POLITÈCNICA DE CATALUNYA, Barcelona, Spain**
Feb. 2024 Courses from the ETSETB - Barcelona School of Telecommunications Engineering.
> 5G Mobile Systems, Stochastic Methods, Internet Management, Advanced Optical Communications, Automotive Embedded Systems.
- Sep. 2023** **BSc in Computer Engineering, Final grade : 104/110, UNIVERSITY OF PADUA, Padua, Italy**
Sep. 2020 > Artificial Intelligence, Software Engineering, Operative Systems, Computer's architecture, Databases, Data structures and algorithms, Computer's networks, Electronics.
> Final thesis : *Transmitting Base Station model with power selective cloaking metasurfaces.*
- Jun. 2020** High School diploma in Applied Sciences (Computer Science oriented). Final grade : 100/100

PROJECTS

- MULTI CHANNEL OPTICAL 64-QAM SIMULATION AND ANALYSIS** 2024
 Paper
Studied the impact of chromatic dispersion and multi-channel multiplexing interference in a 64-QAM multi-channel optical communication system.
[MATLAB](#) [NLSE equation](#) [L^AT_EX](#)
- MONTE CARLO SIMULATION** 2024
 github.com/giacomocalabria/Stochastic-Methods-UPC
Applied Monte Carlo techniques to enhance the performance analysis of stochastic experiments in cases where traditional mathematical methods are challenging or infeasible.
[Python](#) [Monte Carlo](#) [Random Walk](#)
- MANET SIMULATIONS** 2024
 Paper
Using the NS2 simulator, we explore the performance of the MANET network, focusing on the impact of the number of nodes and the probability of packet loss.
[MANET](#) [Video-Streaming](#) [Routing](#)
- USE CASE OF 5G NR : SPORT VENUE** 2024
Collaborated with a team to design a 5G use case scenario, deploying a private 5G network in a football stadium to deliver Augmented Reality experiences for spectators
[5G NR](#) [VR](#) [AR](#) [Private 5G network](#)
- TRANSMITTING BASE STATION MODEL WITH POWER SELECTIVE CLOAKING METASURFACES** 2023
 [Padua Thesis and Dissertation Archive](#)
Studied Power Controlled Metasurfaces for MU-MIMO communications, developing models to evaluate a Base Station with metasurface wrapping in both instantaneous and average scenarios. Validated models through simulations to assess metasurface effectiveness across different configurations
[MU-MIMO](#) [Base Station](#) [L^AT_EX](#) [MATLAB](#)

DESIGN PATTERN ADAPTER : VECTOR TO MAP

2022

github.com/giacomocalabria/Adapter-Map-2nd-exams [Documentation](#)

This project implements the Adapter pattern to convert a Vector into a Map. The project is developed in Java and uses JUnit framework for unit testing. The project is documented using Javadoc

Java JUnit JavaDoc

CHESS GAME SIMULATOR WITH C++

2022

github.com/giacomocalabria/Progetto-finale-Scacchiera-elettronica-I-goblin-lancieri

We have developed an electronic chessboard in C++ with contributions divided among team members, each responsible for different parts of the project such as various chess pieces and game mechanics. We have used GitHub in order to work simultaneously on the same code, creating different branches and manage the merges.

C++ CMake GitHub

HORSE RIDING MONITOR

2022

The application reads the serial data and various time snapshots from the Microgate REIPro/REI2 professional stopwatch and displays them in a Tk interface. The application runs on different monitors and its used by the race jury.

Python Microgate Tk interface Serial interface

EXPERIENCE

Present Sep. 2017	National photofinish & Regional athletics Referee, ITALIAN FEDERATION OF ATHLETICS, <ul style="list-style-type: none">> Since 2021, certified photofinish timekeeper, skilled in deploying and calibrating FinishLynx and custom timing systems across sports venues using IP networks. Collaborating with the <i>Fidal Servizi</i> team for precise athletic competition timing.> Regional athletics referee, ensuring compliance with athletic regulations across various disciplines at regional and international competitions.> Developed an MS Access application to streamline management of school competitions.> Part of the Local Coordinators Team <p>FinishLynx Microgate IP cameras WLAN/LAN management Team work Meeting management</p>
Oct. 2023 Sep. 2019	Timekeeper, ITALIAN FEDERATION OF TIMEKEEPERS - FICr, Verona, Italy <ul style="list-style-type: none">> Developed an application for horse riding timing monitor.> Created an MS Access application for managing the staff's availability and creating call forms.> Fully qualified to use professional instrumentation to time races of different disciplines. <p>FinishLynx Microgate Alge TagHeuer</p>

SKILLS

Programming	C/C++, Java, MATLAB, Python, GoLang, Bash script, Assembly ARM, HTML
Platforms & framework	CMake, Arduino, JUnit, Make
Databases	PostgreSQL, MySQL, Microsoft SQL Server, MS Access
Development tools	Visual Studio Code, git, Jupyter, Agile
Operating system	Windows 10/11, Windows Server, Ubuntu, QNAP

LANGUAGES

Italian	Native
English	Advanced
Spanish	Intermediate