

Europass Curriculum Vitae



Personal information

Name / Surname

Giulio Attenni

Education

2022-present

Ph.D. Student in Computer Science, "*La Sapienza*" University of Rome

2019-2022

M.Sc. in Computer Science, "*La Sapienza*" University of Rome

18 July 2022, 110 cum laude.

Thesis work: "Autonomous Squads of Drones as a Collaborative Delivery Service".

Advisors: Professor Gaia Maselli, Professor Novella Bartolini

May 2022

CAE C1 Cambridge Certificate

2016 - 2019

B.Sc. in Computer Science, "*La Sapienza*" University of Rome

October 23rd 2019, 110 cum laude.

Thesis: "Automatic generation of price policies for Smart Grids".

Advisor: Professor Igor Melatti

2011 - 2016

High school diploma in ICT, *IISS Sandro Pertini*

97/100

Awards

December 6-9, 2022

CoNEXT - International Conference on emerging Networking EXperiments and Technologies, Rome, Italy

GARR Consortium student grant to attend the conference

August 2022

Pre-doctoral Research School, *The Cornell, Maryland, Max Planck*

2018 - 2019

Honours Programme in Computer Science, "*La Sapienza*" University of Rome

Topic: "Algorithms and tools for Smart Cities and Smart Grids".

Advisor: Professor Igor Melatti

2016 - present

Scholarship, "*Villa Nazareth*" College of Merit, Rome, Italy

Description: Part of the conference of merit-based Italian colleges (CCUM), "*Villa Nazareth*" admits students in all disciplines through a competitive selection, promoting unique academic, professional and networking experiences.

Experience

Teaching Assistant

Oct 2022 - present

Autonomous Networking (M.Sc. in Computer Science) held by Professor Gaia Maselli at "*La Sapienza*" University of Rome

Research Fellowship

June 2022 - Oct 2022

Scholarship for research activity purpose at "*La Sapienza*" University of Rome.

Description: Collaboration in the context of a research project concerning the design and implementation of communication protocols for networks of drones. NATO Project "SeaSec: DroNets for Maritime and Border Port Security".

Skills: Research and Development (R&D), Wireless Networking, Drones, Academic Writing

Chief Scientific Officer: Professor Gaia Maselli

Research Internship

September 2021 - present

Master Thesis work at "*La Sapienza*" University of Rome (M.Sc. Computer Science).

Research Fellowship
December 2020 - May 2021

Research Internship
2018 - 2019

Projects

RL-based MAC protocol
2021

RL-based Routing protocol
2021

Centralized task assignment for
drone-swarm
2020

GPU-powered MOLS
Generation from Permutation
Networks
2021

Activities

Scholarship at "Villa Nazareth"
university college of excellence
2016 - present

Description:

- Design and implementation of a system that exploits an autonomous swarm of drones to provide a collaborative parcel delivery service.
- State of the art survey about drone delivery systems.

Skills: Define complex MILP problems; Gurobi; research methods and academic writing.

Advisors: Professor Gaia Maselli, Professor Novella Bartolini

Scholarship for research activity purpose at "La Sapienza" University of Rome .

Description: Development and performance evaluation of algorithms and protocols for IoUT systems. Collaboration in the context of a research project concerning the usage of Underwater IoT systems to understand (and fight) climate change.

Skills: I learned about state of the art seawater measurements with regard to quality of data acquisition.

Chief Scientific Officer: Professor Chiara Petrioli

Bachelor Thesis work at "La Sapienza" University of Rome (B.Sc. in Computer Science).

Description: Automatic generation of price policies for Smart Grids. Design and implementation of a service that provides Time of Usage tariffs applicable to energy bills in order to influence users' behaviour so as to reduce peaks in the aggregate power demand of a certain Smart grid. This thesis work is based on European Commission project SmartHG. In order to find the best price policy we exploit both exhaustive and local search strategies.

Skills: Define MILP problems; CPLEX; Java; Slurm.

Advisor: Professor Igor Melatti

Project for Autonomous Networking course held by Professor G. Maselli at "La Sapienza" University of Rome (M.Sc. Computer Science).

Description: Design and implementation of a Reinforcement Learning based mac protocol that queries drones to retrieve data packets. This protocol is inspired by multi-armed bandit problem.

Skills: RL Q-learning approach.

Project for Autonomous Networking course held by Professor G. Maselli at "La Sapienza" University of Rome (M.Sc. Computer Science).

Description: Design and implementation of a Reinforcement Learning based routing protocol that allows a drone in a patrolling scenario to deliver packets while exploring an area of interest with minimum packet loss.

Skills: RL Q-learning approach.

Project for Computer Network Performance course held by Professor N. Bartolini at "La Sapienza" University of Rome (M.Sc. Computer Science).

Description: Design and implementation of a model for swarms of aerial drones' centralized task assignment problem.

Skills: Define MILP problems; comparison and performance evaluation of MILP models; Python API of CPLEX.

Project for Intensive Computation course held by Professor A. Massini at "La Sapienza" University of Rome (M.Sc. Computer Science).

Description: Exploit parallel computation to find MOLS (Mutually Orthogonal Latin Squares) among Latin Squares composed by permutations obtained performing routing on a set of MIN configurations.

Skills: Matlab, C, CUDA.

Educational activities:

Conference cycles:

- "Mondo digitale: rischi ed opportunità di una vita non solo sul web" (Digital world: risks and opportunities of a life not only on the web) - March 2018
- "Dialoghi sull'attuale emergenza da Covid-19" (Dialogues on the current emergency from Covid-19) - May 2020
- "L'intelligenza artificiale tra etica ed innovazione" (Artificial intelligence between ethics and innovation) - November 2020

Summer school:

- "La guerra: mito e tragedia del genere umano" (War: myth and tragedy of mankind) - Dobbiaco, July 2017
- "L'uomo e lo spazio" (The man and the space) - Arabba, July 2020
- "La frattura tra scienza e società" (The rift between science and society) - Mareson di Zoldo, July 2021