Giulio Attenni

EDUCATION

"La Sapienza" University of Rome Rome, Italy
Ph.D. in Computer Science *Oct 2022 - present*

- **Research Interests**: Computational Sustainability, Network Optimization, Green and Autonomous Networking, Multi-Agent Systems

"La Sapienza" University of Rome Rome, Italy
M.Sc. in Computer Science; 110 cum laude; GPA: 3.93 *Oct 2019 - Jul 2022*

- **Thesis**: "Autonomous Squads of Drones as a Collaborative Delivery Service", *Advisors*: Professor Gaia Maselli, Professor Novella Bartolini

USI "Università della Svizzera Italiana" Lugano, Switzerland
Erasmus+ / SEMP *Sep 2020 - Jan 2021*

"La Sapienza" University of Rome Rome, Italy
B.Sc. in Computer Science; 110 cum laude; GPA: 3.86 *Sep 2016 - Oct 2019*

- **Thesis**: "Automatic generation of price policies for Smart Grids", *Advisor*: Professor Igor Melatti

EXPERIENCE

"La Sapienza" University of Rome Rome, Italy
Teaching Assistant - a.y. 2022/2023 *Oct 2022 - present*

- **Spring**:
  -*Computer Networks* (B.Sc. in Computer Science) held by Professor Gaia Maselli
  -*Introduction to Algorithms* (B.Sc. in Computer Science) held by Professor Tiziana Calamoneri and Professor Angelo Monti
- **Fall**: *Autonomous Networking* (M.Sc. in Computer Science) held by Professor Gaia Maselli

"La Sapienza" University of Rome Rome, Italy
Research Fellowship *Jun 2022 - Sep 2022*

Description: Collaboration in the context of a research project concerning the design and implementation of communication protocols for drone networks. *Chief Scientific Officer*: Professor Gaia Maselli

Skills: Wireless Networking · Drones · Reinforcement Learning · Python · Research Methods · Academic Writing.

"La Sapienza" University of Rome Rome, Italy
Research Internship *Sep 2021 – May 2022*

Description: Thesis work under the supervision of Professor Gaia Maselli and Professor Novella Bartolini. The curricular internship aimed to conduct research to write my Master's thesis: a simulation study with the objective of evaluating whether the introduction of cooperation among drones enhances the performance of a drone delivery service. The problem has been mathematically formalized through a Mixed Integer Linear Programming formulation that aims to minimize the completion time of delivery operations while assigning delivery tasks to drones and defining the corresponding drone routes. To solve the problem in a reasonable amount of time, a heuristic algorithm based on a local search approach has been proposed.

Skills: Operations Research · Gurobi · Python · Research Methods · Academic Writing.

"La Sapienza" University of Rome Rome, Italy
Research Fellowship *Dec 2020 - May 2021*

Description: Scholarship for research activity purpose with the scope of conducting research for 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. *Chief Scientific Officer*: Professor Chiara Petrioli

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

"La Sapienza" University of Rome Rome, Italy
Research Internship *Mar 2018 – Oct 2019*

Description: Thesis work under the supervision of Professor Igor Melatti. 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: Operations Research · CPLEX · Java · Slurm.

Honours and Awards

CoNEXT 2022 · Rome, Italy
GARR Consortium student grant to attend the conference · *December 6-9, 2022*
Conference: "International Conference on emerging Networking EXperiments and Technologies 2022"

Cornell University, Maryland University, Max Planck Institute · Saarbrücken, Germany
Attendee at "The Cornell, Maryland, Max Planck Pre-doctoral Research School 2022" · *August 1-6, 2022*
Topic: "Emerging Research Trends in Computer Science"

"La Sapienza" University of Rome · Rome, Italy
Honours Programme in Computer Science · *2018 - 2019*
Topic: "Algorithms and tools for Smart Cities and Smart Grids", *Advisor*: Professor Igor Melatti

"Villa Nazareth" College of Merit · Rome, Italy
Scholarship · *2016 - present*

- **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.

Languages

English: Advanced (C1 – CAE certificate)
Italian: Mother tongue

IT Skills

Programming Languages: Python, C/C++, MATLAB, Java
Optimization tools: Gurobi, CPLEX
Operating Systems: Linux, Windows, Mac