

Christian Piermarini

Curriculum Vitae



Rome, Italy

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Education

Sep 2019 – Jul 2021 **Master's Degree in Management Engineering,**

Sapienza University of Rome, Italy.

Grade: 110/110 cum laude

○ Curriculum: Decisional Models for Management Engineering

○ Thesis: "Application of the Simulation-based Optimization approach for the analysis of the ambulance diversion phenomenon in a first-aid network."

○ The aim of the thesis is to examine the performances of a first-aid network to vary the diversion policies through the development of four simulation models and their optimization via an appropriate algorithm.

Advisors: Prof. Massimo Roma, Stefano Lucidi

○ Core courses: service systems and simulation, operational research, process management and mining optimization methods for machine learning, continuous optimization, optimization of complex systems, combinatorial optimization, modeling and identification, games and equilibria

Feb 2021 – Jun 2021 **Students Honors Program,**

Sapienza University of Rome, Italy.

Admitted and fulfilled

Sep 2016 – Jul 2019 **Bachelor's Degree in Management Engineering,**

Sapienza University of Rome, Italy.

Grade: 110/110 cum laude

Sep 2011 – Jul 2016 **Scientific High School,**

Liceo Scientifico Giuseppe Piazzi, Istituto d'Istruzione Superiore Margherita Hack,, Morlupo, Italy.

Grade: 100/100 cum laude

Implementation Projects

0 **Master Thesis:**

- Development of various simulation models through ARENA™ Simulator
- Intensive data management and analysis through the Excel software
- Development of a specific Python code for the communication between the ARENA simulation model and the optimization algorithm

0 **Optimization Methods for Machine Learning:**

Multilayer Perceptron and Radial Basis Function Neural Networks to solve a regression problem (Python).
Support Vector Machines to solve a classification problem (Python).

0 **Process Management and Mining:**

Modeling of a bank services through the BPMN language, run of the simulation in Bizagi modeler, development of a basic automation interface in Bizagi Studio, data mining of the process in ProM.

Experiences

2013 **Olympiads in Maths.**

Feb 2015 **Participation in IMUN Italian Model United Nations competition**

Jul 2019 – Sep 2019 **Full time job as a tourist guide for Opera Romana Pellegrinaggi, Openbus Vatican&Rome service**

Computer Skills

Python, AMPL, LaTeX, Bizagi modeler, Bizagi Studio, ProM, ARENA™ Simulator, Simio simulator, Microsoft Office, WoPeD, basics of KNIME Analytics Platform

Languages

0 **Italian:** Mother tongue

0 **English:** Advanced, both written and spoken, having the B1 level PET Cambridge certificate and the B2 FCE Cambridge certificate, and having attended for three years summer schools in Reading, Portsmouth and Greenwich (London)

0 **Spanish :** Knowledge of few words and simple phrase

Scientific publications

9 Aug 2021 **Technical Report**

Christian Piermarini, Massimo Roma, “A Simulation–Based Optimization approach for analyzing the ambulance diversion phenomenon in an Emergency Department network”, published on *ArXiv.org*.