europass Curriculum vitae

PERSONAL INFORMATION Christian Piermarini

SUMMARY

I am a Ph.D. student in Operations Research at the Department of Computer, Control and Management Engineering, Sapienza University of Rome. My current research focuses on numerical analysis, healthcare management and machine learning applied on finance.

EDUCATION AND TRAINING

August 30ĵth – September 2n̂d 2022

ODS2022 International Conference on Optimization and Decision Science

Firenze (Italy)

Presentation of the paper titled "The Ambulance Diversion phenomenon in an Emergency Department network: a case study;

July 24th – August 05th 2022

"Summer Graduate School "Mathematics of Machine Learning"

Organized by Scuola Matematica Interuniversitaria at the Palazzone di Cortona

Followed and successfully completed;

3rd-9th July 2022

“Summer school on optimization, big data and applications”

Veroli (Italy)

Followed an successfully completed;

9th-20th May 2022

“Iterative methods for large-scale saddle point problems course”

Cortona (Italy)

- Lecturers: Professor Michele Benzi, Scuola Normale Superiore, Pisa, and professor Fabio Durastante, Dipartimento di Matematica, Università di Pisa.
- Grade: A;

February 24th 2022

Airo Young Workshop 2022 participation

February 16th 2022

Scientific writing course

Lecturer: professor Enrico Matricciani

Followed and successfully completed

November 1st 2021

Following the ABRO PhD program, Department of Computer, Control and Management Engineering

September 2019 – July 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.";
- Advisors: Massimo Roma, Stefano Lucidi;
- 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;
- 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 fullfilled

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, Instituto d'Istruzione Superiore Margherita Hack, Morlupo, Italy

Grade: 100/100 cum laude

IMPLEMENTATION PROJECTS

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.
Optimization methods for machine learning	Multilayer Perceptron and Radial Basis Function Neural Networks tosolve a regression problem (Python), Support Vector Machines to solve a classification problem (Python).
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 Rome service	Full time job as a tourist guide for Opera Romana Pellegrinaggi, Openbus Vatican

COMPUTER SKILLS

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

LANGUAGES

Italian (mother tongue), 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)), Spanish (Knowledge of few words and simple phrase).

SCIENTIFIC PUBLICATIONS

August 9th 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.

May 2022

Paper (Reviewing phase)

Christian Piermarini, Massimo Roma, “The Ambulance Diversion phenomenon in an Emergency Department network: a case study”, reviewing phase for ODS 2022.