

Anna Livia Croella

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Nationality: Italian



EDUCATION

- 2018 – present day **PhD Program in Automatics, Bioengineering and Operations Research**, Sapienza University of Rome - Department of Computer, Control and Management Engineering Antonio Ruberti (DIAG)
Research Topic: Combinatorial Optimization, Health Care, Train Scheduling
Advisors: Prof. Carlo Mannino, CNR Researcher Paolo Ventura
- 2015 - 2017 **Master's Degree in Management Engineering**, Sapienza University of Rome
Thesis: Inter-connected Neural Networks for a multi-horizon prediction of time series
Advisor: Prof. Alberto De Santis
Final degree mark: 110/110 cum laude
Graduation date: 26/10/2017
- 2012 - 2015 **Bachelor's Degree in Management Engineering**, Sapienza University of Rome.
Thesis: Use of optimization techniques for a complex production and distribution system: development of metaheuristic algorithms
Advisor: Simone Sagratella, Andrea Manno
Final degree mark: 110/110 cum laude
Graduation date: 23/10/2015
- 2007 - 2012 **High School Diploma in Scientific Studies**, Scientific High School A. Volta, Foggia.
School-leaving examination mark: 100/100

WORK EXPERIENCES

- Oct 2021 – present day **Management of Industrial Plants course mentorship activities grant for a.y. 2021-2022**, Management Engineering Faculty, Sapienza University of Rome
- Jun 21-26 2021 **External consultancy on “Deployment of machine learning models and optimization methods for the management of passengers public transport systems”**, Sapienza University of Rome - Department of Computer, Control and Management Engineering Antonio Ruberti (DIAG)
- Dec 2020 – Oct 2021 **Mathematical Analysis II course mentorship activities grant for a.y. 2020-2021**, Management Engineering Faculty, Sapienza University of Rome
- Sep 02-05 2019 **Organizing Committee Assistant for ISSI 2019 - 17th International Conference on Scientometrics & Informetrics**, Rome (Italy).

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Nov 2017 - Oct 2018 **Management Consulting Analyst** - Accenture Strategy Rome (Italy)
Consulting for two major world wide Italian utility groups: operated and supported the control of a new process-based model for whole Group, developed on Oracle HFM and Tagetik CPM.
Internal Talent Strategy project: implemented a back-end model for a analytics forecasting tool. Managed the use of statistical algorithms and machine learning techniques to better predict the future.

PHD VISITING

Mar – May 2020 **PhD short-term visiting at Department of Mathematics and Cybernetic of SINTEF Digital Unit**, Oslo (Norway)
Supervisor: Carlo Mannino

SCHOLARSHIPS

Oct 2021 – present day **Mentorship activities grant for a.y. 2021-2022**, Management of Industrial Plants course, Management Engineering Faculty, Sapienza University of Rome

Dec 2020 – Oct 2021 **Mentorship activities grant for a.y. 2020-2021**, Mathematical Analysis II course, Management Engineering Faculty, Sapienza University of Rome

Mar - Jun 2020 **Mobility grant for abroad joint research projects for PhD students (33rd and 34th cycles)**, Sapienza University of Rome

2018 – present day **PhD Programm Scholarship for PhD in Automatics, Bioengineering and Operations Research (ABRO)**, Sapienza University of Rome

QUALIFICATIONS AND AWARDS

July 2020 **State Exam for Information Engineer** (Italian Legislation),
Qualification to practice - Sapienza University of Rome

July 2020 **24 CFU for anthro-psycho-pedagogical disciplines and in teaching methodologies and technologies**, CFU acquisition at Telematic University eCampus

16 Apr 2017 **Post degree recognition prize as one of the 400 outstanding students of Sapienza University of Rome**, *Giornata del laureato VI edizione – Rome (Italy)*

2016 - 2017 **Excellence Path of the Management Engineering Master's Degree Program**
Completion of additional training activities (disciplinary and inter-disciplinary in-depth study, seminars and internship activities) – Sapienza University of Rome

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CONFERENCES

Sep 14-17 2021	50th Annual Conference of the Italian Operations Research Society (ODS2021) , Sapienza University Campus, Rome (Italy)
Jul 11-14 2021	31st European Conference on Operational Research (EURO2021) , University of West Attica (UNIWA), Athens (Greece)
Jun 05-10 2021	INFORMS Manufacturing and Service Operations Management Conference (MSOM2021) , Kelley School of Business, Indiana University, Online Participation
Nov 19 2020	International Conference on Optimization and Decision Science (ODS2020) , AIRO Meeting, Online
Feb 24-26 2020	Games, Dynamics and Optimization (GDO2020) , Rome (Italy)
Sep 02-05 2019	ISSI 2019 - 17th International Conference on Scientometrics & Informetrics , Rome (Italy)
21 Jan 2019	DIITET Conference - "Area Strategica Matematica Applicata" , Rome (Italy)

SCHOOLS AND WORKSHOPS

Sep 03 2021	EURO Working Group on Practice of OR Webminar - Recent developments of real-time train scheduling optimization , Online
Aug 30 -Sep 01 2021	EUROPT Summer School 2021 Robust and Nonsmooth optimization , Online Edition
Feb 08-12 2021	5th AIROYoung Workshop on Optimization and Data Science , Online Edition
May 18 2020	Mixed Integer Programming Workshop 2020 (MIP2020) , Online Edition
Feb 05-07 2020	4th AIROYoung Workshop on New Advances in Optimization, Machine Learning and Data Science , Bozen (Italy)
Jan 20-24 2020	9th Winter School on Network Optimization (NetOpt2020) , Estoril (Portugal)
Jun 25-28 2019	1st MINOA PhD Summer School on Mixed-Integer Nonlinear Optimization Meets Data Science , Ischia (Italy)
Mar 26-29 2019	3rd AIROYoung Workshop + PhD School on Advanced Methods in Optimization and Data Science , Rome (Italy)
Jul 25-29 2016	Tools and techniques for parallel computing, automatic learning and massive data analysis with MATLAB - Scuola di calcolo scientifico con MATLAB (SCSM) , Palermo (Italy)
Jul 18-22 2016	MATLAB and Simulink for scientific calculation - Scuola di calcolo scientifico con MATLAB (SCSM) , Palermo (Italy)

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PUBLICATIONS

Sep 2021 (accepted) **Disruption management in railway systems by safe place assignment**
P. Ventura, A. L. Croella, V. Dal Sasso, L. Lamorgese, and C. Mannino

LANGUAGES

Italian (Native)

English (Advanced)

Spanish (Intermediate)

COMPUTER SKILLS

Software Application: AMPLide, Azure ML, CCH Tagetik, CPEX Studio IDE, Github, Gurobi, Latex, Microsoft SQL Server, Microsoft Visual Studio, Office Suite, Oracle HFM, Planimate, Simulink

Programming languages: AMPL, JAVA, Julia, MATLAB, Python, R, SQL, Visual Basic

RESEARCH INTERESTS

My research is mainly focused on the design and implementation of algorithms for solving time-scheduling problems. I am interested in exploiting combinatorial optimization and dynamic programming tools for network re-optimization. Specifically, I am investigating in a train network context the performance of new formulations and models that deal with the time re-scheduling in case of delay in the system.

PERSONAL INTERESTS

I am a passionate, dynamic and curious woman with a strong inclusion capacity in different contexts. I am a very analytic person and I have always had a constant need to challenge my mind and enrich my knowledge. In the last years I realized that my personal fulfilment is long-standing and coupled with learning and research. My hobbies are dancing and reading comics; I have been playing in women's futsal championships at a competitive level for 8 years.

Date: 22/10/2021