

RAFFAELE GIUSEPPE CESTARI

20-12-1996

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EDUCATION

- **Politecnico di Milano** Milan, Italy
Ph.D. in Information Technology cum Laude Nov. 2021 – Oct. 2024
- **Cornell University** Ithaca (NY), USA
Visiting Ph.D. Student in Information Technology June 2023 – Aug. 2023
- **ETH Zurich** Zurich, Switzerland
Visiting Ph.D. Student for Learning-Based Predictive Control July 2022
- **Politecnico di Milano** Milan, Italy
Master of Science in Automation and Control Engineering - 110/110 cum Laude March. 2019 – July. 2021
- **Politecnico di Milano** Milan, Italy
Bachelor's in Mechanical Engineering - 92/110 Oct. 2015 – March. 2019

EXPERIENCE

- **Politecnico di Milano** Milan, Italy
Postdoctoral Researcher - Data-driven Control for Financial Trading Nov. 2024 – Today
- **Politecnico di Milano** Milan, Italy
Instructor of Fundamentals of Automatic Control 2023 – Today
- **Exacon s.r.l.** Milan, Italy
Data Engineer Aug. 2021 – Oct. 2021

PATENTS

- **Misurare un carico su un veicolo agricolo:** 102024000013171 - CNH INDUSTRIAL ITALIA S.P.A., 10/06/2024

PUBLICATIONS

- **E-Private Mobility Index: A Novel Tool for Assessing BEV Transition Feasibility:** Sustainability, 2025.
- **Univariate Hawkes-based cryptocurrency forecasting via LOB data:** ECC 2025, Thessaloniki, Greece.
- **Enhancing portfolio covariance estimation: a hybrid prediction approach:** ECC 2025, Thessaloniki, Greece.
- **Control-oriented modeling for MPC of water reservoir systems:** International Journal of Control, 2025.
- **Non-linear multi-objective Bayesian MPC of water reservoir systems:** European Journal of Control, 2025.
- **Split-boost neural networks:** SYSID 2024, Boston, USA.
- **Vertical load estimation in tractors via in-wheel optical sensing:** SYSID 2024, Boston, USA.
- **MPC with adaptive resilience for DoS attacks mitigation on a regulated dam:** CDC 2024, Milan, Italy.
- **Scenario-based model predictive control of water reservoir systems:** MECC 2023, Lake Tahoe (NV), USA.
- **Hourly operation of a regulated lake via model predictive control:** IFAC CMWRS 2022, Milan, Italy.

PROJECTS

- **Aeronautica Militare [2021-Today]:** Automated Fleet Planning of Italian Air Force (P.A.F.AM).
- **KPMG [2024-Today]:** Learning-based anomaly detection for the Profit & Loss attribution test.
- **FIVES Intralogistics [2024-Today]:** Model predictive control of mobile robots fleet.
- **UnipolTech [2023]:** Big data analytics of private vehicles mobility.
- **CNH Industrial [2023]:** Vertical load estimation in tractors via in-wheel optical sensing.
- **Tenaris [2020]:** Energy consumption forecasting for steel production optimization.

CERTIFICATES AND SKILLS

State Exam: Information Engineer, Section A: 78/100

Coding: Python, Matlab/Simulink, C++, SQL

English: TOEIC - 940/990

Tech: PyTorch, Spark, Git, Django, Selenium, Kali