MARTA FOCHESATO
PhD Candidate at ETH Zürich

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🎓 EDUCATION

Sept 2020 - ongoing	**PhD at Automatic Control Laboratory, Department of Electrical Engineering and Information Technology**, ETH Zürich, Switzerland
	> Research on Stochastic Optimization and Predictive Control
	  > Design of data-driven algorithms for predictive control of stochastic dynamical systems under safety constraints
	  > Distributionally robust optimization for risk-aware programs
	  > Main application to energy markets
	> Courses : Large-scale convex optimization, numerical optimization, Distributed optimization, Optimal Control
	> Head Teaching Assistant of Signal and System 2 (200+ students)
	> Winner of the "DocMobility" 2022/2023 Fellowship from ETH to support research stay abroad (less then 20 fellowships per year for the entire university).

Sept 2023 - Feb 2024	**Visiting researcher**, University of Oxford, UK
	> Visiting at the Oxford Control Group hosted by Prof. Paul Goular working on
	  > Co-design of certificates and controllers for safety of stochastic systems via convex optimization
	  > Interplay between quality and quantity in data-driven optimization.

Oct 2017 - Dec 2019	**Master in Industrial Engineering - Focus : Process Systems Engineering**, University of Padua, Italy > Final grade : first-class honors (110/110 Cum Laude) > Master thesis abroad at University of Eindhoven (NL). > Awards : "Mille e una Lode" scholarship (2018), MIUR national scholarship for best students in STEM (2018).
Oct 2014 - July 2017	**Bachelor in Industrial Engineering - Focus : Process Systems Engineering**, University of Padua, Italy > Final grade : first-class honors (110/110 Cum Laude) > Full scholarship based on academic achievements from University of Padua (2017).

💼 WORK EXPERIENCE

June 2024- Sept 2024	Research intern, MITSUBISHI ELECTRIC RESEARCH LABORATORY, Boston (US) Research topic : perception-aware control of autonomous vehicles. `Software development` `Data-driven control` `Computer vision`

Nov. 2019- **Apr. 2020**	Modelling and Simulation Engineer, HOFFMANN-LA ROCHE, Basel (CH) Development of hybrid (data-based and physics-based) predictive models and control architectures for of pharmaceutical processes. Predictive modelling · Process optimization · Data analytics · Project management
Feb. 2019- **Jul. 2019**	Visiting researcher, TECHNICAL UNIVERSITY OF EINDHOVEN, The Netherlands (NL) Implementation of a multiphase computational fluid dynamics numerical scheme for the petrochemical industry. Numerical analysis · CFD · C++ · Linux
Jul. 2017- **Sept. 2017**	Research intern, PSE LTD., London (UK) Development of a tool for structure-property prediction of active pharmaceutical ingredient based on density function theory. Numerical optimization · Mathematical programming · Consulting

☰ TECHNICAL SKILLS

Key areas	Stochastic optimization, Data analytics, Modelling and Simulation, Advanced control methods
Programming	Matlab, Python, basics of C/C++ and R Studio
Libraries	Pythorch, Tensorflow, NumPy
Modelling	Aspen, Ansys, gPROMS, ProII
OS	Windows, basics of Linux
Administration	LaTeX, Git, Windows Office Suite (Word, Excel, PowerPoint)

</> LANGUANGES

Italian ●●●●●
English ●●●●○
German ●○○○○

✚ SOFT SKILLS

> Problem-solving, can-do attitude, goal-oriented, fast learner.
> Communication skills, team player, leadership.
> Time management, project management.

♀ HONOURS AND AWARDS

> Selected to be a mentee at "Lead The Future" Mentorship, "Mentors4U" Mentorship and "Nova" Mentorship : non-profit mentorships from for national and international high-potential people (acceptance rate : less than 20 %)
> DocMobility Fellowship from ETH Zürich (2022)
> Erasmus+ Scholarship for Master thesis abroad (2019)
> University of Padova Scholarship for best students in STEM (years : 2016, 2017, 2018)
> Rotary Club Scholarship for best students in STEM (section of Vicenza, Italy, 2014)
> Member of the Italian Register of Excellence and candidate for "Alfiere del Lavoro" (2014)