

Marco Peruzzo

PHD STUDENT

Department of Information Engineering, University of Padua
Via Gradenigo 6, 35131 Padova, Italy

✉ marco.peruzzo.5@phd.unipd.it | 🏠 marcoperuzzo.github.io | 🎓 Marco Peruzzo

Professional Experience

University of Padua

TEACHING ASSISTANT

- Course: Control Engineering Laboratory

Padua, Italy

2024, 2025

Education

University of Padua

PHD IN INFORMATION ENGINEERING

- Research Topic: Analysis and control of classical and quantum networks
- Advisors: Prof. Francesco Ticozzi, Prof. Giacomo Baggio

Padua, Italy

Oct. 2023 - Current

University of Nottingham

VISITING SCHOLAR

- Advisors: Prof. Madalin Guta

Nottingham, UK

Sep. 2025 - Current

University of Padua

M.SC. IN CONTROL SYSTEMS ENGINEERING

- Thesis: Controllability on networks, influence of structure and memory
- Advisors: Prof. Francesco Ticozzi, Prof. Giacomo Baggio

Padua, Italy

Oct. 2021 - Sep. 2023

University of Padua

B.SC. IN COMPUTER ENGINEERING

- Thesis: Quadcopter modelling and control
- Advisors: Prof. Sandro Zampieri

Padua, Italy

Oct. 2018 - Sep. 2021

I.T.I F. Severi

HIGH SCHOOL DIPLOMA - COMPUTER SCIENCE AND TELECOMMUNICATION

Padua, Italy

Oct. 2018 - Sep. 2023

Research Interests

My research is mainly focused on the analysis and control of classical and quantum networks. I'm currently investigating the use of system-theoretic method for quantum state reconstruction and verification on quantum networks. I'm also studying the impact of memory on classical network controllability and developing new kernel-based methods for system identification.

Personal Skills

Languages Italian (Mother tongue), English

Computer skills MATLAB, Simulink, latex, Microsoft office suite, python, c/c++ languages. System identification toolbox and control systems toolbox for MATLAB and Simulink.

Publications

SUBMITTED PAPERS

- “Reconstructing Quantum States and Expectations via Dynamical Tomography”, **M. Peruzzo**, T. Grigoletto and F. Ticozzi, 2025, Submitted.
- “Obtaining Structural Network Controllability with Higher-Order Local Dynamics“, **M. Peruzzo**, G. Baggio and F. Ticozzi, 2025. Submitted.
- “Finding Conditions for Target Controllability under Christmas Trees“, **M. Peruzzo**, G. Baggio and F. Ticozzi, 2025. Submitted.
- “Identification of forward models: a nonparametric approach“, G. Fattore, **M. Peruzzo**, G. Sartori and M. Zorzi, 2024. Submitted.

CONFERENCE PAPERS

- “Reconstructing Quantum States from Local Observation: A Dynamical Viewpoint“, **M. Peruzzo**, T. Grigoletto and F. Ticozzi, IEEE Conference on Decision and Control (CDC), Milan, 2024.
- “A kernel-based PEM estimator for forward models“, G. Fattore, **M. Peruzzo**, G. Sartori and M. Zorzi, IFAC Symposium on System Identification (SYSID), Boston, USA, 2024.

- “Exploring the Impact of Memory on Network Controllability”,
M. Peruzzo, G. Baggio and F. Ticozzi, European Control Conference (ECC), Stockholm, Sweden, 2024.

Fellowships and Grants

2023 **Phd scholarship**, University of Padua