

Carmelo (Carlo) Sferrazza

PhD candidate working on real-world applications of robotics, machine learning and computer vision, with a strong theoretical and practical expertise in state estimation.

Email: csferrazza@ethz.ch URL: <https://sferrazza.cc> Extended CV: [↗](#) Google Scholar: [↗](#)

Education

- 2017- PHD in Robotics. ETH ZURICH.
Specialized in data-driven, vision-based tactile sensing. Advisor: Prof. Raffaello D'Andrea.
Supervised 11 Master's projects, co-authored 6 journal and 7 conference papers.
Committee: Prof. K. Goldberg, Prof. R. Kramer-Bottiglio, Prof. K. J. Kuchenbecker.
Keywords: deep learning, image-to-image translation, sim-to-real, manipulation, Bayesian filtering.
- 2014-2016 MSc in Robotics, Systems and Control. ETH ZURICH.
Awarded with distinction. Thesis on efficient learning-based MPC for flying vehicles.
- 2012-2013 BENG in Electronics and Information Engineering. TONGJI UNIVERSITY.
Double degree. Thesis on trajectory optimization for flying vehicles.
- 2011-2014 BSc in Automation Engineering. POLITECNICO DI MILANO.
Final grade: 110/110 with honors.

Experience

- 2015-2016 GE (EX-ALSTOM) INSPECTION ROBOTICS. Zurich, Switzerland.
Six-month internship as a Navigation Software Developer. Developing and testing navigation and control software for several inspection robots.
Keywords: SLAM, Extended Kalman Filter, robot localization, IMU, sensor fusion, OpenGL.

Select Awards & Honors

- 2021 BEST POSTER AWARD.
At the IEEE ICRA Workshop on "Bridging the Gap between Data-driven and Analytical Physics-based Grasping and Manipulation."
- 2020 BEST PAPER AWARD.
At the IEEE International Conference on Soft Robotics (RoboSoft).
- 2017 ETEL MASTER AWARD.
For the best master's thesis in mechatronics at ETH Zurich.
- 2013 PRIZE FOR "THE BEST FRESHMEN STUDENTS."
On the basis of academic achievements in the first year of all bachelor degrees at Politecnico di Milano.

Select Public Talks

- 2020 SFERRAZZA. "Robots that feel by seeing." *TEDxZurich*.
TEDx talk viewed by 43,000 people (Nov 2021). [↗](#)
- 2019 SFERRAZZA. "Optical Touch." *WORLD.MINDS Annual Symposium*.
WORLD.MINDS is a community of 1000 individuals who have made proven contributions in science, the arts, business and government. [↗](#)

Skills

- Technical Python, C++, Matlab, C, PyTorch, OpenCV, Abaqus, Git.
- Languages Italian (Native), English (Fluent), German (Intermediate), Mandarin Chinese (Beginner).