

MATTEO CIRILLO

MSc Student in Microengineering & Quantum Science

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SUMMARY

EPFL Microengineering BSc with an exchange year at TU Delft. I completed my Swiss military obligations and am now pursuing a master's degree in Microengineering & Quantum science. I am actively looking for a graduation internship, starting next summer and for up to 6 months.

EDUCATION

Master of Science	EPFL - Swiss Federal Institute of Technology	2023 - 2026
Major in Microengineering and minor in Quantum Science (GPA : 98%)		
Academic Exchange	TU Delft - Delft University of Technology	2021 - 2022
Faculty of Electrical Engineering, Mathematics and Computer Science (GPA : 90%)		
Bachelor of Science	EPFL - Swiss Federal Institute of Technology	2019 - 2022
Major in Microengineering (GPA : 88%)		

RELEVANT PROJECTS

Process engineering,	EPFL – Laboratory of Bio and Nano Instrumentation	Feb 2025 – Jul 2025
Semester thesis on the design and microfabrication of trilayer atomic force microscope cantilevers for scanning electrochemical microscopy applications (AFM-SECM). Project is ongoing.		
Research assistant,	EPFL – Hybrid Quantum Circuits Laboratory	Jul 2024 – Feb 2025
Semester thesis on the fabrication of superconducting microwave resonators in niobium. Worked in clean room to fabricate devices and characterized them in a dilution cryostat, with the goal of optimizing the manufacturing process for enhanced internal quality factor. My study uncovered flaws in the design and fabrication process of the devices, laying the groundwork for more robust future applications.		
Systems engineering,	EPFL – Product Design & Systems Engineering class	Sep 2023 – Feb 2024
Class project on creating a product to solve a chosen real-world problem. My team of six set out to develop a versatile and autonomous solar panel cleaner to keep domestic plants energy efficient. My role in the team was twofold, doing both systems engineering in collaboration with the Swiss Center for Electronics and Microtechnology (CSEM), as well as mechanical design/machining for the actual prototype build.		

WORK EXPERIENCE

Summer intern,	ETH Zurich / PSI – Trapped Ion Quantum Information Group	Jul 2024 – Sep 2024
Joined the Ion Trap Quantum Computing (ITQC) lab and designed an integrated double-pass acousto-optic modulation board, for laser frequency scanning and switching applications. The device is now used in various setups at ETH Zurich and PSI. Key features include: 300% reduction in size, compatibility with large band of laser wavelengths, power/polarization monitoring, fibered I/O ports, and Euro-rack mounts.		
Student Engineer,	EPFL - Racing Team & Rocket Team Associations	Sep 2021 – Sep 2024
For the former I integrated a sensor package into an RC car to test an autonomous driving system and later adapted it for our team's electric racecar before competing in four international Formula Student competitions. For the latter I designed and built an 868 MHz RF antenna to successfully recover the telemetry of three model rockets, at a launch event. My proactive involvement in these associations provided experience in collaboration, organization and leadership among large engineering teams.		
Machining Intern,	ETML – Polymechanic Trade School	Jul 2021 – Aug 2021
Joined a fast-paced course by professional machinists to learn how to use standard equipment (lathe, vertical mill, drill press, ...) by machining and assembling a C-Clamp, vice and a small Stirling motor. This was a valuable insight into the perspective of machinists and an asset for engineering design/prototyping.		

SKILLS, CERTIFICATIONS & AWARDS

Languages	English (<i>Fluent: C2</i>), French (<i>Native</i>), Italian (<i>Native</i>), German (<i>Intermediate: B2</i>)	
Technical	Cleanroom microfabrication, CAD design (CATIA, Inventor), FEM Simulation (COMSOL), Mechanical machining, laser safety/operation.	
Coding	Python (with data science packages), Matlab, Mathematica, LabView	
C2 Certificate in Advanced English, Cambridge University Press		2019
Prize for Excellence in Mathematics and Sciences, Nestlé Switzerland S.A.		2016

OTHER ACTIVITIES

Teaching	Tutoring students from high school to graduate level, working either freelance, for university professors, and at private institutions (INPV/CVAJ).
Hobbies	Opposite hitter in indoor volleyball, endurance runner, guitarist, and mathematics hobbyist.