MATTEO CIRILLO

MSc Student in Microengineering & Quantum Science

09.10.2000
Swiss

SUMMARY

EPFL 2022 microengineering BSc with exchange at the Delft TU. Worked 6 months as a private school teacher and member of the EPFL racing team. Fulfilled military obligations in early 2023, and currently at EPFL, pursuing my masters in microengineering and quantum science.

EDUCATION

Master of Science ***EPFL - Swiss Federal Institute of Technology*** *2023 - 2026*
Major in Microengineering and Minor in Quantum Science and Engineering *(GPA : 95%)*

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%)*

EXPERIENCE

Summer intern, ***PSI – Paul Scherrer Institute*** *Jul 2024 – Sep 2024*
Joined the Ion Trap Quantum Computing (ITQC) group and built 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 (TIQI group). Key features include: 200% size reduction, power/polarization monitoring, Euro-rack mounts, and compatibility with various AOMs and laser wavelengths.

Student Engineer, ***EPFL - Racing Team & Rocket Team Associations*** *Sep 2021 – Sep 2024*
Fit a package of sensors on an RC car to test an autonomous driving system. Applied it to the EPFL Racing Team's electric racecar and passed scrutineering for international formula SAE competitions.

Designed and built a Yagi-Uda RF antenna with the help of Dr. Ismael Triviño. Later successfully recovered the telemetry of three model rockets, at a launch event of the EPFL Rocket Team. With limited prior experience, I self-studied the relevant antenna theory.

PROJECTS

Niobium Resonators, ***EPFL HQC – Hybrid Quantum Circuits Laboratory*** *Jul 2024 – Feb 2025*
Semester project on the fabrication of superconducting microwave resonators in niobium. Worked in EPFL's CMi clean room to optimize the manufacturing process, while learning to characterize the fabricated devices with a VNA in a dilution cryostat. Key results include enhanced internal quality factors, with the potential for more robust superconducting circuits for quantum applications.

OTHER ACTIVITIES

Professional/Private Tutoring Overseeing student learning from high school to undergraduate level. This being in freelance, employed by EPFL professors, and in private institutions (INPV / CVAJ).

Volleyball Player: Outside hitter for my local club and for the Kratos 2nd league team during my exchange.

CERTIFICATIONS & AWARDS

C2 Certificate in Advanced English, ***Cambridge University Press*** *2019*
Prize for Excellence in Mathematics and Sciences, ***Nestlé Switzerland S.A.*** *2016*

SKILLS, CERTIFICATIONS & AWARDS

French	Native Speaker	**English**	Bilingual Proficiency	CEFR C2
Italian	Native Speaker	**German**	Advanced Proficiency	CEFR B2

Skills Clean room microfabrication (laser/DUV Lithography, plasma etching, SEM metrology), CAD design (Solidworks, Catia, Inventor), Simulation (COMSOL, Ansys), Prototyping (mechanical machining, 3D printing, soldering, oscilloscope, VNA), Laser safety and optical table prototyping.

C2 Certificate in Advanced English, ***Cambridge University Press*** *2019*
Prize for Excellence in Mathematics and Sciences, ***Nestlé Switzerland S.A.*** *2016*

CONTACT INFORMATION

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