Eric Richter

+41 78 686 55 30 | ercoppet3@gmail.com | www.linkedin.com/in/ecrichter | github.com/errichter/CV

Experience

Boston University | Boston, MA USA
Research Fellow in Mass and Heat Transport Modeling for Carbon Capture and Energy Storage August 2024–June 2025
- Challenged 5+ assumptions made in the design of an adsorption test chamber with COMSOL mass and heat transfer simulations, redesigned and built a completely validated version.
- Implemented a numerical Python simulation of 4 coupled processes: advection, film diffusion, pore diffusion, adsorption.
- Fabricated and tested stencils and sensors for thermal wave sensing of bulk and multi-layer materials for battery applications.

Sensirion AG | Stäfa, Switzerland
Engineering Intern in the Temperature and Humidity Sensors Team September 2023–February 2024
- Achieved state-of-the-art accuracy with a self-made humidity sensor, costing 1% of the alternatives.
- Iterated through 3 rapid hardware prototyping cycles.
- Achieved 50% reduction in stabilization time with respect to reference research equipment using integrated control.

ETH | Zürich, Switzerland
Research Assistant at EIS in the Institute for Neuro-Informatics February–June 2023
- Tested a novel evolutionary algorithm for training spiking neural networks that perform AI tasks on the edge of hardware.

EPFL | Lausanne, Switzerland
Research Assistant at LMIS1 February–June 2022
- Created, simulated and optimized a class of thermally sensitive electro-magnetically coupled superconducting resonators.
- Achieved quality factor Q>5000, and generated 15+ highly valuable physical design insights.

Research Assistant at MOBOTS September 2021–January 2022
- Automated a robotics platform for laser vibrational analysis of a bee comb, reducing characterization time from 2[h] to 120[s].
- Extracted valuable data from 1/10 SNR data with DSP.

Teaching Assistant in Mathematical Analysis February–July 2021

Education

ETH | Zürich, Switzerland
Master of Science in Mechanical Engineering (GDP 5.49/6) March 2025
- Majored in micro- nanosystems and robotics.
- Completed courses in: MEMS; Microfluidics, real-time control; thermal simulation.

EPFL | Lausanne, Switzerland
Master of Science in Microengineering (Discontinued after 61ECTS, GDP 5.3/6) July 2022
Bachelor of Science in Microengineering (GDP 5.23/6) July 2021
- Studied micro- and macro- scale electrical, mechanical, materials engineering, and signal theory.
- Completed courses in: MEMS; SoC; embedded systems; DSP; ARM; electronics; semiconductors; Multi-thread architectures.

USJ | Beirut, Lebanon
Off-Curriculum International Relations Studies December 2017

Volunteering

Panel Discussion | Zürich, Switzerland
Host, Event Organizer January–May 2024
Moderated a debate between 1 lobbyist and 2 academics around carbon pricing in front of a 200+ person audience.

ShARE EPFL | Lausanne, Switzerland
Interim Vice-President June 2022–November 2022
Mentor, Consultant September 2020–June 2022
- Led and mentored 25+ members on their respective cases.
- Collaborated with EPFL's startup accelerator by completing the product-market fit analysis for 3 startups.

Additional Achievements

iGEM Competition | Cambridge, MA (USA)
Head Engineer, Gold Medal, Best Website, Best Environmental Project Nomination February–November 2021
- Prototyped a bioreactor for bioremediation of heavy metals from the environment capable of continuously processing 5dl/min.
- Involved 3 stakeholders, raised awareness around the issue in 2 high schools and through a 4 episode podcast.

Certification

SHARE's Leadership Program of Excellence | International June 2022
Arabic Elementary Level | Saifi Institute for Levantine Arabic of Beirut December 2017
Conservatory Certificate for End of Piano Studies | COV, Nyon July 2017
Swedish Conversational Level | Folkuniversitetet in Stockholm July 2015

Additional Skills

Languages: English (Native); French (Native); German (Proficient); Swedish (Conversational).
Programming Proficiency: Python; C++; C; Arduino; ARM Assembly; VHDL; Matlab.
Engineering Software: Multiphysics simulation (COMSOL); CAD; Circuit (LtSpice); VHDL (Vivado Suite, Quartus).
Clean Room Processes: Photolithography; Sputtering; Bosch process; HF etching; ALD; Wire bonding; SEM.