GIOVANNI ZHANG

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EDUCATION

ETH ZURICH | **Zurich, CH**

Master of Science in Quantum Engineering — **2023-Present**

- GPA: *5.75/6*
- Selection of courses include:
    - *Solid State Theory, Quantum Dot Spin Qubits, Superconducting Qubits, RF Design Techniques, Quantum Information Processing, Quantum Optics*

EPFL | **Lausanne, CH**

Bachelor of Science in Physics, Exchange semester — **2022-2023**

- GPA: *5.75/6*

POLITECNICO DI MILANO | **Milan, IT**

Bachelor of Science in Physics Engineering — **2020-2023**

- Graduated with *110/110 cum laude*

RESEARCH EXPERIENCE

ENGINEERING QUANTUM SYSTEMS GROUP, PROF. WILLIAM D. OLIVER | **Boston, MA**

Visiting Student (Master's Thesis) — **09/2025-08/2026**

- Upcoming year-long project at MIT in the research field of superconducting qubits and hybrid systems

QUANTUM MOTION | **London, UK**

Quantum Hardware Intern — **02/2025-Present**

- Extraction of silicon-based spin qubits' parameters at cryogenic temperatures
- Perform and improve RF reflectometry readout schemes

QUANTUM DEVICE LAB (QUDEV), PROF. ANDREAS WALLRAFF | **Zurich, CH**

Research Student — **09/2024-02/2025**

- Joined the research group as a student researcher to investigate Two Level Systems (TLS) coupling with superconducting qubits.
- The project is set to build the infrastructure to study E-field based AC/DC mitigation techniques of TLS in transmon qubits.
- It includes the design of the qubit parameters and on-chip Low Pass filters using in-home libraries based on GDSpy and Ansys EDT and HFSS

QUANTUM COHERENCE LAB, PROF. DOMINIK ZUMBUHL | **Basel, CH**

Summer Intern — **07/2024-09/2024**

- Joined the group as a summer intern working on their partnership project with Intel Corporation
- Assisted in cryogenic measurements of Intel's spin-based Tunnel Falls chip
- Worked with both dry and wet dilution refrigerators, assisting in He/N transfers and replacement of electronic components.
- Developed knowledge in QCoDes, BEOL processes (glueing, wirebonding, cleaning), and tuning quantum dots.

ENSSLIN'S NANOPHYSICS GROUP, PROF. KLAUS ENSSLIN | **Zurich, CH**

Semester Project Student — **04/2024-07/2024**

- Joined the group for a semester project focused on 2 parts:
    - COMSOL simulation of a Magic Angle Twisted 4-Layers Graphene – based Josephson Junction
    - Dip stick characterization of Magic Angle Twisted Bilayer Graphene devices

AQUA LAB, PROF. EDOARDO CHARBON **Neuchatel, CH**
Research Assistant **12/2022-03/2023**
- Worked in the group of Edoardo, specializing in single photon detectors
- Assisted in setting up a SPADs-based sensor for road quality assessment, embedded on FPGAs.

AWARDS AND SCHOLARSHIPS

- **ETH Quantum Hackathon Winner, 2024**
  - Winners of the challenge "*Quantum Neural Network for designing Differentiable Quantum Circuits to solve PDEs using PyTorch and Qadence*" proposed by PASQAL
- **"Ermenegildo Zegna Founder's Scholarship", 2023**
  - National scholarship for 60 recipients consisting of 15'000 CHF/year
- **"Excellence fellowship" recipient from EPFL, 2023**
  - Fellowship offered to the top 3% of applicants for a Master Program at EPFL, which I rejected in order to pursue education at ETH.
- **"Best Freshman Prize", 2021**
  - Yearly prize given to the best performing freshmen (roughly 200) of Politecnico di Milano.
- **ZeroRobotics, 2018-2020**
  - National Winner (Campionato Italiano), International Finalist with EX-AEQUO 3rd place(2018), International 4th place (2019).
  - Challenge hosted by MIT and NASA on the International Space Station.
- **Math Team Olympiad, 2018-2019**
  - National Finalist (top 15), Regional Gold Medal.

SKILLS

- **Software Development**
  - Python/MATLAB for multipurpose tasks
  - CSS/HTML for web development
  - Software version control using Git
- **Multiphysics Simulations**
  - ANSYS package (EDT, HFSS, Q3D) for EM-field, S-parameters, and circuit elements simulations.
  - COMSOL for EM-field simulation
- **RF-circuits design**
  - QUCS for elementary circuit simulation
  - GDSpy for custom on-chip designs
- **Tiramisù Expert**
  - Both at eating and making (no complaints received so far)