

GABRIEL GIRIBALDI

PhD Student in Nanotechnologies

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in [Gabriel Giribaldi](#)

EXPERIENCE

PhD

Research on piezoelectric MEMS resonators and micro-machined ultrasound transducers

Jan 2021 – Present Northeastern University, Boston

- Natural continuation of the Master's Thesis
- Experience on design, fabrication and testing of piezoelectric MEMS devices.
- Design of a competitive 180 nm CMOS instrumentational amplifier for biological signal detection.

Master's Thesis

Sc-doped AlN: high-performance piezoelectric MEMS resonators and a high-polarization ferroelectric

Feb 2020 – Oct 2020 Northeastern University, Boston

- Use of COMSOL to simulate the behaviour of piezoelectric MEMS resonators
- Cleanroom experience
- Characterization of Sc-doped AlN concerning its piezoelectric and ferroelectric properties
- Real research experience
- Final grade : 110/110

Research Assistant

Piazza Micro and Nano Systems Laboratory

Jun 2019 – Aug 2019 CMU, Pittsburgh

- Study on loss mechanisms in SAW-resonators, with particular focus on Bulk Scattering.
- Study on structures able to eliminate Bulk Scattering and design of a device, from specifications and modeling to fabrication.

EDUCATION

Micro and Nanotechnologies for Integrated Systems

École polytechnique fédérale de Lausanne (EPFL), Politecnico di Torino, and INP Grenoble

2018-2020 Lausanne, Switzerland and more

- Broad overview on the engineering fields of micro and nano-electronics, MEMS, analog, digital, and mixed signal design.
- Microfabrication experience and knowledge about characterization techniques.
- Knowledge about applied solid state physics, quantum optics, spintronics.
- Final grade : 110/110

EDUCATION

Bachelor in Physical Engineering

Politecnico di Torino

2015 - 2018 Torino, Italy

- Analog and Digital Design.
- Electronic Devices.
- Micro and Nano Fabrication.
- Quantum Physics.
- Final grade : 110/110

High School for Foreign Languages

Istituto Saluzzo-Plana

2010 - 2015 Alessandria, Italy

- Deep knowledge of English, French and German, both regarding the spoken language and the literature and culture
- Learned methodologies to approach the study of new languages, combined with a great personal interest
- Final grade : 100/100

SOFTWARES & PLs

MatLab

Python

COMSOL

Cadence Virtuoso

ADS

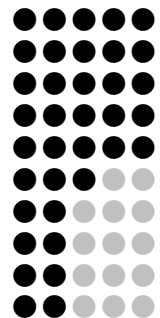
LTSpice

C language

Ansys

Quantum Espresso

Skill code



LANGUAGES

Italian

English

French

German

Spanish

