# LEONARDO AIROLDI

ELECTRONICS ENGINEER

Milan, Italy

## CONTACTS


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GitHub
Website


## TOOLS

- MATLAB
- Simulink
- Cadence Suite
  - Genus
  - Virtuoso
  - Xcelium
  - Capture
- LTspice
- Xilinx Vivado
- 3D CAD
- Linux Environment
- PowerPoint
- Excel

## PROGRAMMING

- C
- C++
- MATLAB
- VHDL
- Python
- Java / C# / OOP

## SOFT SKILLS

- Teamwork
- Engineering Reports
- Meeting Presentations
- Project Scheduling
- Time Management
- Team Communication
- Continuous Learner
- Problem Solving

## LANGUAGES

- English – B2
- Italian – C2

## INTERESTS

• Music • Electric Guitar • Bass Guitar • 3D printing • Self-hosting • IoT • HPC • Smart-Home • Electric Vehicles • AI • Economy • Physics • Tennis • Windsurf • Bikes • Basketball • Snow Skiing • Nature •

## PROFILE

*Passionate Electronics Engineer, willing to learn and tackle challenges of today's world*

## EXPERIENCE

### ARPLab, Politecnico di Milano: "Time Interleaved ADCs for Wireless Applications"

September 2024 – July 2025

MSc's Thesis at an academic research lab focused on Integrated Circuits, part of the Analog-to-Digital Converter (ADC) design team. Studied effects of non-idealities of Time-Interleaving (TI) converters used in modern wireless digital radio (Wi-Fi, 5G) receivers. Awarded 7/7 points. Advisor: Prof. Carlo Samori

- Conducted **research** on state-of-the-art converters.
- **Developed a numerical simulator** in MATLAB based on analytical models.
- Driven **improvement of performance** studying state-of-the-art randomization techniques and proposing of a **novel timing skew calibration** technique**.**
- **Digital design** of random-TI phase generator in **VHDL** using **Cadence Xcelium**, **Genus** and **Virtuoso**, meeting project specifications in the target 28nm technology node.

### Battery Management System Engineer at Dynamis PRC, Formula Student

May 2022 – September 2024

Designed and developed software for monitoring and controlling the battery pack (accumulator), ensuring safety and performance of a Formula Student racing electric car.

- Focused on BMS firmware **architecture**, working with **FreeRTOS** in C.
- Developed a **model-based** Power Limiter algorithm using **Simulink.**
- Working directly with the accumulator as part of the Powertrain department. Collaborated closely with other team areas (e.g. Cooling, Vehicle Dynamics)
- Assisted in project planning, progress tracking, developing engineering reports.

## EDUCATION

### Electronics Engineering, Politecnico di Milano

September 2022 – July 2025

[Grade: 102/110] Master of Science Degree focused on Integrated Circuit Electronics. Relevant courses:

• Mixed-Signal IC Design • Digital Embedded Systems Design • Analog/Digital IC Design

### Engineering of Computing Systems, Politecnico di Milano

September 2019 – September 2022

[Grade: 107/110] Bachelor's degree in Computer Science Engineering. Relevant courses:

• Algorithms and Information Theory • Computer Architecture and Operating Systems

### Liceo Scientifico opzione Scienze Applicate, IIS Vittorio Bachelet

September 2014 — July 2019

[Grade: 92/100] High School Diploma focused on Scientific Subjects, including Computer Science

## ACTIVITIES & CERTIFICATIONS

### PES-PAV Certification

January 2023

Certification by *TEXA Automotive*, regarding safety aspects working with high voltages.

### FS Austria Red Bull Ring – FS East Hungaroring

July 2023 / July 2024

Attended Formula Student international competitions, working on the car at race day.

### ETH Zurich Quantum Hackathon

May 2023

Took part in the algorithm challenge, solving the Travelling Salesman's Problem with Qubits.