

PROFILE

I am a Master's student in physics at the University of Trento with hands-on experience in quantum photonics, integrated photonic circuits, and electric vehicle development. Joining Formula Student was a fundamental step that taught me key aspects of product development. I believe that this experience offers valuable transferable skills to physics, even if the technical knowledge is very different. I perform best at the intersection of experimental physics and engineering, with a passion for applied research and technology development. I am seeking opportunities to apply this combined expertise in R&D settings focused on photonics technologies.

EDUCATION

MASTER DEGREE

University of Trento
september 2023 - present

BACHELOR DEGREE

University of Trento
september 2019 - march 2023

HIGH SCHOOL

Liceo Antonio Rosmini, Rovereto
applied science diploma, 2019

SKILLS

- MATLAB & Simulink
- Python
- GitHub
- Latex
- Figma
- English (~C1)
- Public speaking

CONTACTS

LORENZO BALDESSARINI

WORK EXPERIENCE

INTERNSHIP



FBK, Trento



july 2023 - september 2023



Researchers: Georg Pucker and Martino Bernard, SD-I&QO unit

I was tasked with helping the development of an integrated photonic circuit, including everything from the very first post-production test, characterization, development of a custom control software and the final delivery of the prototype to the client.



RESEARCHER ASSISTANT



Hebrew University of Jerusalem, Israel



june 2022 - august 2022

Researcher: Ronen Rapaport

Characterized a "SPS" device through image acquisition, spectroscopy, photon counting and a custom experimental setup for optical fiber coupling. In particular we focused on studying the main parameters for quantum communication such as emission rate, collimation, g2 and polarization quality.

More information can be found on the [ACS Photonics publication](#)



INTERNSHIP



FBK, Trento



december 2021 - february 2022

Researcher: Nicola Massari, IRIS unit

Worked on the characterization of an on-chip quantum random number generation. It included programming a command interface on LabVIEW and the output data was analyzed with MATLAB and the NIST suite.

EXTRACURRICULAR ACTIVITY

FORMULA STUDENT



University of Trento, E-Agle TRT



september 2022 - present



Advisor: Paolo Bosetti

As a member of the vehicle dynamics division my work consisted of developing traction control and torque vectoring, track data analysis, fine tuning the setup of the car, simulations using a custom Simulink vehicle model, validation of the handling behaviour, a study on regenerative braking and the optimization of the powertrain (gearboxes, cell configuration of the battery pack) and racing strategy.

After two years in the team in september 2024 I became the head of the vehicle dynamics division where I lead a team of 9 people in the development of suspensions, aerodynamics and our custom vehicle model.

In addition I hosted a few lectures on various topics regarding the project .

More information can be found on E-Agle TRT [website](#)