



Nicolò Salimbeni

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Date of birth: 18/08/2000 **Nationality:** Italian

HONOURS AND AWARDS

[08/12/2024] **2024 US HL LHC CMS Detector Upgrade Essential Contribution Award**

Accreditation: for critical contributions to the Outer Tracker test beam analysis and subsequent paper.

WORK EXPERIENCE

[06/01/2025 – 06/2025] **Intern**

CERN

City: Geneva | **Country:** Switzerland

Committed to contributing for a minimum of 6 months to the development of the data acquisition system for the CMS Outer Tracker Upgrade.

[30/06/2024 – 25/09/2024] **Thesis student**

Fermilab

City: Chicago | **Country:** United States

For the HL-LHC, the CMS tracker will be upgraded. I worked with the CMS Outer Tracker group to finalize the analysis of a test beam and a paper on a PS module tested at Fermilab in 2023. This is also the main topic of my master's thesis.

[02/2024 – 06/2024] **Tutor for the course: General physics 1**

University of Padua, Engineering department

City: Padua | **Country:** Italy

My job was to give one 2 hours lesson a week to students of the engineering department, in the construction engineering degree, for the general physics 1 exam. The lessons covered exercises (both basic and advanced) on the theoretical topics explained by the professor in the ordinary lessons (mainly classical mechanics).

[10/2023 – 01/2024] **Tutor for the course: General physics 2**

University of Padua, Physics and Astronomy department

City: Padua | **Country:** Italy

My job was to give one 2 hours lesson a week to students of the physics and astronomy department, in the astronomy degree, for the general physics 2 exam. The lessons covered exercises (both basic and advanced) on the theoretical topics explained by the professor in the ordinary lessons (mainly electromagnetism).

[29/07/2023 – 30/09/2023] **Intern**

Fermilab

City: Chicago | **Country:** United States

I worked for the CMS experiment, in the outer tracker collaboration. My contribution was to carry out part of the data analysis of a test beam on some of the new silicon sensors (strips and pixels) to be installed for the high luminosity phase at the LHC.

EDUCATION AND TRAINING

[2022 – Current] **Master of Science in Physics of the Fundamental Interactions**

DFA "G. Galilei", University of Padua

City: Padua | **Country:** Italy | **Field(s) of study:** experimental High Energy Physics

Main courses: Theoretical Physics of the Fundamental Interactions, Advanced Physics Laboratories, Nuclear and Subnuclear Physics

[2019 – 2022] **Bachelor of Science in Physics**

DFA "G. Galilei", University of Padua

City: Padua | **Country:** Italy | **Final grade:** 109/110 | **Thesis:** Measurements of b-mesons oscillations with the CMS detector

1. GPA: 28.34/30

2. Main courses: Classical and Quantum Mechanics, Electromagnetism, Nuclear and Subnuclear physics, Advanced Programming classes

[2014 – 2019] **High School**

Liceo Scientifico Vito Volterra

City: Fabriano | **Country:** Italy | **Final grade:** 100/100 with honours

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

My Digital Skills

Programming languages

C++ - Advanced | Python - Advanced | Bash - Intermediate | LaTeX - Advanced

Software & frameworks

ROOT - Advanced | Wolfram Mathematica - Beginner | Octave - Beginner

Operating systems

Linux - Advanced user | Windows - Advanced user

PROJECTS

[03/2023 – 03/2024] **Cosmic Muons Characterization and g-Factor Measurement**

One exam in my curriculum involved building a particle physics experiment from scratch over the course of a year. This process included configuring electronics and detectors, as well as performing data analysis. We characterized cosmic muons and measured the g-factor.

SOCIAL AND POLITICAL ACTIVITIES

[2020 – 2022] **Scout Leader for AGESCI** Fabriano, Italy

[2018 – Current] **Active member of the Italian Alpine Club (CAI)** Fabriano and Padua, Italy

HOBBIES AND INTERESTS

Academic interests

Experimental high energy physics, specifically standard model. I am interested mainly in detectors and data analysis.

Personal interests

Mountain climbing, ski mountaineering, travel and discover *new* cultures, nature and sports in general

VOLUNTEERING

[06/2018 – 07/2018] **Himalayan Mountain Conservation Project** Annapurna Conservation Area, Nepal

[2017 – 2019] **Assistant Scoutmaster for AGESCI** Fabriano, Italy