



Sara Gamba

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📅 Date of birth: 26/10/2000 🇮🇹 Nationality: Italian

WORK EXPERIENCE

[03/2024]

Erasmus+/KA131-Extra UE 2023 Award

University of Pisa

Country: Italy

Research project: **Commissioning of the Mu2e Data Acquisition system and the Vertical Slice Test of the straw tracker**

I was awarded a ERASMUS scholarship of 700€ for a 1-month stay at Fermilab to support my Master's Thesis research which extends the Training Program carried out during my internship at Fermilab.

[01/2024 – 02/2024]

URA Visiting Scholars Program Award

Universities Research Association (URA)

Country: United States

Research project: **Commissioning of the Mu2e Data Acquisition system and the Vertical Slice Test of the straw tracker**

I was awarded a URA scholarship of 5000\$ for a 2-month stay at Fermilab to support my Master's Thesis research which extends the Training Program carried out during my internship at Fermilab.

[08/2023 – 09/2024]

Summer Intern

FERMI NATIONAL ACCELERATOR LABORATORY

City: Batavia, IL

Country: United States

Commissioning of the Mu2e data acquisition system and the vertical slice test of the straw tracker

As a Master student in Physics at the University of Pisa, I joined the Mu2e Collaboration in July 2023 for a 9-week internship at Fermilab within the DOE-INFN Summer Exchange Program. My Training Program has been dedicated to the Mu2e straw tracker construction, integration and vertical slice test. The tracker is the most crucial detector for the conversion electron search in Mu2e. Detector design follows a modular architecture made of 18 stations each composed of 4 planes made of 3 panels. We have been using a small part of the detector, i.e. one single plane, to test the performance of the readout and collect a data sample of cosmic muons to perform an initial track reconstruction and analysis. I am convinced this has been an excellent hands-on introduction to the Mu2e experiment, data acquisition, tracking and data analysis.

[04/2023 – Current]

"More Women in Physics" Award

Italian National Institute for Nuclear Physics (INFN).

Country: Italy

I won one of the 25 INFN fellowships assigned at national level to female students in Physics. The prize consists of 3000 euros.

[30/09/2023 – 16/12/2023]

Teaching Assistant

University of Pisa

Country: Italy

Name of unit or department: Department of Physics

Tutoring and helping students of the Mathematical Analysis II Course, Bachelor Degree in Physics (Prof. Massimo Gobbino).

Supplementary teaching, problem solving and recovery activities.

[05/2017 – 09/2017]

Trainee

Country: Italy

I was an intern at the following companies:

- Laboratorio Apuano di Analisi Mediche, in Massa (IT);
- G.M. Service & Software srl, in Viareggio (IT);
- CAEN S.p.A. Tools for discovery, in Viareggio (IT).

I improved my software and digital electronic skills

EDUCATION AND TRAINING

[08/2022 – Current]

Master Degree in Physics

University of Pisa

City: Pisa

Country: Italy

Field(s) of study: Fundamental Interactions

1. Theoretical Physics 1: 30/30, 9cfu;
2. Fundamental Interaction: 28/30, 9cfu;
3. Computing Methods for Experimental Physics and Data Analysis: 28/30, 9cfu;
4. Statistical Analysis of Data: 27/30, 9cfu;
5. Laboratory of Fundamental Interactions: 30/30 cum laude, 15 cfu;
6. Particle Physics: 29/30, 9cfu;
7. Introduction to Neutrino Physics: 30/30 cum laude, 3cfu;
8. Astroparticle Physics: 28/30, 6cfu;
9. Summer School at Fermilab exam: 30/30, 6cfu;
10. Instrumentation for Fundamental Interactions: 30 cum laude, 9cfu.

[08/2019 – 09/2022]

Bachelor Degree in Physics

University of Pisa

City: Pisa

Country: Italy

Final grade: 110 cum laude

- occupational techniques (making of standard breads, fancy breads, cakes and pastries)
- science applied to food and equipment (microbiology, biochemistry, hygiene)
- occupational technology (basic principles, hygiene and safety)
- knowledge of business and its economic, legal and social context

[03/2022 – 04/2022]

Q@nt Spring School 2022: quantum science and technologies

City: Trento

Country: Italy

Lectures on quantum science and technologies given by experts of the University of Trento. I also visited the Laboratories of the University of Trento.

[08/2021 – 09/2021]

PLAS@PAR Summer School: Plasma Physics

City: Roscoff

Country: France

Lectures on Plasma Physics given by experts of Sorbonne University and the University of Pisa.

[10/2018 – 11/2018]

International Cosmic Day, University of Pisa

City: Pisa

Country: Italy

Field(s) of study: High Energy Physics

[04/12/2017 – 06/12/2017]

8th project conference of the Fermi center: Extreme Energy Events Project

Ettore Majorana Foundation

City: Erice

Country: Italy

Field(s) of study: High Energy Physics

DIGITAL SKILLS

C++ | C | ECDL IT-Security Specialized | ECDL | Python | Microsoft Office (Microsoft Word
Microsoft | Linux | Windows | ROOT | Latex