



Fabio Bosco

Nationality: Italian

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ABOUT ME

My leading professional interests are addressed to the accelerator physics, especially particle beam dynamics in linear accelerators, electrodynamics and RF systems

WORK EXPERIENCE

PhD student in Accelerator Physics

La Sapienza [11/2019 – Current]

Address: Rome (Italy)

*Research in the field of particle accelerators joining activities of the Italian Institute of Nuclear Physics (INFN) and the Department of Basic and Applied Sciences for Engineering (SBAI). I am performing **beam dynamics** studies on **electron linear accelerators** meant to be employed in novel radiation sources such as Compton machines and Free Electron Lasers.*

Technical support at EuPRAXIA FEL Pilot User Application Workshop

INFN [06/2019]

Address: Rome (Italy)

*Two days **workshop** in Rome (Italy) concerning the main progresses of the international design project EuPRAXIA (European Plasma Research Accelerator with eXcellence In Applications). I assisted the speakers providing **technical support** during the talks*

Internship at Fermi National Accelerator Laboratory

Fermilab [07/2018 – 09/2018]

Address: Batavia (IL) (United States)

*Visitor student at "Fermi National Accelerator Laboratory" (Batavia, IL) employed as intern in a **summer school** program. I have been working in a Quantum Computing Laboratory where I developed a digital device aimed to characterize a Qubit system built in superconductive 3D technology. My work is summarized in a **report** titled "Digital Phase Comparator for the characterization of a Superconductive Quantum System".*

Tutorship of Physics Classes

University of Rome "La Sapienza" [03/2020 – 10/2020]

City: Rome

Teaching activities as a tutor of the course "Physics" for engineering students at the university of Rome "La Sapienza".

EDUCATION AND TRAINING

Master Degree in Electronics Engineering

La Sapienza [2016 – 2019]

Address: Rome (Italy)

*Consolidated knowledge of electromagnetics and RF engineering especially through **laboratory** courses and design projects. Growth of interest for applications in fields of **modern physics** such as Particle Accelerators, Optics and Quantum Mechanics. Author of a **thesis** titled "Arbitrary Shaped Traveling Wave Accelerating Structures for Compact X-Band Free Electron Lasers" which contributed to the international project "CompactLight".*

The Science of Particle Accelerators

JUAS - ESI [01/2019 – 02/2019]

Address: Archamps (France)

*International course concerning the physics of **Particle Accelerators**, Archamps (France). The course is provided by JUAS (Joint Universities Accelerator School) which belongs to ESI (European Scientific Institute). Understanding of the fundamental topics for the subject, either through theoretical lessons, visits, seminars and **workshops**.*

Bachelor Degree in Electronics Engineering

La Sapienza [2013 – 2016]

Address: Rome (Italy)

*Advanced studies of electromagnetics engineering and applied physics. Acquisition of a **theoretical** background as well as knowledge of tools for the **analysis** of systems. Author of a theoretical **thesis** in Electromagnetic Fields titled "Generalized Brewster Phenomena in Planar Structures with Losses".*

High School Scientific Diploma

Liceo Scientifico Statale Nomentano [2008 – 2013]

Address: Rome

*Acquisition of analytical thinking and passion for learning. Growth of the **interest** in scientific subjects as well as humanistic ones like literature, history and philosophy.*

LANGUAGE SKILLS

Mother tongue(s):

Italian

English

LISTENING: C1 **READING:** C2 **WRITING:** B2

SPOKEN PRODUCTION: B2

SPOKEN INTERACTION: C1

DIGITAL SKILLS

Programming Languages

Basic knowledge of programming languages C fortran python

Data Analysis Tools

Programmin language PYTHON / Proficient User of MATLAB

Particle Tracking Codes

General Particle Tracer

Electromagnetics CAD

ANSYS (HFSS) / CST

Scientific Writing

MicrosoftMicrosoft Office / Proficient User of Latex

PUBLICATIONS

Publications

05/2019 - G. D'Auria, F. Bosco et al., "CompactLight DESIGN STUDY", Proceedings of IPAC2019, Melbourne, Australia

PERSONAL INTERESTS

Personal Interests

Literature, art and creative writing. Music, especially playing the trumpet. Playing theater and volleyball as an amateur. Traveling and meeting new people.