

Bruno Gehlen F. da Silva

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“We are what we repeatedly do. Excellence, then, is not an act, but a habit.” – Aristotle

Personal Profile

I'm an eternal learner and Bachelor's student at the Universidade de São Paulo with a strong interest in particle physics and exploring beyond the Standard Model of Particles. I'm passionate about the mathematics behind physics, specifically differential geometry and functional analysis!

Education

University of Sao Paulo B.Sc in Physics	Sao Paulo-SP, Brazil April 2021 - December 2024
Sartre Escola SEB High School	Lauro de Freitas-BA, Brazil Apr 2018 - Apr 2020

Work Experience

Scientific Initiation - Institute of Theoretical Physics IFT UNESP Mathematica Demonstrations in an introduction to Quantum Field Theory and Particle Physics	São Paulo, Brazil Jun 2024 - Dec 2024
<ul style="list-style-type: none">It is of paramount importance to expose undergraduate students to cutting-edge physics topics as soon as they have the capacity to grasp them. In this project, our aim is to enhance candidates' education by delving into introductory texts on Particle Physics and Field Theory. In addition to the usual approach of reading books and presentations, we will complement it with the creation of Mathematica programs that will perform relevant calculations for this study. These programs will not only facilitate simulations and demonstrations, offering candidates a deeper understanding of the subject, but will also be made available to other students or the general public.	

Extracurricular

III Escola de Inverno Jayme Tiomno Universidade de São Paulo	São Paulo-SP, Brazil Aug 2021
<ul style="list-style-type: none">Introdução aos Fundamentos Filosóficos da Mecânica QuânticaIntrodução à Teoria de SupercordasMétodos Algébricos da Física Teórica	
Curso de Verão do IF-USP Universidade de São Paulo	São Paulo-SP, Brazil Mar 2022
IV Escola de Inverno Jayme Tiomno Universidade de São Paulo	São Paulo-SP, Brazil Aug 2022
<ul style="list-style-type: none">Física Além do Modelo PadrãoIntrodução aos Modelos Científicos a Partir da Filosofia da Ciência: Uma Abordagem Pela FísicaSistemas Hamiltonianos em Espaços Vetoriais SimpléticosUma Introdução À Teoria Quântica de Campos em Espaços-Tempos Curvos	
Curso de Verão do IF-USP Universidade de São Paulo	São Paulo-SP, Brazil Feb 2023

Skills

Programming	Python (specifically science/data packages, as Pandas, NumPy, SciPy, Matplotlib), Fronted in general (the triad HTML/CSS/JavaScript), Wolfram Mathematica
Miscellaneous	Linux, \LaTeX , Microsoft Office, A personal Homelab where I take time to test new technologies
Soft Skills	Problem-solving, Efficiency Enthusiast, Documentation, Organized, Optimizer.

Achievements

2019	Bronze Medal , Mathematical Kangaroo	<i>Brazil</i>
2020	Gold Medal , National Science Olympiad (ONC)	<i>Brazil</i>
2020	Bronze Medal , Brazilian Olympics of Astronomy (OBA)	<i>Brazil</i>

Interests

Physics	I have always been passionate about it, especially the mathematical formalism. I am currently applying for a master's degree in pure mathematics at Institute of Mathematics and Statistics of USP.
Linux	Since 2021, I have been exploring the world of Linux and the open source. Currently using Arch.
Music	I enjoy almost all types of music, as long as it's Brazilian. I particularly listen to rap, R&B and jazz.
Art	I have always enjoyed drawing since I was a child. Sometimes I sketch something to distract myself.

Languages

Portuguese	Native proficiency
English	Bilingual proficiency
French	Beginner proficiency