Marco Ciafardini

Curriculum Vitae

Contact Information

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in https://www.linkedin.com/in/marco-ciafardini/

🌐 https://regularhexahedron.github.io/

Summary

Physicist by training, with experience in research and teaching, now transitioning toward industry roles that value deep analytical thinking, mathematical structure, and precision. Currently strengthening my programming skills in Python and SQL, and deepening my understanding of probability and statistics through self-directed study and projects.

Education

Licenciatura en Ciencias Físicas ———————————————————— March 2018 - October 2024

Faculty of Exact and Natural Sciences - University of Buenos Aires

- "Licenciatura" is a (1+5)-year degree. The first year, 'Cíclo Básico Común (CBC)", is a required set of foundational courses at the University of Buenos Aires, covering general subjects before the degree itself.

- "GPA": 9.39/10 (excluding CBC)

Research Experience & Publications

MSc. Thesis Student ————————————————————————————— March 2023 - March 2024

Relativistic Quantum Theories and Gravitation Group, Institute of Astronomy and Space Physics, University of Buenos Aires

- Title: *Reducción Dimensional del Sector de NS-NS: Perspectivas desde Simetrías*

My thesis focused on studying symmetries—particularly diffeomorphisms—in the context of Kaluza-Klein compactifications. This research contributed to a larger project, with an article published in the *Journal of High Energy Physics*.

- **Ciafardini, M.**, Marqués, D., Núñez, C.A., *et al*. "Hidden symmetries from extra dimensions", *J. High Energ. Phys.* 2025, 72 (2025) DOI: 10.1007/JHEP02(2025)072.

Undergraduate Research Assistant ————————————————— March 2022 - December 2022

Department of Condensed Matter Physics, Research and Applications Management, National Atomic Energy Commission (CNEA)

Conducted research on the impact of the adsorption morphology of Li on Au as a substrate in isotope separation. Performed simulations based on Density Functional Theory to study the adsorption process, as well as electrochemical depositions and structural characterizations.

- Presented research findings at *"107° Reunión de la Asociación de Física Argentina"* (2022) with a poster titled *"Separación Isotópica de Litio por Electrodeposición"*.

This experience concluded a publication in *The Journal of Physical Chemistry C*.

- Marina S. Bellora, Federico M. Cabello, María A. Barral, **Marco Ciafardini**, Federico A. Viva, Horacio R. Corti, and Verónica L. Vildosola, "Effect of the Substrate and the Morphology on Electrochemical Separation of Lithium Isotopes: Insights from DFT", *The Journal of Physical Chemistry C* 2023 127 (44), 21713-21720. DOI: 10.1021/acs.jpcc.3c04679.

Teaching Experience

Undergraduate Teaching Assistant ———————————————— March 2023 - July 2025
Department of Physics, Faculty of Exact and Natural Sciences - University of Buenos Aires

> Primarily addressed student inquiries regarding course exercises, assisted in grading mid-term exams and prepared excercise classes for courses on Newtonian Mechanics, Classical Mechanics, and Classical Electrodynamics.

Additional Activities

Python Workshop —————————————————————————— April 2022
Faculty of Exact and Natural Sciences - University of Buenos Aires

> Participated in the delivery of a Python workshop organized by and for students whose main goal was to introduce newcomers to the Python language, primarily with the aim of facilitating their adaptation to lab courses.

Collaborator at the "Physics Week" ————————————————— June 2022
Department of Physics, Faculty of Exact and Natural Sciences - University of Buenos Aires

> Participated in a outreach event aimed at high school students, conducting experimental demonstrations at the "Waves and Sound" station.

Languages

Spanish	Native
English	IELTS UKVI - 7.5 Overall Band Score, as of 31/01/2025
	C1 Advanced - 196/210, as of 30/11/2022
French	