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## Contact Information

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|  <a href="https://regularhexahedron.github.io/">https://regularhexahedron.github.io/</a>                   |
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## Summary

Trained in physics, with experience in research and teaching, now transitioning toward industry roles that value deep analytical thinking and mathematical structure, where precision meets high-paced demands. Currently strengthening my programming skills in Python and SQL, and deepening my understanding of probability and statistics through self-directed study and projects (accessible on personal site).

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## 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, ‘Círculo 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)
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## 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*

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](https://doi.org/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 Electrodepositación”.

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](https://doi.org/10.1021/acs.jpcc.3c04679).

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## 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 exercise classes for courses on Newtonian Mechanics, Classical Mechanics, and Classical Electrodynamics.

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## 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.

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## 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	