

Rubén Izquierdo-López, PhD student

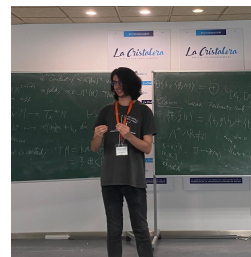
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Teaching experience

- 2024–now 📌 **Professor** at UNIR (Universidad Internacional de la Rioja) teaching
 - Differential Equations (2024–2025) for 2nd year students in Physics.
- 2022–2023 📌 **Teaching assistant** in “Matemáticas Básicas” at Universidad Complutense de Madrid.
- 2020–2022 📌 **Support Teacher** at Savannah SLC in Torrejón de Ardoz.

Research experience

- 2023–2024 📌 **Severo Ochoa contract for Master students** in CSIC (Instituto de Ciencias Matemáticas) supervised by Prof. Manuel de León.
- 2023 📌 **JAE Intro research grant** supervised by Prof. Manuel de León.

Education

- 2024– now 📌 I am currently a PhD student in Mathematics under the supervision of prof. Manuel de León.
- 2023–2024 📌 **Master’s degree in Advanced Mathematics, (average of 9.77/10)** in Universidad Complutense de Madrid.
Thesis title: *Coisotropic reduction in Multisymplectic Geometry*. Advisor: *Manuel de León Rodríguez*. **Grade:** 10.
- 2019–2023 📌 **Bachelor’s degree in Mathematics, (average of 9.44/10)** in Universidad Complutense de Madrid. I was awarded with “premio excelencia UCM”, for one of the best academic records in Mathematics.
Thesis title: *Simplicial and Cellular Homology*. **Advisor:** *Manuel Alonso Morón*. **Grade:** 9.7/10.

Languages

- 📌 **Spanish:** Native
- 📌 **English:** C1, 100/120 on TOEFL.

Grants

- 📌 **Severo Ochoa grant for Master students** in academic year 2023–2024.
- 📌 **“Excellence grant” of Comunidad de Madrid** in academic years 2020–2021, 2021–2022, 2022–2023.
- 📌 **JAE Intro research grant.**

Schools and conferences

- November 2024  **New Advances in Contact and Symplectic Hamiltonian Dynamics** in Great Bay University, Dongguan, Guangdong, China. Gave a talk on "Poisson and Dirac structures in Classical Field Theories".
- September 2024  **Workshop de Jóvenes Investigadores** in UCM, Madrid. Gave a talk on "Coisotropic reduction in Classical Field Theories".
- August 2024  **Workshop on Geometric Aspects of Material Modelling** in UNED, Madrid. Gave a talk on "The Multisymplectic framework of Field Theories".
- June 2024  **XVI International ICMAT Summer School on Geometry, Dynamics and Field theory** in Miraflores de la Sierra, Madrid.
-  **The Geometry of Field Theories** in Real Colegio de Santa Cristina, Madrid. Gave a short talk on "Coisotropic reduction in Multisymplectic Geometry".
- February 2024  **XVIII International Young researchers Workshop in Geometry, Dynamics and Field Theory** in Warsaw University. Gave a short talk on "Coisotropic reduction in different phase spaces".
- January 2024  **XXV Winter Meeting on Geometry, Dynamics and Field Theory** in Universidad de Zaragoza.
- December 2023  **de León fest** in ICMAT.
- November 2023  **BYMAT** in ICMAT. Gave a short talk on "Coisotropic reduction in symplectic, cosymplectic, contact and cocontact geometry".
- July 2023  **JAЕ summer School** in ICMAT.

Talks and seminars

- November 2024  **New Advances in Contact and Symplectic Hamiltonian Dynamics** in Great Bay University, Dongguan, Guangdong, China. Gave a talk on "Poisson and Dirac structures in Classical Field Theories".
- September 2024  **Workshop de Jóvenes Investigadores** in UCM, Madrid. Gave a talk on "Coisotropic reduction in Classical Field Theories".
-  **Seminario de doctorandos** in UCM, Madrid. Gave a talk on "Geometría multisimétrica, el marco para teoría clásica de campos".
- August 2024  **Workshop on Geometric Aspects of Material Modelling** in UNED, Madrid. Gave a talk on "The Multisymplectic framework of Field Theories".
- June 2024  **Gamma Seminar**, online. Gave a talk on "Coisotropic reduction in Multisymplectic Geometry".
-  **The Geometry of Field Theories** in Real Colegio de Santa Cristina, Madrid. Gave a short talk on "Coisotropic reduction in Multisymplectic Geometry".
- February 2024  **XVIII International Young researchers Workshop in Geometry, Dynamics and Field Theory** in Warsaw University. Gave a short talk on "Coisotropic reduction in different phase spaces".
- November 2023  **BYMAT** in ICMAT. Gave a short talk on "Coisotropic reduction in symplectic, cosymplectic, contact and cocontact geometry".

Volunteering

- July 2024  **Assistant in ECM (European Congress of Mathematics)** at Universidad de Sevilla.
- April 2023  **Assistant in "Concurso de Primavera"** at Universidad Complutense de Madrid.

Research Publications

Journal Articles

- 1 M. de León and R. Izquierdo-López, “A review on coisotropic reduction in symplectic, cosymplectic, contact and co-contact hamiltonian systems,” *Journal of Physics A: Mathematical and Theoretical*, vol. 57, no. 16, p. 163 001, Apr. 2024. [DOI: 10.1088/1751-8121/ad37b2](https://doi.org/10.1088/1751-8121/ad37b2).
- 2 M. de León and R. Izquierdo-López, “Coisotropic reduction in multisymplectic geometry,” *Geometric Mechanics*, vol. 01, no. 03, pp. 209–244, 2024. [DOI: 10.1142/S2972458924500096](https://doi.org/10.1142/S2972458924500096).

Preprints

- 1 M. de León and R. Izquierdo-López, *Graded poisson and graded dirac structures*, 2024. arXiv: 2410.06034 [math-ph]. [URL: https://arxiv.org/abs/2410.06034](https://arxiv.org/abs/2410.06034).