

# Rubén Izquierdo-López, PhD student

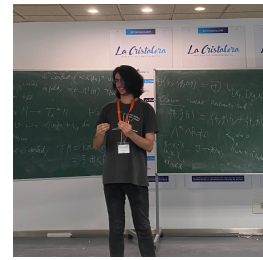
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📞 On request

🌐 My personal web-

page

**Last updated:** February 11, 2025



## 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




- January 2025 **■ XIX Young Researchers Workshop in Geometry Dynamics and Field Theory** in University of Verona, Verona, Italy. Gave a talk on "Graded structures of classical field theories".
- VII Congreso de Jóvenes Investigadores de la RSME** in Universidad del País Vasco, Bilbao, Spain. Gave a talk on "Graded brackets in classical field theories".
- 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 **■ JAE summer School** in ICMAT.

## Talks and seminars

- February 2025 **■ Q-math seminar**, Universidad Carlos III de Madrid. Gave a talk on "Graded Poisson brackets in classical field theories".
- January 2025 **■ XIX Young Researchers Workshop in Geometry Dynamics and Field Theory** in University of Verona, Verona, Italy. Gave a talk on "Graded structures of classical field theories".
- VII Congreso de Jóvenes Investigadores de la RSME** in Universidad del País Vasco, Bilbao, Spain. Gave a talk on "Graded brackets in classical field theories".
- 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 clásicas 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".

## Talks and seminars (continued)

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- February 2024  **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







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- 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

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### Journal Articles

-  M. de León and R. Izquierdo-López, "Graded poisson and graded dirac structures," *Journal of Mathematical Physics*, vol. 66, no. 2, p. 022 901, Feb. 2025, issn: 0022-2488.  DOI: 10.1063/5.0243128.
-  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.
-  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.