Rubén Izquierdo-López, Master student

☑ rubizqui@ucm.es

J +34 629949747

My personal webpage

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Teaching experience

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

Severo Ochoa contract for Master students in CSIC (Instituto de Ciencias Matemáticas) supervised by Prof. Manuel de León.

JAE Intro research grant supervised by Prof. Manuel de León.

Education

I am currently a PhD student in Mathematics under the supervision of prof. Manuel de León.

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.

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

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 Multisympelctic framework of Field Theories".

Schools and conferences (continued)

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

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 multisimpléctica, el marco para teoría clásicas de campos".

August 2024

Workshop on Geometric Aspects of Material Modelling in UNED, Madrid. Gave a talk on "The Multisympelctic 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

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. O DOI: 10.1088/1751-8121/ad37b2.

Preprints

M. de León and R. Izquierdo-López, Coisotropic reduction in multisymplectic geometry, 2024. arXiv: 2405.12898 [math.SG].