

MIGUEL SANTOS PASCUAL

PhD Student at ICMAT, Mathematics and Physics Graduate, Master's in Statistics.

@ miguel.santos@icmat.es 📍 Valladolid, Spain in www.linkedin.com/in/miguel-santos-pascual-a18722290

EDUCATION

Master's in Statistics for Data Science

Carlos III University of Madrid (UC3M)

📅 2024 – 2025 📍 Madrid, Spain

- Final GPA: 9.51/10, awarded Honors for 36 ECTS.
- A fully English-taught postgraduate program offering intensive training in core statistical tools, with a focus on methodology, practical application, and real-world relevance.
- Final Master's Thesis: "A two-level Plackett-Luce model for preference modelling in route choice with applications".

Bachelor's in Mathematics.

Universidad de Valladolid (Uva)

📅 2019 – 2024 📍 Valladolid, Spain

- Final GPA: 9.365/10, awarded Honors for 117 ECTS credits, and ranked first in my graduating class.
- Erasmus Program at Università degli Studi di Perugia.
- Final Thesis: "Application of Information Theory in Supervised Learning", graded 9.8/10 with Honors.

Bachelor's in Physics.

Universidad de Valladolid (Uva)

📅 2019 – 2024 📍 Valladolid, Spain

- Final GPA: 8.998/10, awarded Honors in 108 ECTS and ranked second in my graduating class.
- Erasmus Program at Università degli Studi di Perugia.
- Final Thesis: "Variational Quantum Algorithms: A First Step in Adiabatic Quantum Computing", graded 9.4/10.

PUBLICATIONS & TALKS

- Under revision: **A Two-Level Plackett-Luce Model for Preference Modeling in Smart Mobility Platforms**. Preprint.
- Ongoing preprint: **Adversarial Observations in Probabilistic State-Space Models for Robust Reinforcement Learning**.
- Presentation and attendance at **SEIO Lleida 2025 Congress**. Lleida, SEIO, July 10–13, 2025.
- Session presentation at **II International Workshop on Bayesian Statistics**. CUNEF Universidad, Madrid, June 4–5, 2026.
- Attendance and poster presentation at **ISBA 2026**. Japan.

COURSES & WORKSHOPS

- Attendance at the workshop **Reinforcement Learning for Science: Discovery and Automation**. Isaac Newton Institute, Cambridge.
- Course in **Deep Learning**.
- Attendance at **AI HORIZONS 2024 UC3M**: "Navegando los desafíos de la Inteligencia Artificial".

EXPERIENCE

PhD Candidate at ICMAT

Instituto de Ciencias Matemáticas (ICMAT)

📅 2025 – ongoing 📍 Madrid, Spain

- Granted the FPU24 Ph.D. scholarship by the Spanish Ministry of Science, Innovation and Universities.
- Working in **Adversarial Machine Learning, Reinforcement Learning and Probabilistic Machine Learning** under the supervision of David Ríos Insua.

Research Fellowship at ICMAT

Instituto de Ciencias Matemáticas (ICMAT)

📅 2024 – 2025 📍 Madrid, Spain

- Awarded the first of the 15 **JAE Intro ICU 2024 scholarships** across Spain, designed for master's students as an **introduction to the research world**. Working in the **Department of Statistics**.

Quantitative Finance Analyst

Analistas Financieros Internacionales (AFI)

📅 June-August, 2023 📍 Madrid, Spain

- Internship using advanced **Microsoft Excel** and **Python** automation, with applications of **Markov processes** and **Brownian motion** to basic **financial product** valuation.

ACHIEVEMENTS

- **Silver Medal** at the National Physics Olympiad. *XXX Edition*, Salamanca, 2019.
- **Honorable Mention** at the National Chemistry Olympiad. *XXXII Edition*, Santander, 2019.

LANGUAGES

Spanish (mother tongue)	●●●●●●
English (C1 CAE)	●●●●●●
French (DELF B2)	●●●●●●
Italian (B1)	●●●●●●

SKILLS

C, C++	●●●●●●
Python	●●●●●●
Docker	●●●●●●
Github	●●●●●●
Linux (Ubuntu)	●●●●●●
R / RStudio	●●●●●●