Martín Arnaiz Iglesias

PhD Candidate | Applied Mathematics & Quantitative Finance

Paris, France | +34 632 313 724 | martin.arnaiz.iglesias@gmail.com | LinkedIn | GitHub | Website

Profile

Applied-mathematics PhD candidate specialising in stochastic optimisation and quantitative finance, with a publication in *Mathematics of Operations Research* and an MBA in Science & Management (Collège des Ingénieurs) pursued alongside the PhD. Seeking quantitative research / analyst roles in banking, asset management or consulting.

Education

PhD in Applied Mathematics 2024 – Present
Université Paris 1 Panthéon-Sorbonne · Centre d'Économie de la Sorbonne
Thesis: learning schemes for the risk-budgeting problem (stochastic approximation in finance). Advisor: Noufel Frikha.

MBA — Science & Management 2024 – Present
Collège des Ingénieurs
An MBA pursued in parallel with the PhD: management training and corporate projects across Paris, Munich and Turin; leadership, entrepreneurship and strategy.

MSc Quantitative Economic Methods (QEM) — Erasmus Mundus Joint Master 2022 – 2024
Università Ca' Foscari · Université Paris 1 (M1/M2 MMMEF, quantitative finance track) — GPA 4/4
Stochastic calculus, machine learning, derivatives pricing, portfolio choice, risk measures, Monte Carlo methods.

BSc in Mathematics 2018 – 2022
Universidade de Santiago de Compostela — mean grade 8.5/10
Exchanges at Maria Curie-Skłodowska University and Universidad de Sevilla.

Experience

Quantitative Researcher (Doctoral) 2024 – Present
Centre d'Économie de la Sorbonne

- Designed mirror-descent algorithms for risk-budgeting portfolios, providing the first non-asymptotic convergence guarantees in the stochastic setting.
- Implemented and benchmarked the methods in Python; results published in *Mathematics of Operations Research*.

Research Assistant 2021
Epidemiology & Clinical Research, Hospital Clínico Universitario de Santiago (CHUS)
Statistical analysis of clinical databases to evaluate treatment efficacy; data support for health research.

Teaching Assistant 2024 – Present
Université Paris 1 Panthéon-Sorbonne
Financial mathematics and foundations of mathematics — tutorials and exam preparation.

Publications & Research

- **Arnaiz Iglesias, M.**, Cetingoz, A. R., Frikha, N. (2026). *Mirror Descent Algorithms for Risk Budgeting Portfolios.* Mathematics of Operations Research (INFORMS).
- **Arnaiz Iglesias, M.**, Frikha, N. *Robust Mirror Descent Algorithms for Risk Management.* Working paper.

Technical Skills

Programming: Python (NumPy, pandas, SciPy), C++, Excel
Quantitative methods: stochastic calculus & SDEs, stochastic and convex optimisation, Monte Carlo methods, machine learning, time series (Hawkes processes), risk measures (volatility, Expected Shortfall), portfolio optimisation, derivatives pricing
Tools: Git / GitHub, LaTeX

Awards & Scholarships

- Erasmus Mundus Scholarship (QEM Joint Master Degree).
- Galician Award for Academic Excellence, 2020–2021.
- Bronze Medal, Galician Economics Olympiad.

Leadership & Activities

President of the Sports Committee 2024 – Present
Colegio de España, Paris
Organise and coordinate activities and events for residents.

Doctoral Student Representative 2024 – 2026
Université Paris 1 Panthéon-Sorbonne
Liaison between doctoral students and the university administration.

Interests: Tennis and sport, painting, and sailing (boat licence).

Languages

Spanish (native) | Galician (native) | English (C1, Cambridge CAE) | French (C1) | Italian (C1) | German (A2)