

# GUIOMAR PESCADOR BARRIOS

Statistics and Machine Learning (StatML) PhD student

✉ [Email](#) |  [Google Scholar](#) |  [LinkedIn](#) |  [Website](#) |  [GitHub](#)

## EDUCATION

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**PhD in Statistical Machine Learning, Imperial College London and University of Oxford, UK** Exp. 2026

- Supervised by [Sarah Filippi](#) and [Mark van der Wilk](#) on the [StatML](#) programme. Funded by EPSRC.
- Research Focus: Developing principled methods for Approximate Bayesian Inference, Neural Architecture Selection, and Continual Learning, to enable models to adapt efficiently to evolving data streams and task distributions.

**Master in Mathematics with Honours (First-class), University of Edinburgh, UK** Sept. 2017 - June 2022

- Master Dissertation: Statistical Evaluation of Medical Tests. Under the supervision of [Vanda Inacio De Carvalho](#).
- Undergraduate Group Thesis: Adaptive Single Hidden Layers Perceptron. In collaboration with Jay Holley and Leah Sea. Under the supervision of [Benedict Leimkuhler](#).

## ACADEMIC PLACEMENTS

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**RIKEN Center for Advanced Intelligence Project** *Tokyo, Japan.* April to July 2025

Visiting student researcher at the Approximate Bayesian Inference Team lead by Dr. [Emtiyaz Khan](#).

## RESEARCH

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- [1] Pescador-Barrios, G., Filippi, S., and van der Wilk, M. [Adjusting Model Size in Continual Gaussian Processes: How Big is Big Enough?](#) In *Proceedings of the 42nd International Conference on Machine Learning (ICML 2025)*. **Spotlight**.

## EVIDENCE OF ESTEEM

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### Invited Talks

**NeurIPS 2024 Bayesian Decision-making and Uncertainty Workshop:** Lightning talk on accepted work on adaptive model size for continual Gaussian Processes. December 2024

**Oxford-Man Institute:** “Adjusting Model Size in Continual Gaussian Processes: How Big is Big Enough?”, invited speaker at [F-StatML Seminar Series](#). December 2024

### Research Seminars

**Dagstuhl Seminar:** Invited participant in a closed workshop on “Rethinking the Role of Bayesianism in the Age of Modern AI”. [\[Link\]](#) Dagstuhl, November 2024

**Amazon Workshop:** featuring keynotes and discussions on statistical machine learning. [\[Link\]](#) Berlin, April 2024

### Oral Presentations

**StatML seminar series, Imperial College London:** Continual Learning with Sparse GPs. April 2024

**StatML seminar series, University of Oxford:** Dimensionality Reduction with Side Information. March 2023

## EXPERIENCE

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**Creator Fund, Venture Fellow** *London, UK.* Oct. 2023-2024

Deep tech early-stage venture capital investing in PhD and academic founders across Europe.

**Amazon, Software Developer Intern** *Madrid, Spain.* 2020-2021

- Summer 2021:** I developed a new feature for an internal web application used by developers and product managers within Amazon Business. The project was delivered ahead of time, and I was able to start another extension of the app. Offered a full-time position.

- **Summer 2020:** I designed and created a new buying policy for Amazon Business. The project was delivered ahead of the deadline and the buying policy is available worldwide. Offered a full-time position.

#### Addlink Scientific Software, *Intern*

*Remote & Spain.* May to November 2019

Created educational materials for Maple 2019 software, including webinars and articles for basic and advanced users. Delivered a one-day course on Maple 2019 at the Technical University of Madrid for higher education.

#### Morgan Stanley

*Glasgow.* April 2019

Technology Insight Programme.

#### Spanish National Institute of Mathematical Sciences, *Research Intern*

*Madrid, Spain.* June 2018

Evaluation of the performance of Machine Learning classification algorithms in malware detection. Attendant at JAE School of Mathematics: “Public Key Cryptography: an introduction” and “An introduction to Mathematical Neuroscience”.

### TEACHING

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#### Graduate Teaching Assistant, Department of Mathematics, Imperial College London

2023 - 2024

- Postgraduate modules: Machine Learning, Computational Statistics.
- Undergraduate modules: Probability and Statistics.

#### Tutorial Lead, Imperial Business School

- Summer School on Machine Learning, Applied Statistics, and Quantitative Finance. 2024
- Summer School on Business Analytics, Machine Learning and Applied Statistics. 2023

### AWARDS

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#### Nova 111 Student Award 2024

March 2024

Selected as one of top 10 highest-potential students under 25 in the Mathematics, Data Analytics, and Physics category in Spain.

#### EPSRC Studentship

October 2022 to October 2026

Engineering and Physical Sciences Research Council (EPSRC) Studentship for PhD studies.

### TECHNICAL SKILLS

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**Programming:** Python, R, Java, C, SQL, Datapath.

**Software & Tools:** VS Code, RStudio, Maple, Matlab, IntelliJ IDEA, High Performance Computing.

**Libraries:** TensorFlow, PyTorch, Keras, GPflow, GPytorch, SciPy, NumPy, Pandas, scikit-learn, Matplotlib, Seaborn.

**Languages:** Spanish (Native), French (Bilingual), English (Proficient).

### PHD TRAINING

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**Modules:** Bayesian Modelling and Computation, Statistical Machine Learning, Modern Statistical Theory, Online learning, Bandits, and Reinforcement learning, Causality, ML Finance.

**Technical Training:** Foundations of GPU Computing, Good Software Engineering Practice, Responsible Innovation, Introduction to HPC, Parallel Programs on HPC Cluster.

### OTHERS

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#### Leadership

- Co-founder of [PhD Espresso](#), a peer-support and learning network for PhD students. 2025
- Student representative StatML CDT. 2022-2025
- Amazon Campus Ambassador for the University of Edinburgh. 2020-2021
- Secretary of External Relations of the Spanish Society at the UoE. Consulate liaison. 2018-2020

#### Outreach

- Oxford Mathematics Festival. 2023
- STEM Ambassador Scotland. 2020-2021