

# Marhuenda Beltrán Mario

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## EDUCATION

**PARIS DAUPHINE UNIVERSITY**  
MEng in Theoretical and Applied Mathematics  
2021-2022 | Paris, France  
University ranked top 10 on Shanghai ranking

**ECOLE NORMALE SUPERIEUR PARIS**  
MEng in Computer Science  
2021-2022 | Paris, France

**SORBONNE UNIVERSITY**  
MEng in Fundamental Mathematics  
2020-2021 | Paris, France  
University ranked 3<sup>rd</sup> on Shanghai ranking  
Top 20%

**COMPLUTENSE UNIVERSITY OF MADRID**  
BS in Mathematics  
May 2020 | Madrid, Spain  
Top 1%  
Grade: 9.1/10,  
9 honor grades, 26 A+/32

## WHERE TO FIND ME

Github: [marhu98](#)  
LinkedIn: [mario-marhuenda](#)  
MathExchange: [miraunpajaro](#)

## LANGUAGES

**Native:** Spanish, Catalan  
**English:** C2, accredited by TOEFL  
**German:** A2, accredited by KID2  
**French:** A2/B1

## COURSEWORK

### GRADUATE

Cryptography: Classic and quantum.  
Error correcting codes. Lie algebras.  
Symplectic geometry/topology

### UNDERGRADUATE

Algebraic topology. Differential geometry. Functional analysis. Measure theory

## OTHER INTERESTS

Competitive chess player

## ACADEMIC

### MASTER THESIS | Proof systems for PQ Cryptography

Supervisor: Rafael del pino

We try to produce more efficient signatures, based on MPC in the head schemes, which are naturally resistant to quantum computers since they only rely on symmetric cryptography schemes.

### BACHELOR THESIS | Symplectic non-Kähler manifolds

Supervisor: Giovanni Bazzoni

We give a survey of the Thurston-Weinstein conjecture, its state of the art and how to produce topological tools that allows us to study topological restrictions on the metric in symplectic manifolds. We use a variety of tools, ranging from spectral sequences to Hodge theory. Finished with honours. Check it out [here](#).

## GRANTS/DISTINCTIONS

- Madrid academic excellence grant : 2017-2018
- Madrid academic excellence grant : 2018-2019
- UCM Algebra, geometry and topology department collaboration grant: 2019-2020 [Only two were awarded]

## ACCREDITATIONS

Coursera	Cryptography I
FUN-MOOC	Machine learning in python with scikit-learn
FUN-MOOC	Python 3
FUN-MOOC	Fundamentals for data science

## SKILLS

### PROGRAMMING

Over 5000 lines:

Python • Java • C • Latex • HTML • CSS • SQL

Over 1000 lines:

Rust • C • C++ • Bash

Beginner:

Go • R • Scala • Haskell • Clojure

Numerical tools:

Sage • Mathematica • Matlab

Frameworks/Workflow:

React (native) • Vue • Svelte • Flask • Git • Mithril

## EXPERIENCE

Private math tutoring: From high school level to 2<sup>nd</sup> undergrad year.

Currently working on a Spark course for [Newline](#).

Check out my [Github](#).

Blog/Webpage: [marhuenda.in](#)