Eloi Torrents

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PhD student in Mathematics

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I am a PhD student in the Department of Mathematics of the Autonomous University of Barcelona. I am interested in Number Theory, specially Automorphic forms, Modular forms, Elliptic curves and Algebraic Geometry. I am also interested in programming, computational mathematics and theorem provers. Teaching is my passion.

Education

`Dec 2020 - present` **Ph.D on Mathematics** Under the supervision of Dr. Marc Masdeu

- Universitat Autònoma de Barcelona (Bellaterra, Spain)

Thesis title: Fundamental domains for quadratic S-arithmetic groups

I participate in the following weekly seminars:

Seminar I: main topic: Clausen-Scholze's **Condesed Mathematics**. Hosted by our research group "Arithmetic Geometry and Algebraic Geometry".
Seminar II: main topic: Daniel Bump's book **Automorphic forms and Representations**. Hosted by our research group "Arithmetic Geometry and Algebraic Geometry".
Seminar III: main topic: **Modular Forms** organized together with other graduate students in Barcelona.
Seminar IV: Main topic: **Barcelona Lean Seminar**. Hosted in the University of Barcelona where I take part in the organization. a seminar for undergraduate students.

`Sep 2019 - Oct 2020` **Master's degree in Advanced Mathematics**

- Universitat Politècnica de Catalunya (Barcelona, Spain)

Master's Thesis: Understanding the factorization mod p of polynomials via modular forms

`Sep 2015 - Jun 2019` **Bachelor's degree in Mathematics**

- Universitat Autònoma de Barcelona (Bellaterra, Spain)

Bachelor's Thesis: Geodesics in Monge's ellipsoid

Professional Experience

Volunteer experience

Fellowships and awards

`2014` **Mathematical olympiad**

- Local phase (Calalonia), Gold medal (3rd place)
- National phase (Spain), Bronze medal (21st place)

Olympiad in informatics

- National phase (Spain), Bronze medal (10th place)

Talks

`2020` An introduction to theorem provers

- **Seminari Informal de Matemàtiques de Barcelona**

Languages

Catalan native or bilingual proficiency
Spanish native or bilingual proficiency
English upper intermediate professional proficiency
German upper intermediate professional proficiency

Skills

Programming langauges

Pyhton, C / C++, and Java at an advanced level

Mathematical software

SageMath, Lean and LaTeX at an advanced level.

Maxima and Magma at a user level.