

Francesco Naccarato

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EDUCATION

Scuola Normale Superiore

Mathematics student

Pisa
2017 - 2022

Relevant coursework: Elliptic and Modular Functions, Scheme Theory, The Arithmetic of Elliptic Curves, Analogues of Prime Numbers on Function Fields of Curves and Height Estimates in Function Fields.

University of Pisa

Master's Degree in Mathematics

Pisa
2020-2022

Graduated 110/110 cum laude;

Thesis: The Congruent Number Problem and ranks in quadratic twist families of elliptic curves.

Relevant coursework: Modular Forms, Analytic and Algebraic Number Theory.

Bachelor's Degree in Mathematics

2017 - 2020

Graduated 110/110 cum laude;

Thesis: Counting rational points on elliptic curves with rational 2-torsion.

ETH Zürich

Exchange Master's student

Zürich
Sep 2021 - Feb 2022

Worked on my Master's thesis with professor Emmanuel Kowalski on a one-semester SEMP exchange;

Relevant coursework: Student seminar in L -functions.

Liceo Scientifico "M.Grigoletti"

Scientific high school diploma: 100/100

Pordenone, Italy
2012 - 2017

Appointed one of the top 100 Italian students at *Giornata delle Eccellenze* 2016.

PROFESSIONAL EXPERIENCE

PhD student

ETH Zürich

Zürich
July 2023 - ongoing

Working on a project aimed at understanding certain arithmetic aspect of critical values of polynomials and their applications to certain exponential sums. Advisor: Emmanuel Kowalski;

Coordinating the undergraduate Topology course and grading various exams.

Teaching Assistant

University of Pisa

Pisa
2020-2021

PUBLICATIONS

Counting rational points on elliptic curves with a rational 2-torsion point

[Paper]

Established an improved upper bound for the number of rational points of bounded height on elliptic curves with nontrivial rational 2-torsion; published on *Rendiconti Lincei* (DOI: 10.4171/RLM/945);

Extended the results of a previous work by Enrico Bombieri and my thesis supervisor Umberto Zannier.

MEMBERSHIPS AND CONFERENCES

RIMSE

Member

2020-present

Active in *Rete Italiana Matematici delle Scuole d'Eccellenza*, a network of young mathematicians organizing study groups, seminars and lectures by established professors.

Number Theory days, Basel, Switzerland

10-11 November 2023

100 Years of Elliptic Curves, Cambridge, UK

15-19 August 2022

Elliptic Curves Summer School, Baskerville Hall, UK

8-12 August 2022

Workshop on Diophantine problems, Cetraro, Italy

July 2022 and July 2023

The second JNT Biennial Conference, Cetraro, Italy

18-22 July 2022