



MARA-IOANA POSTOLACHE

Peterhouse, Cambridge,
UNITED KINGDOM, CB2 1RD
mip32@cam.ac.uk

PROFILE STATEMENT

Mathematics student, currently studying for my Master's Degree. My interests lie mainly within analysis and differential geometry.

HONORS AND AWARDS

- Scholarship in Mathematics, Peterhouse – 2022-present
- HMC Scholarship – 2019-2021

LANGUAGES

- Romanian – native
- English – fluent
- German – beginner

PROGRAMMING

- MATLAB
- Python
- C++

RESEARCH EXPERIENCE

Summer Research Intern (June 2024 – August 2024)

University of Cambridge – Cambridge, UK

- Research project titled "Infinite-dimensional geometry of diffusions", supervised jointly by Prof. Clément Mouhot and Amélie Loher.
- Read into Otto calculus and gradient flow techniques for estimating convergence of solutions of PDEs.
- Will present my project at the Summer Research Festival on the 14th of October 2024.

Philippa Fawcett Intern (July 2023 – August 2023)

University of Cambridge – Cambridge, UK

- Group research project titled "Polynomials with many pre-periodic points", supervised by Prof. Holly Krieger.
- Tried to improve bounds on the number of pre-periodic rational points of polynomials, then also looked at polynomial Henon maps with particularly long cycles.
- Gave a presentation at the CMP Presentation Day in October 2023

EDUCATION

Mathematical Tripos (MMath)

University of Cambridge, Cambridge, UK

Current 4th year student, expected graduation date: July 2025
Will be taking courses in pure and applied analysis and differential geometry.

Mathematical Tripos (BA)

University of Cambridge, Cambridge, UK

Class I (First Year), Class II Division 1 (Second and Third year)
Third Year courses: Algebraic Geometry, Algebraic Topology, Analysis of Functions, Differential Geometry, Galois Theory, Linear Analysis, Probability and Measure, Representation Theory, Riemann Surfaces

A-Levels

Royal Masonic School for Girls, Rickmansworth, UK

A*A*A*A* in Maths, Further Maths, Physics, and Computer Science

EXTRACURRICULARS AND ACTIVITIES

CU Scout and Guide Club (2021-present)

Chair, Secretary, Webmaster, Marathon Co-organiser

- Part of the university student scout and guide group since start of first year, on committee since spring 2022.
- Completed a year as the Chair of the society, managing the entire committee through many unexpected role vacancies.
- Twice co-organiser of Marathon Challenge, an incident hike we put on for around 70 local scouts and guides aged 14 and over.

PROMYS Europe (July 2021 – August 2021)

First-year student

- Worked on open-ended Number Theory questions, making and proving my own hypotheses.
- Went from axioms of \mathbb{Z} to more advanced results like Legendre symbols and varied properties of related integer rings.
- Worked independently, as well as in a small group, sharing and connecting our statements and ideas.

Peterhouse Student Ambassador

Open Day Helper, Admissions Interview Helper

- Helped represent the college at the university open days in July 2023, September 2023, and July 2024.
- Also helped during the admission interview process in December 2023, guiding applicants around college.