

Edwina Aylward

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EDUCATION

University College London

September 2023 – September 2027 (Expected)

PhD student.

London, England

- ESPRC funded PhD student at the London School of Geometry and Number Theory, supervised by Vladimir Dokchitser. Current interests include elliptic curves and algebraic number theory.

Cambridge University

October 2022 – June 2023

Master of Advanced Study (MASt) in Pure Mathematics.

Trinity College, Cambridge, England

- Final grade: 88% (Distinction). Ranked 20/282.

Trinity College Dublin

September 2018 – May 2022

B.A. (Mod) in Mathematics.

Dublin, Ireland

- Final grade: 92%. Achieved gold medal for academic merit, and graduated first in class.

EXPERIENCE

Teaching

September 2019 - Present

University College London, Kings College London, Trinity College Dublin

- Taught tutorials for first year abstract algebra at KCL, and fourth year combinatorics at TCD.
- Marked assignments for analysis, linear algebra, abstract algebra, and mathematics for engineers modules.

Undergraduate Research

May 2020 - June 2022

Imperial College London, University College Dublin, Trinity College Dublin.

- **Mary Lister McCammon Research Fellow** (Imperial College London, Summer 2021).
Ten week research project supervised by Vladimir Dokchitser in number theory and representation theory.
- **UCD Summer research student** (University College Dublin, Summer 2021).
Six week research project supervised by Rupert Levene and Helena Smigoc in spectral graph theory and combinatorics.
- **Undergraduate Hamilton research assistant** (Trinity College Dublin, Summer 2020 and Summer 2022).
Six week research project in 2020 supervised by Nicolas Mascot in number theory and symbolic integration. Six week research project in 2022 supervised by Jack Kelly studying the Picard-Fuchs equation and Gauss-Manin connection.

TALKS

- Extended Weyl group and affine Dynkin diagrams (November 2024, Bruhat-Tits theory study group, KCL),
- Artin's primitive root conjecture (November 2024, 'Open problems in number theory' study group, UCL),
- Rank predictions: parity vs. L-value approaches (November 2024, Junior number theory seminar, University of Warwick),
- A survey of the Inverse Galois Problem (October 2024, London junior number theory seminar, KCL),
- Artin formalism and BSD (August 2024, YRANT VI, University of Oxford),
- Introduction to Etale cohomology (May 2024, Galois cohomology study group, KCL),
- Ray class fields (April 2024, Class field theory study group, UCL),
- Modularity theorem and Diophantine equations (October 2023, 10 minute presentations, UCL).

SCHOLARSHIPS AND PRIZES

- Trinity Studentship in Mathematics (2022): Awarded by Trinity College, Cambridge. One year studentship covering course fees and living expenses during completion of MASt.
- George Moore Scholarship (2022): Successful in Irish scholarship programme which supports students who wish to undertake a Master's degree in the US, Canada, Europe or the UK. Accepted funding partially, due to the above.
- Bishop Law Prize (2022): Award presented for graduating first in class.
- Hamilton Prize (2021): Awarded by the Royal Irish Academy. Award presented to the best undergraduate mathematics students in their final year of study, as nominated by their university.

TECHNICAL SKILLS

Programming Languages: C, Python. **Others:** Git, L^AT_EX, Mathematica, Magma, SageMath, Linux.