

# Edwina Aylward

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## EDUCATION

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### 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 arithmetic geometry.

### 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.

## PAPERS

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- Tamagawa numbers and positive rank of elliptic curves (Math. Proc. of the Cambridge Philos. Soc., April 2026).

## EXPERIENCE

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### Teaching

September 2019 - Present

*University College London, Kings College London, Trinity College Dublin*

- Tutorial teaching: abstract algebra (KCL), metric spaces and topology (KCL), combinatorics (TCD).
- Assignment marking: analysis, linear algebra, number theory, metric spaces and topology, abstract algebra.

### 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: 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: spectral graph theory.
- **Undergraduate Hamilton research assistant** (Trinity College Dublin, Summer 2020 and Summer 2022).  
Six-week research project (2020), supervised by Nicolas Mascot: number theory and symbolic integration. Six-week research project (2022), supervised by Jack Kelly: Picard–Fuchs equations and the Gauss–Manin connection.

## SELECTED TALKS

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- $\ell$ -parity results over global function fields (Nov. 2025, Linfoot Number theory seminar, Univ. of Bristol),
- $p$ -parity conjecture for twists of hyperelliptic curves by Artin representations (Nov. 2025, Manchester Number theory seminar, Univ. of Manchester),
- Reduction types of genus 2 curves (July 2025, LuCaNT conference, Providence, Rhode Island),
- Rank predictions: parity vs. L-value approaches (Nov. 2024, Junior number theory seminar, Univ. of Warwick),
- A survey of the Inverse Galois Problem (Oct. 2024, London junior number theory seminar, KCL),
- Artin formalism and BSD (Aug. 2024, YRANT VI, Univ. of Oxford),
- Introduction to Étale cohomology (May 2024, Galois cohomology study group, KCL),

## SCHOLARSHIPS AND PRIZES

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- 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.

## TECHNICAL SKILLS

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**Programming Languages:** C, Python. **Others:** Git, L<sup>A</sup>T<sub>E</sub>X, Mathematica, Magma, SageMath, Linux.