Bradley Ryan

Postgraduate Mathematics Student

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Education

2020–2024 **PhD in Pure Mathematics**, *University of Leeds*
Thesis supervised by Dr Oleg Chalykh and Professor Karin Baur.

2016–2020 **MMath, BSc Mathematics**, *University of Leeds*
Achieved First Class Honours with a grade average of 86%.

2014–2016 **A-Levels**, *Temple Moor High School*
Achieved Mathematics (A*), Further Mathematics (A), Chemistry (A), History (A).

2012–2014 **GCSEs**, *Temple Moor High School*
Achieved six A* grades, four A grades and two Distinction grades.

Research

2020–2024 Researching representations of quivers, Cherednik algebras and double affine Hecke algebras with applications to integrable systems.

2019–2020 Wrote a seventy-page survey on knot theory from the viewpoints of algebraic topology and differential geometry, supervised by Professor Martin Speight.

2018–2019 Wrote a report on the Poincaré disk model from a differential-geometric and complex-analytic perspective, supervised by Dr Derek Harland.

Talks

24/10/2023 **Double Affine Hecke Algebras and Character Varieties**
Leeds Algebra Seminar, University of Leeds.

14/06/2023 **Character Varieties and Symmetric Polynomials**
School of Mathematics Postgraduate Research Conference, University of Leeds.

17/06/2022 **A Deligne-Simpson Problem**
School of Mathematics Postgraduate Research Conference, University of Leeds.

18/11/2021 **Representations of Quivers via Double Affine Hecke Algebras**
Pure Mathematics Postgraduate Research Seminar (online), University of Leeds.

06/05/2021 **Knots and the Fundamental Group**
Pure Mathematics Postgraduate Research Seminar (online), University of Leeds.

Teaching

2023–2024 **Teaching Assistant**, *University of Leeds*
Responsible for tutorial classes and marking in the following modules:

- MATH1025 Number Systems, Tutor.
- MATH1225 Introduction to Geometry, Tutor.
- MATH2027 Rings and Polynomials, Module Marker.

2022–2023 **Teaching Assistant**, *University of Leeds*
Responsible for tutorial classes and marking in the following modules:

- MATH1060 Introductory Linear Algebra, Tutor.
- MATH1225 Introduction to Geometry, Exam Marker.
- MATH1331 Linear Algebra with Applications, Tutor.
- MATH1400 Modelling with Differential Equations, Tutor.
- MATH2027 Rings and Polynomials, Module Marker.
- MATH3044 Number Theory, Module Marker and Exam Marker.
- MATH3071 Groups and Symmetry, Exam Marker.
- MATH3143 Combinatorics, Exam Marker.

2021–2022 **Teaching Assistant**, *University of Leeds*
Responsible for tutorial classes and marking in the following modules:

- MATH1005 Core Mathematics, Exam Marker.
- MATH1025 Number Systems, Exam Marker.
- MATH1026 Sets, Sequences and Series, Tutor.
- MATH1331 Linear Algebra with Applications, Tutor.
- MATH2230 Discrete Mathematics, Exam Marker.

2020–2021 **Teaching Assistant**, *University of Leeds*
Responsible for tutorial classes and marking in the following modules:

- MATH1026 Sets, Sequences and Series, Exam Marker.
- MATH1060 Introductory Linear Algebra, Tutor and Exam Marker.
- MATH1225 Introduction to Geometry, Exam Marker.

2015–2023 **Mathematics Tutor**, *Personal*
One-on-one tutoring with 22 students at GCSE, A-Level and undergraduate-level.

Achievements

2020–2024 Studentship from the EPSRC (EP/2434194).
2019 Scholarship from the University of Leeds for being a top-ten-performing student.
2018 Scholarship from the University of Leeds for being a top-ten-performing student.
2016 Minerva Cup from Temple Moor High School for best KS5 academic performance.
2015 Achieved a Distinction in ABRSM Grade Five Piano.
2011 Minerva Cup from Temple Moor High School for best KS3 academic performance.

Skills

Documents Proficient in LaTeX, Word, Excel and PowerPoint.
Coding Basic experience with `html`, `Python 3` and `R`.
Driving Clean UK driver's licence.

Interests

I have played piano since a young age, thanks to the fact my grandmother owned one (that said, you wont see me on stage anytime soon!). You can also find me regularly going for runs, swimming at the nearby spa or visiting the cinema.