

Bailey Whitbread | Curriculum Vitae

Address: School of Mathematics and Physics, The University of Queensland, St Lucia, Australia.

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Education

The University of Queensland

Master of Philosophy

Brisbane, Australia

2022 – Present

- Supervised by [Masoud Kamgarpour](#) and [Ole Warnaar](#).
- Topic: Arithmetic geometry of representation varieties, using representation-theoretic and combinatorial techniques.
- UQ Graduate School and Research Training Program Scholarships (Stipend and tuition).

The University of Queensland

Bachelor of Mathematics, First Class Honours

Brisbane, Australia

2017 – 2021

- Supervised by [Masoud Kamgarpour](#) and [Anna Puskás](#).
- Thesis: Hecke algebras and Gelfand pairs in representation theory ([pdf 20/06/2021](#)).
- UQ Academic Merit Scholarship, UQ Link Scholarship, Smith Family Tertiary Scholarship.
- UQ Maths Stradbroke Island Workshop on Character Varieties (Dec 2021).
- UQ Maths Heron Island Workshop on Geometry and Representation Theory (Jun – Jul 2021).
- UQ Maths Stradbroke Island Retreat (Feb – Mar 2021).
- Simon Marais Competition (2018 and 2019).
- UQ Dean's Commendations for Academic Excellence.

Maroochydore State High School

Queensland Certificate of Education, ATAR 99.00 – 99.95.

Maroochydore, Australia

2012 – 2016

- QCAA Academic Commendation for Very High Achievement (under Bailey Page).
- University of Southern Queensland Academic Excellence and Leadership Award.
- High Distinctions in the Australian Mathematics Trust's Australian Mathematics Competition.

Work

Simon Marais Mathematics Competition Marker

Competition for undergraduates. Coordinated by Sean Gardiner.

Brisbane, Australia

Nov 2022

UQ/QAMT Problem Solving Competition Marker

Competition for high school students. Coordinated by Michael Bulmer.

Brisbane, Australia

Mar 2022

UQ Exam Marker

Marked exams for first and second year analysis and algebra courses.

Brisbane, Australia

2021 – 2023

UQ Research Assistant

Working students to improve clarity and conciseness in their mathematical writings.

Brisbane, Australia

Aug – Dec 2021

UQ Tutorial Assistant

I may have been your tutor for the following:

Brisbane, Australia

2019 – 2023

- [MATH3303 Abstract Algebra & Number theory](#).
- [MATH2401 Mathematical Analysis & Advanced Topics](#).
- [MATH2400 Mathematical Analysis](#).
- [MATH2301 Linear & Abstract Algebra & Number Theory](#).
- [MATH2001 Calculus and Linear Algebra II](#).
- [MATH1071 Advanced Calculus & Linear Algebra I](#).
- [MATH1061 Discrete Mathematics](#).
- [MATH1052 Multivariate Calculus & Ordinary Differential Equations](#).
- [MATH1051 Calculus & Linear Algebra I](#).
- [First Year Learning Centre](#).

Talks

66th Annual Meeting of the Australian Mathematical Society

Counting points on representation varieties

Sydney, Australia

Dec 2022

AMSI Winter School 2022

The representation variety and its E-polynomial

Brisbane, Australia

Jul 2022

Honours final talk

Hecke algebras and Gelfand pairs in representation theory

Brisbane, Australia

May 2021

UQ Mathematics Students Society

Kinky sets

Brisbane, Australia

Mar 2021

Coursework

Characteristic classes and Chern classes

Brisbane, Australia

Oct 2020

Coursework

The Twin Prime and Elliot–Halberstam Conjectures

Brisbane, Australia

Oct 2020

Coursework

Sieve methods

Brisbane, Australia

Aug 2020

UQ Mathematics Students Society

The Dirichlet function

Brisbane, Australia

Mar 2019

Service

UQ Maths Relay

Volunteer

Brisbane, Australia

2021 – 2023

Welcome event for undergraduates. Question-solver.

UQ Queensland Mathematics Summer School

Volunteer

Brisbane, Australia

Jan 2019

Summer school for senior high school students, 5 days.

UQ Mathematics Students Society

President and Vice President

Brisbane, Australia

2017 – 2019

Managing semesterly 'Lawn Bowls' and 'Wine & Cheese' events for the department. Organising student maths talks. Managing collaboration events with industry sponsors. Managing semesterly campus BBQ's. Managing the society's vending machine.

Events

You may have met me at the following events:

- 66th Annual Meeting of the Australian Mathematical Society, Dec 2022.
- Number Theory Down Under 10, Sep 2022.
- AMSI Winter School - New Directions in Representation Theory, Jun – Jul 2022.
- ANU Workshop - Character Varieties, E-Polynomials and Representation Zeta Functions, Feb 2022.
- UQ Maths North Stradbroke Island Workshop on Character Varieties, Dec 2021.
- UQ Maths Heron Island Workshop on Geometry and Representation Theory, Jun – Jul 2021.
- UQ Maths North Stradbroke Island Workshop, Feb – Mar 2021.
- 'What is . . . ?' (Wise) Seminar, 2021 – 2022.