

Luke Kershaw

l.kershaw@bristol.ac.uk

Office 2.21, Fry Building, Bristol

SUMMARY Current 3rd year PhD student in Mathematics at the University of Bristol. Researching homological algebra and representation theory of finite-dimensional algebras.

EDUCATION **Ongoing**
Doctor of Philosophy, Mathematics 2019-2023 (*Expected*)
Focus: Representation Theory of Finite-Dimensional Algebras
University of Bristol, Bristol, UK *Supervisor: Prof. Jeremy Rickard*
Previous
Master of Mathematics, Mathematics October 2015 - July 2019
University of Warwick, Coventry, UK
First Class *Final mark: 83%*
Blue Coat School, Liverpool
*A Levels: 3A*s, 1 A* *GCSEs: 8 A*s, 5 As, 1 B*

RESEARCH EXPERIENCE **Previous**
4th Year Project, Tropical Geometry *Supervisor: Dr Diane Maclagan*
Warwick Mathematics Institute 2018-2019
An investigation into the properties of tropical geometry, with a focus on tropical orders of vanishing and comparison with their classical analogue.
2nd Year Essay, Tensors and Exterior Algebra
Warwick Mathematics Institute 2016-2017
An introduction to the ideas behind Exterior Algebras aimed at second year mathematics students.

TEACHING EXPERIENCE **Ongoing**
Support Session Leader, Bristol School of Mathematics 2021-Present
Weekly support sessions and assignment marking. Communicate unfamiliar ideas to students and improve precision of their mathematical arguments. Give efficient feedback to written submissions and verbal questions.
Courses: Group Theory
Previous
Tutorial Leader, Bristol School of Mathematics 2019-2021
Fortnightly tutorials and homework grading. Focused on helping students to communicate their ideas clearly and in a mathematically rigorous manner.
Courses: Linear Algebra, Intro to Proof, Intro to Group Theory
Supervisor, Warwick Mathematics Institute 2018-19
Mentor and support two groups of five 1st year maths students with all core modules. Communicated a range of ideas to students, provided effective feedback to submitted work, and assisted their general mathematical development.

Peer Tutor, Warwick Mathematics Institute 2016
 Provided support for Teaching Assistant of 1st year analysis class. Improved students ability to be mathematically rigorous.

CONFERENCES ATTENDED *University of Bristol (Online), UK* August 2021
Finitistic Dimension Conjecture Workshop
University of Bristol (Online), UK June 2021
Young Researchers in Mathematics 2021
University of Valencia (Online), Spain December 2020
3rd Bringing Young Mathematicians Together Conference
ICRA 2020 (Online) November 2020
Workshop and International Conference on Representations of Algebras
Hausdorff Center for Mathematics (Online), Germany October 2020
Winter School - "Connections between representation theory and geometry"
London Mathematical Society (Online), UK September 2020
Autumn Algebra School
Leicester (Online), UK September 2020
Categorifications in Representation Theory

MISC. EXPERIENCE *PGR Representative:* 2019-Present
 Member of the Student Staff Liason Committee.
Conference Co-organiser:
 MINGLE 2020 (annual Bristol postgraduate conference).
Programming Languages: Python, Lua, Matlab, Java, C.

WORK EXPERIENCE *Data Engineer (prev. Data Science Intern)* Jul-Aug 2018, Jul-Aug 2019
 AIMES Ltd, Liverpool, England

- Developed an automatic system for data collection and processing to aid in NHS funding applications.
- Effectively organised work to complete the project within strict deadlines.

Accounts Assistant Dec 2016, Mar-Apr 2017, Jul-Sep 2017
 Velocity Composites Plc, Burnley, England

- Developed a demand analysis project to forecast changes in customer needs.
- Communicated within the business to decide which information was relevant to calculations and decision making.

Accounts Assistant Aug 2014
 Ultrasys Plc, London, England

- Managed current and historical invoices, processed purchases and expenses.