Adele Jackson

https://adelejackson.com • adele.jackson@sydney.edu.au

Experience

2024-Present	**Postdoctoral Research Associate, University of Sydney** Supervisor: Stephan Tillmann

Education

2019-2024	**DPhil in Mathematics, University of Oxford** Thesis: *Seifert fibered spaces: triangulation and recognition* Supervisor: Marc Lackenby
2015-2018	**B. Philosophy (1st class honours), Australian National University** Thesis: *Presentations of the mapping class group* Supervisor: Joan Licata

Preprints and Papers

- **Recognition of Seifert fibered spaces with boundary is in NP**, 2023. arXiv:2306.04612, 38 pages.
- **Minimal triangulation size of Seifert fibered spaces with boundary**, 2023. arXiv:2301.02085, 24 pages.
- **Arc diagrams on 3-manifold spines**, 2023. *with J. Brand, B. Burton, Z. Dancso, A. He and J. Licata.* Discrete and Computational Geometry. DOI: 10.1007/s00454-023-00539-4.

Grants and Awards

2019-2024	Clarendon Scholarship, University of Oxford
2021	Graduate Research Fund grant, Lincoln College, Oxford
2015-2018	National Merit Scholarship, Australian National University
2018	Chancellor's Letter of Commendation, Australian National University
	ChooseMaths Scholarship to attend AMSI Summer School in Mathematics
2017	Vacation Research Scholarship, AMSI
2016	Half-Academic Scholarship, Bruce Hall, Australian National University

Conference talks

April 2023	Computational problems in low-dimensional topology III, Rutgers-Newark
January 2023	Low-dimensional topology workshop, Oberwolfach
July 2021	Young Topologists Meeting (online)

Seminar talks

January 2024	King's College London/University College London, Junior Geometry seminar
December 2023	Universität Bonn, Oberseminar Geometric Group Theory
December 2023	Laboratoire d'Informatique Gaspard-Monge, Paris, Séminaire Algorithmique Discrète et Applications
November 2023	Università di Pisa/Scuola Normale Superiore, Baby Geometri seminar
November 2023	University of Southampton, Topology seminar
November 2023	University of Warwick, Geometry and Topology seminar
October 2023	University of Oxford, Topology seminar
October 2023	Groups and Geometry in the South East, London
June 2023	International Young Seminar on Bounded Cohomology and Simplicial Volume (online)
March 2023	University of Bristol, Geometry and Topology seminar

March 2023	University of Warwick, Junior Algebraic Geometry, Algebraic Topology and Algebra seminar
February 2023	Université du Luxembourg, Geometry and Topology seminar
December 2022	University of Bristol, Junior Geometry seminar
March 2022	University of Cambridge, Junior Geometry seminar
September 2021	University of Queensland, Pure Maths seminar
March 2021	MATRIX/AMSI, Graduate Talks in Geometry and Topology (online)
February 2021	Australian National University, Canberra 3-manifolds seminar
January 2017	University of Queensland, Pure Maths seminar

Teaching

University of Oxford

2020-23	Non-stipendiary lecturer, pure mathematics, St Catherine's College
	Linear Algebra I (x3), Linear Algebra II (x3), Geometry (x3), Analysis I (x3), Analysis II (x3), Analysis III (x3), Group Theory (x3)
09/2023	Tutor for Opportunity Oxford university prep program for disadvantaged entrants
2022-23	Tutor for UNIQ outreach program for disadvantaged Oxford applicants
2022	Tutor, Mathematical Institute
	Topology and Groups (15 students)
2022	MESME mentor
	Ran a weekly maths enrichment group for 13-year-olds for 20 weeks
2020-2021	Teaching assistant, Mathematical Institute
	Geometry of Surfaces (15 students), Geometric Group Theory (15 students)

Australian National University

Semester 2 2018	Tutor for COMP1730: Programming for Scientists *(40 students)*
Semester 1 2018	Tutor for COMP4670: Introduction to Statistical Machine Learning *(60 students)*
Semester 1 2017	Tutor for COMP4670: Introduction to Statistical Machine Learning *(60 students)*

Australian Informatics Olympiad Program

2014-2018	Tutor at Australian Informatics Olympiad Committee School of Excellence
	Gave lectures, ran labs and prepared exams on algorithms for 25 students. Evaluations: 4.7/5.

Service and other experience

2019, 2021, 2023	Member of admissions team, mathematics, University of Oxford
	Interviewed maths candidates at St Hugh's, Teddy Hall, and Lincoln College
2020-23	Graduate Studies Committee, Mathematical Institute, University of Oxford
11/2022	Panelist for PhD Your Way outreach event, online
2021-22	Organiser, Junior Topology and Group Theory seminar, University of Oxford
11/2020-03/2021	Organiser, Canberra 3-manifolds seminar
01/2019-06/2019	Research assistant, Machine Learning Research Group, CSIRO
11/2015-02/2016	Software engineering intern, Google, Sydney