

# Adele Jackson

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## Education

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| 2019-2024<br>(expected) | <b>DPhil in Mathematics</b> , University of Oxford, UK.<br>Thesis: <i>Seifert fibered spaces: triangulation and recognition</i><br>Supervisor: Marc Lackenby                           |
| 2015-2018               | <b>B. Philosophy</b> (1 <sup>st</sup> class honours), Australian National University, Australia.<br>Thesis: <i>Presentations of the mapping class group</i><br>Supervisor: Joan Licata |

## Preprints and Papers

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- **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 Scholarships

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|--------------|---|
| 2019-present | Clarendon Scholarship, University of Oxford                           |
| 2021         | Graduate Research Fund grant, Lincoln College, Oxford                 |
| 2015-2018    | National Merit Scholarship, Australian National University            |
| 2018         | 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

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| 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

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|---------------|---|
| 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

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### University of Oxford

2020-23	Non-stipendiary lecturer, pure mathematics, St Catherine's College <i>Linear Algebra I (x3), Linear Algebra II (x3), Geometry (x3), Analysis I (x3), Analysis II (x3), Analysis III (x3), Group Theory (x3)</i>
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 <i>Topology and Groups (15 students)</i>
2022	MESME mentor <i>Ran a weekly maths enrichment group for 13-year-olds for 20 weeks</i>
2020-2021	Teaching assistant, Mathematical Institute <i>Geometry of Surfaces (15 students), Geometric Group Theory (15 students)</i>

**Australian National University**

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

**Australian Informatics Olympiad Program**

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

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2019, 2021, 2023	Member of admissions team, mathematics, University of Oxford <i>Interviewed maths candidates at St Hugh's, Teddy Hall, and Lincoln College</i>
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