SAMUEL FISHER

University of Oxford, Mathematical Institute

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EDUCATION

University of Oxford — 2020 – 2025 (expected)
DPhil Mathematics
Supervised by Prof. Dawid Kielak

McGill University — 2019 – 2020
MSc Mathematics
Supervised by Prof. Daniel T. Wise

McGill University — 2016 – 2019
BSc Honours mathematics and physics

PREPRINTS AND PUBLICATIONS

6. *On the cohomological dimension of kernels of maps to $\mathbb{Z}$*, `arxiv.org/abs/2403.18758`, submitted (2024)
5. (with Ismael Morales) *The Hanna Neumann Conjecture for graphs of free groups with cyclic edge groups*, `arxiv.org/abs/2112.00397`, submitted (2023)
4. (with Pablo Sánchez-Peralta) *Division rings for group algebras of virtually compact special groups and 3-manifold groups*, to appear in J. Comb. Algebra (2023)
3. (with Sam Hughes and Ian J. Leary) *Homological growth of Artin kernels in positive characteristic*, Math. Ann. **389**, no. 1 (2023)
2. *Algebraic fibrings of a hyperbolic 7-manifold*, Bull. Lond. Math. Soc. **55**, no. 3 (2023)
1. *Improved algebraic fibrings*, `arxiv.org/abs/2112.00397`, to appear in Compos. Math. (2021)

INVITED TALKS

- *Maps to the circle, to the integers, and L^2-Betti numbers*, University of Pisa Geometry Seminar — June 2024
- *Virtually free-by-cyclic RFRS groups*, Modern methods in infinite groups, Bristol — June 2024
- *L^2-Betti numbers and kernels of maps to $\mathbb{Z}$*, Conference on homology growth and fibering, Bonn — May 2024
- *Virtual fibering of manifolds and groups*, Glasgow Geometry and Topology Seminar — March 2024
- *Kaplansky's zero divisor conjecture via embeddings into division rings*, Southampton Pure Maths Colloquium — March 2024
- *Algebraic fibring and ℓ^2-Betti numbers*, McGill Geometric Group Theory Seminar — March 2023
- *Homology gradients of Bestvina–Brady groups*, Cambridge Junior Geometry Seminar — February 2023
- *Analogues of ℓ^2-Betti numbers in positive characteristic and homology growth*, ICMAT Group Theory Seminar — January 2023
- *ℓ^2-Betti numbers and algebraic fibring*, ICMAT Group Theory Seminar — January 2023
- *Agrarian invariants and a positive characteristic version of Lück's approximation*, Southampton Pure Maths Lunchtime Seminar — November 2022
- *Algebraic fibring and ℓ^2-Betti numbers*, KIT AG Topology Seminar — November 2022

AWARDS

NSERC Postgraduate Scholarship – Doctorate	2022 – 2025
ERC studentship	2020 – 2024
NSERC Canada graduate scholarship – Master's	2019 – 2020
Award for Outstanding Teaching Assistant	2019

NSERC Summer Undergraduate Research Award – Supervised by Prof. Jacques Hurtubise		Summer 2018
Undergraduate Summer Research Award – Supervised by Prof. Eyal Goren		Summer 2017
J.W. McConnell major renewable entrance scholarship		2016 – 2019
Royal Conservatory of Music Gold Medal		2010 – 2016
Top piano performance mark in Québec for grades 3, 4, 5, 7, 9, and 10		

TEACHING

University of Oxford

Stipendiary Lectureship at St. Peter's College		2024 – 2025
Tutor for: M2 Analysis I, II, and III, and ASO Graph Theory		
B4.1 Functional Analysis I	Tutor for visiting student at St. Peter's	Trinity 2024
ASO Graph Theory	Tutor at St. Peter's	Trinity 2024
ASO Projective Geometry	Tutor at Queen's	Trinity 2024
M2 Analysis III	Tutor at Queen's	Trinity 2024
M2 Analysis II	Teaching assistant at Queen's	Hilary 2024
B3.1 Galois Theory	Tutor	Michaelmas 2023
B1.1 Logic	Tutor	Michaelmas 2023
Stipendiary Lectureship at Hertford College		Michaelmas 2022
Tutor for: A0 Linear Algebra and A2 Metric Spaces and Complex Analysis		
A3 Rings and Modules	Tutor for visiting student at St. Edmund Hall	Trinity 2022
A5 Topology	Tutor for visiting student at St. Edmund Hall	Hilary 2022
B1.2 Set Theory	Tutor	Hilary 2022
C2.2 Homological Algebra	Teaching assistant	Michaelmas 2021
A8 Probability	Tutor for visiting student at St. Edmund Hall	Michaelmas 2021
ASO Graph Theory	Tutor at Queen's and St. Anne's	Trinity 2021
C3.2 Geometric Group Theory	Teaching assistant	Hilary 2021
C3.1 Algebraic Topology	Teaching assistant	Michaelmas 2020
B7.1 Classical Mechanics	Teaching assistant	Michaelmas 2020

McGill University

Algebra I	Teaching assistant	fall 2019

Grader for: Hons. Analysis II (winter 2019), Hons. Analysis I (fall 2018), Hons. Applied Linear Algebra (winter 2018), Hons. ODEs (winter 2018), Advanced Calculus (fall 2017), Algebra I (fall 2017)

Dawson College

Weekly lectures on problem solving techniques for math competitions	winter 2021
Lecture on Cantor's diagonal argument for π-day	March 2021
Weekly zoom lectures on set theory	fall 2020
Weekly lectures on ODEs	winter 2020
Weekly lectures on multivariable calculus	fall 2019