

Benjamin Morris

Personal

Nationality: British and Australian
Languages: English
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Education

2022-2026* **Ph.D.** in Mathematics, University of Leeds. Supervisor: Prof. Paul Martin
2018-21 **Ph.B.** with First Class Honours in Mathematics, Australian National University.
Supervisor: Prof. Vladimir Mangazeev

Research Experience

2019-2020 Summer Research Scholar, Research School of Physics, Australian National University, (Advisor: Prof. Vladimir Mangazeev)

Awards & Honors

April 2022 EPSRC Doctoral Training Partnership Studentship
July 2020 Chancellor's Letter of Commendation (awarded for maintaining a perfect GPA in 2019)
Jan 2019 Chemistry Ambassador Program, UK (1500 AUD)
Jan 2018 PhB Science Scholarship (6500 AUD)
Dec 2017 Queensland Certificate of Education - Certificate of Academic Commendation
Aug 2017 Australian Mathematics Competition - High Distinction
Aug 2016 Australian Mathematics Competition - High Distinction
Sep 2011 Australasian Problem Solving Mathematical Olympiads Junior Division - top 25% achiever and highest individual score

*Expected.

Presentations

Conference Talks

- T1. **Morris, B**, Ibarra, D., Montoya-Vega, G. & Martin, P. *A Diagram Category for Non-orientable Surfaces* Biracks and Biquandles: Theory, applications, and new perspectives, (Leeds, UK). Dec. 2024.
- T2. **Morris, B**, Ibarra, D., Montoya-Vega, G. & Martin, P. *An Unorientable Extension of the Temperley-Lieb Category* School of Maths PGR Conference, (Leeds, UK). July 2024.
- T3. **Morris, B** & Mangazeev, V. *Towards a factorised solution of the Yang-Baxter equation with $U_q(sl_n)$ symmetry* SIDE 14.2 (Symmetries and Integrability of Difference Equations), (Warsaw, Poland). June 2023.
- T4. **Morris, B** & Mangazeev, V. *Towards a factorised solution of the Yang-Baxter equation with $U_q(sl_n)$ symmetry* Applications of Hecke and related algebras: Representations, Integrability and Physics, (Les Houches, France). Feb. 2023.
- T5. **Morris, B** & Mangazeev, V. *Towards a factorised solution of the Yang-Baxter equation with $U_q(sl_n)$ symmetry* 65th Annual Meeting of the Australian Mathematical Society, Integrable Systems and Mathematical Physics special session, (Newcastle, Australia). Dec. 2021.

Seminars

- S1. **Morris, B**. *The Yang-Baxter Equation and Quantum Group Symmetry* Mathematical Physics at Leeds, (Leeds, UK). Nov. 2024.
- S2. **Morris, B**. *What's the Deal with Cellular Algebras* Pure Mathematics Postgraduate Seminar, (Leeds, UK). Oct. 2024.
- S3. **Morris, B**. *Algebra from Statistical Mechanics* Students in Theoretical and Mathematical Physics, (Edinburgh, UK). Apr. 2024.
- S4. **Morris, B**, Ibarra, D., Montoya-Vega, G. & Martin, P. *An Unorientable Extension of the Temperley-Lieb Category* Junior London Algebra Colloquium, (London, UK). Mar. 2024.
- S5. **Morris, B**. *Lattice Statistical Mechanics is Algebra* Pure Mathematics Postgraduate Seminar, (Leeds, UK). Mar. 2024.
- S6. **Morris, B** & Mangazeev, V. *Towards a factorised solution of the Yang-Baxter equation with $U_q(sl_n)$ symmetry* Pure Mathematics Postgraduate Seminar, (Leeds, UK). Jan. 2023.

Posters

- P1. **Morris, B**, Ibarra, D., Montoya-Vega, G. & Martin, P. *An Unorientable Extension of the Temperley-Lieb Category* Topological aspects of low-dimensional quantum physics, (Maynooth, Ireland). Apr. 2024.

Teaching

University of Leeds

2024/25 Demonstrator, Real Analysis (MATH1110)

2024/25 Demonstrator, Introduction to Group Theory (MATH1120)
2023/24 Demonstrator, Real Analysis (MATH2017)
2023/24 Demonstrator, Calculus and Mathematical Analysis (MATH1050)
2023/24 Demonstrator, Numbers and Vectors (MATH1055)

Australian National University

2022 Demonstrator, ODEs (SDU-ANU Joint Science College)
2022 Demonstrator, Mathematical Abstraction I (SDU-ANU Joint Science College)
2022 Demonstrator, Applied Mathematics I (MATH2301)

Other Experience

2024-2025 Organiser of the Pure Mathematics Postgraduate Seminar, University of Leeds
2022 Private Tuition for Undergraduate Students, Australian National University
2019 Academic Mentor, Ursula Hall, Australian National University
2019 Peer Assisted Learning (PAL) Mentor, Research School of Chemistry, Australian National University

Computer Skills

Proficiency in Mathematica, Python, Matlab, \LaTeX .

Last updated: February 27, 2025