

Joseph Martin

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Profile

Enthusiastic mathematics educator with a PhD and over six years of undergraduate teaching experience across mathematics and engineering. Experienced in lecturing, tutorial delivery, module coordination, and outreach. Committed to inclusive, high-quality teaching with a focus on deepening students' understanding of core ideas through intuitive explanation, guided discussion, and dialogic teaching.

Education

PhD in Mathematics

University of Sheffield, 2019 – 2024

Thesis title: *A Diagrammatic Approach to Constructing Fibrant Double Categories*

Master of Mathematics (MMath), first-class honours

University of Bath, 2014 – 2018

Thesis title: *An Introduction to the Periodic Table of n -Categories*

Employment

University of Sheffield

2019 – 2024 • 5 years

- **Module Coordinator and Supervisor in Professional Development and Employability Skills**
2023 – 2024 • 1 year
Co-managed a large module involving small-group, skills-based teaching. Supervised, managed and supported a team of final-year tutors, reviewed and moderated their marking, and ensured consistency in feedback and assessment. Course content included analysis of job adverts, job descriptions, and CVs, and the practices of evidencing and reflection.
- **Module Lecturer in Computational and Numerical Methods**
Sep 2020 – Feb 2021 • 6 months
Lectured a third-year module for mechanical engineering students with full responsibility for delivery and assessment. Course content included numerical methods for solving partial differential equations, optimisation techniques, splines for curve fitting, and implementation of algorithms in MATLAB.

- **Mathematics Tutorial Lead**

2019 – 2024 • 5 years

Led tutorials on over a dozen modules for mathematics and engineering undergraduates, often to large groups. Marked assignments to deadlines, moderated others' marking, and gave constructive and supportive feedback. Worked with Learning Support Plans, being responsive to student needs. Content included

- foundation year modules in algebra, calculus, statistics, and numerical methods,
- engineering and applied mathematics (e.g., *Differential Equations, Mechanics and Fluids*),
- mathematics for programming and data analysis (e.g., *Python Programming for Engineers*, and *Advanced Bioengineering Statistics*),
- core pure mathematics, including number theory, algebra and analysis.

- **Engagement Tutor**

2020– 2023 • 3 years

Designed and delivered intensive six-hour support sessions for mathematics undergraduates identified as being at risk of underperformance or disengagement, with tailored content design focused on rebuilding mathematical confidence through guided problem-solving and interactive group teaching.

- **Undergraduate Research Project Supervisor**

Jun 2020 – Aug 2020 • 3 months

Supervised an undergraduate summer research project on group theory. Offered research direction through weekly meetings, and gave feedback and guidance on the student's preparation of a project report and presentation.

University of Bath

2016 – 2018 • 2 years

- **Mathematics Tutorial Lead**

2016 – 2018 • 2 years

Led first-year undergraduate tutorials in algebra and analysis as well as MATLAB programming labs. Marked and provided feedback on weekly problem sheets.

Outreach and Volunteering

Guest Speaker, Undergraduate Outreach Seminar Series

University of Sheffield • 2019–2023 • 3 years

Delivered outreach lectures aimed at engaging undergraduate audiences with enriching, exploratory mathematical topics beyond the standard curriculum. Talks I delivered include *Cold Wallets and Cryptocurrency*, *Sober Topological Spaces and Point-Free Topology*; and *Combinatorial Game Theory*.

Sex Education Volunteer, Sexpression UK

Schools in Sheffield • 2019–2023 • 3 years • 3hrs/mo

Delivered sex education lessons to Year 10 and 11 students in secondary schools across Sheffield; used a mix of presentation-led teaching and small group activities.

Maths Tutor, Action Tutoring

King Edward VII School, Sheffield • Jan 2025 – Present • 6 months • 1hr/wk

Provide maths tutoring to Year 10 pupils from disadvantaged backgrounds in after-school sessions. Work focuses on building mathematical confidence and supporting GCSE attainment.

Awards

Teaching Excellence Award, University of Sheffield Education Awards, 2022.

Awarded for ‘an approach to teaching that had a significant impact on inspiring student learning’.

Research Poster Presentation Award, Faculty of Science Graduate Showcase, 2021

Professional Development

Science Teaching Network, University of Sheffield

Regularly attended seminars on best practice in science and mathematics teaching. Topics included inclusive pedagogy, assessment strategies, constructive alignment, and effective use of feedback.

Elevate Workshops, University of Sheffield

Participated in a series of training workshops on teaching and learning in higher education, covering areas such as active learning, course design, student engagement, and digital tools for teaching.

Sheffield Teachers and Advisors Conference, 2022, University of Sheffield and Sheffield Hallam University

Attended a conference focused on access, admissions, and student support. Sessions covered UCAS updates, student finance, personal statements, and widening participation. Took part in breakout discussions on inclusive access and enterprise education.

Effectively Teaching Mathematics as a Postgraduate, 2023, University of Sheffield

Attended a one-day teaching-focused conference at the University of Sheffield, part of the *IMA Higher Education Teaching and Learning Series*. Explored strategies for engaging students, structuring classroom sessions, and developing reflective teaching practices.