

# Malthe Sparring

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## Education

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### University of Edinburgh

Sep 2022 - Aug 2026

*PhD Geometry and Topology*

- Working with Prof. Clark Barwick on a project on "Koszul duality of  $\infty$ -operads."
- Member of the GlaMS PhD training Centre.

### University of Edinburgh

Sep 2017 - May 2022

*MMath Mathematics*

- Awarded a 2021 Summer Vacation Scholarship for a project on "Axiomatic Homology and the Borsuk-Ulam Theorem".
- Awarded a Year 1 Certificate of Merit.

## Experience

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### Mathematics Tutor

Jan 2023 - Current

*University of Edinburgh*

- Experienced tutor of undergraduate mathematics, in topics ranging from pure to applied; introductory to advanced.
- Receiving training on reflective practices as work towards an Edinburgh Teaching Award.
- (Spring 2023) Algebraic Topology, Fundamentals of Pure Mathematics.
- (Autumn 2023) Category Theory, Honours Analysis - Skills (Presentation skills), MathsBase (Homework help).
- (Spring 2024) Honours Algebra - Skills (Mathematical computing), Proofs and Problem Solving.
- (Autumn 2024) Accelerated Proofs and Problem Solving, Axiomatic Set Theory, MathsBase.
- (Spring 2025) Calculus and its Applications.

### Online Assessment Intern

Aug 2022 - Sep 2022

*University of Glasgow*

- Responsible for converting a series of diagnostics tests for undergraduate students into the STACK system.

### Online Assessment Intern

May 2022 - June 2022

*Heriot-Watt University*

- Took part in a project to introduce STACK assessment in first year mathematics courses. This included designing new questions, and running a workshop for colleagues.

### Freelance Mathematics Tutor

Jan 2020 - May 2022

- Gained experience tutoring students age 16-18 of the International Baccalaureate programme, in both an individual and group setting.

### ASID Intern

June 2020 - Aug 2020

*University of Edinburgh*

- Took part in a project to turn the HELM mathematics workbooks into STACK quizzes. This included conducting quality-assurance on questions written by colleagues.
- Gained experience in teaching STACK from organizing and speaking at eight STACK workshops.
- Learned HTML and CSS through designing the official website [stack-assessment.org](https://stack-assessment.org).

### Online Assessment Community Engagement Intern

June 2019 - Aug 2019

*University of Edinburgh*

- Responsible for improving the learning experience of the online assessment system STACK.
- Collated a [collection of cases studies](#) detailing innovative use of STACK.
- Conducted a survey of STACK users world-wide.

## Additional Accomplishments

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### Twoples Mentor

*Sep 2023 - Dec 2023*

- Mentored a project on algebraic topology for [Twoples](#), an online directed reading program for mathematics undergraduates

### Teaching Intern

*Sep 2020*

- Completed a two-week teaching internship at the upper-secondary school Birkerød Gymnasium, HF and IB.

### Publicist for the University of Edinburgh Swing Dance Society

*April 2019 - April 2020*

### Treasurer for the University of Edinburgh Swing Dance Society

*April 2018 - April 2019*

## Technologies

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Experienced user of Python, Git, LEAN and LaTeX.

Experienced in online mathematics assessment via STACK