

Research Interests

My main research interests are in **algorithmic graph theory** and **computational complexity**, with a particular focus on parameterised complexity and matching problems.

Awards and Scholarships

- Won the annual **Haya Freedman Prize for the best dissertation** produced by a student on the MSc in Applicable Mathematics at the London School of Economics from a cohort of 31 students.
- Awarded a **PhD Studentship** (£56244) by the Engineering and Physical Sciences Research Council (EPSRC).
- Successfully applied for a **Travel Scholarship** (\$900) from TCS Women to attend the 50th Annual ACM Symposium on the Theory of Computing (STOC 2018) in Los Angeles, California.
- Obtained **funding from the Sigma Network** (£2400) in 2015 to develop online mathematics revision resources for economics undergraduate students after proposing the idea to Newcastle University's E-Learning Unit.
- Secured a **Vacation Research Scholarship** (£1456) from Newcastle University to work on a mathematical modelling research project during the summer of 2014.

Education

PhD in Computer Science

University of Glasgow

2017 – 2021

Award: EPSRC PhD Scholarship

Thesis Title: Parameterised Algorithms for Hard Matching Problems

Supervisors: Dr Kitty Meeks and Prof. David Manlove

MSc in Applicable Mathematics - *Graduated with Distinction*

London School of Economics and Political Science

2015 – 2016

Award: Haya Freedman Prize for the best dissertation in mathematics

Thesis Title: Covering Edge-Coloured Graphs by Monochromatic Paths and Cycles

BSc (Hons) in Economics and Mathematics

Newcastle University

2012 – 2015

Award: Newcastle University Vacation Research Scholarship

Presentations

British Combinatorial Conference

Subgraph Counting in Practice

University of Birmingham

29 July – 2 August 2019

STOC 2018

Subgraph Counting in Practice (Poster)

Los Angeles, California

25 – 29 June 2018

25th Postgraduate Combinatorial Conference

Partitioning edge-coloured graphs into monochromatic subgraphs

London School of Economics

4 – 6 June 2018

2018 Colloquia in Combinatorics

Counting Subgraphs Efficiently (Poster)

London

8 – 9 May 2018

FATA Research Seminar

Counting Subgraphs Efficiently

University of Glasgow

10th April 2018

CETL-MSOR Conference 2015

Online Maths Revision Resources for Economics Students

University of Greenwich, London

8 – 9 September 2015

Academic Events Attended

- AlgoUK Workshop, Liverpool University (September 2018)
- One-Day Meeting in Combinatorics, University of Oxford (May 2018)
- Glasgow Workshop on Mechanism Design and Behavioural Economics, University of Glasgow (May 2018)
- Scottish Combinatorics Meeting 2018, University of Edinburgh (April 2018)
- AlgoUK Workshop, King's College London (February 2018)
- MATCH-UP 2017, Microsoft Research New England (April 2017)

Employment

Heriot-Watt University

Research Assistant - Psychology

Edinburgh, UK

April–September 2019

- Single-handedly developed and tested a new computer role play software program for use in investigating children's social vulnerabilities.
- Worked in collaboration with a team of psychologists to design the software tool in line with their requirements.

University of Glasgow

Course Demonstrator

Glasgow, UK

January – May 2019

- Assist in lab demonstration classes for Algorithms and Data Structures master's degree course.

Inform Information Systems Limited

Software Developer

Maidenhead

February – October 2017

- Developed the company's first automated software test scripts.
- Implemented multiple software systems.

Technology Summary

- **Coding:** Java, SQL
- **Environments:** Windows, Linux, Microsoft SQL Server