

EDUCATION AND QUALIFICATIONS

2021 – Present: **Cardiff University, Mathematics PhD**

- Researching Least Squares Proper Generalised Decomposition Mimetic Spectral Element Methods with Professor Tim Phillips and Dr Angela Mihai, funded by Engineering and Physical Science Research Council.
- This research focuses on developing numerical methods and algorithms to solve elliptic PDEs.
- Completed Doctoral training through courses in Adaptive Finite Element Methods, Continuum Mechanics, Numerical Methods in Python, Theoretical PDEs, Mathematical Methods, Inverse Problems, Advanced Fluid Dynamics.
- Attended and presented my research at conferences and seminars including Women's Retreat for Applied Mathematics at the ICMS 2023, Welsh Mathematics Colloquium at Gregynog 2022 and 2023, Applied and Computational seminar at Cardiff University 2023.
- Department competition winner of 3 Minute Thesis 2023.
- Department competition winner of Bake Your Thesis 2023.
- Chair Student Rep for Postgraduate Maths where I have organised our Student Staff Panels 2022 – 2023.
- Postgraduate Teaching Assistant for undergraduate modules and the Maths Support Service (see Experience).
- Run workshops as part of Outreach (see Experience).
- Member of the Women in Maths and Computer Science group.

2022 – 2023: **Cardiff University, Associate Fellowship AFHEA**

- Part of AdvanceHE-accredited Cardiff University Education Fellowship Programmes.
- Recognition for professional practice in learning and teaching.
- Undertook role of cohort Student Rep.

2020 – 2021: **Cardiff University, Mathematical Biology MPhil**

- Research project with Dr Katerina Kaouri, Dr Thomas Woolley, and Prof Karl Swann. We modelled Ca^{2+} and IP3 oscillations in egg cells at fertilisation, developing a deterministic model.
- Postgraduate teaching assistant during this time.
- Member of the Mathematical Biology reading group.

2015 – 2019: **Cardiff University, Mathematics with a year abroad BSc**

- First Class Honours with a final year average of 83%, overall average of 77%.
- Completed a year Studying Abroad at Drexel University, Philadelphia. I took classes in the School of Engineering which included Statics and Introduction to Control Theory. I also took PhD level modules including Complex Analysis. I immersed myself into a new culture and made new connections.
- Student mentor, mentor consultant and a student representative.

2008 – 2015: **Ysgol Friars School, Bangor (ABC)**

EMPLOYMENT AND WORK EXPERIENCE

2023 – Present: **We Solve Problems Tutor.**

- Lead a Saturday social club for 12-16-year-old maths enthusiasts, delivering sessions on problem solving and structured thinking.

2020 – Present: **Cardiff University, Postgraduate Teaching Assistant**

- Taught modules to first year undergraduates in Foundations of Mathematics II, Elementary Differential equations, and Linear Algebra, in both Welsh and English.
- Tutor for Maths Support, a drop-in service for mathematical and statistical queries for any member of the university.

2022 – Present: **Cardiff University Outreach Worker**

- Run interactive Mathematical Workshops for a wide range of abilities and ages:
 - FMSPW conference for year 8/9s 2022,
 - ZNPU (Ukraine) Night of Science 2022,
 - Maths Adventures Day as a part of Cardiff Science Festival 2023,
 - Bridgend Seren Day for year 8s 2023,
 - FMSPW conference for year 10/11s 2023.

2020 – Present: **Maths tutor**

- Tutored KS3, GCSE and A level Mathematics students of a wide range of abilities and confidence.
- Employ innovative teaching methods to convey complex concepts and foster enthusiasm for the subject.

2019 – 2021: **Pizza House, Bangor, Assistant Manager**

- Managed family business full-time in university breaks and during MPhil.
- Recruited and trained staff and oversaw shift scheduling and stock deliveries.
- Implemented comprehensive safety measures in response to the COVID-19 pandemic, ensuring well-being of customers and staff.

SKILLS AND ACHIEVEMENTS

Skills

- Experienced in MATLAB, Python, Maple, and LaTeX.
- Some experience in JavaScript, React, CSS, HTML, SQL.

Courses and achievements

- Code First Girls course in SQL sponsored by Admiral, 2023.
- Code First Girls course in JavaScript, sponsored by BAE systems and winner of best class project, 2023.
- Code First Girls course in Python sponsored by Deloitte, 2021.
- UK Graduate Modelling Camp, Newton Gateway to Mathematics, 2021.
- Welsh Intermediate course, Welsh for All by Cardiff University, 2016-2017.
- French Advanced course, Languages for All by Cardiff University 2015-2016.
- Gold Crest award and 'Most Innovative and Adaptive Design' at the North Wales Big Bang competition, 2014.
- 1 week course at Bangor University in Electrical and Electronic Engineering, 2014.
- 1 week work experience in a Primary School and 1 week work experience in a Secondary School, 2014.

Languages

- Native English speaker.
- Fluent Welsh speaker/Professional working proficiency - GCSE First language C grade. Taught tutorials in Welsh as part of the Maths departments Welsh Language Provision.
- Confident French Speaker/Basic working proficiency - A level B grade, completed 4 exchange programmes.

Activities

- Programming projects including: Portfolio website, Recipe website, Maths tools Website, Flashcard Website.
- Advocate for Human Rights and Women Rights, particularly in Iran and across the Middle East.
- Enthusiastic about health and fitness. Activities include hiking, running, yoga, weightlifting, and skiing.
- Enjoy learning new languages and am currently learning Persian.

References available upon request.