Elis Parry

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Education

2023-2024 University of Cambridge, MPhil Nuclear Energy
Grade: Distinction (80%) – ranked top of cohort in taught component of the course.

- Created a multi-physics model to explore hydrogen redistribution in a novel nuclear fuel form; presented findings in a thesis, dissertation conference, and to industry partners.
- Modules studied: Reactor Physics & Engineering; Nuclear Fuel Cycle, Waste & Decommissioning; Nuclear Policy & Safety; Nuclear Materials; Computational Reactor Modelling; Advanced Fission & Fusion Systems; Medical Physics.

2020-2023 Durham University, BSc (Hons) Physics
Grade: 1st Class Honours (88%) – ranked top of cohort.

- Advanced Laboratory: Fabricated a superconductor and designed cryogenic experiments and LabView tools to investigate the effects of Gadolinium substitution.
- Computing Project: Developed a Monte Carlo model to simulate phase transitions in the 2D Ising Model; presenting findings to peers and academic staff.

2018-2020 Ysgol Y Creuddyn, A-Levels
Grade: 5 A*'s in Chemistry, Further Mathematics, Mathematics, Physics, Welsh Bacc.

Awards

2024	Trinity Hall Bateman Scholarship for Academic Excellence
2024	Lewins Prize (highest mark in taught component of the Nuclear Energy MPhil course)
2023-2024	Cambridge Trust Scholarship (for academic merit)
2023	St Cuthbert's Society Charles Holmes Prize (highest mark in college across all subjects)
2023	D. A. Wright Prize (highest mark in BSc Physics cohort)
2023	Durham Physics Poster Prize (best Computing Project poster)
2022+2023	Durham Physics Award for Outstanding Achievement
2022	Stars and Galaxies Level 2 Module Prize (highest mark)

Research Experience

Mar 2025-Jul 2025 Rolls Royce PLC, Nuclear Physicist

- Led the development of a low-fidelity reactor physics research software, using Python, within a multidisciplinary team of Chemists, Engineers and Physicists.
- Presented work to internal stakeholders and produced written technical and user guides to accompany the software.

Oct 2024-Jan 2025 Bangor University, Nuclear Fusion Laboratory Technician

- Technical lead on a project developing dilithium oxide fusion breeder blanket spheres in collaboration with Oxford Sigma.
- Designed and conducted preliminary experiments to optimise process parameters based on current spray-drying methods across different industries.
- Gained insight into working within an academic research environment.

Jun 2023-Aug 2023 Tokamak Energy, Physics Intern

- Developed a positivity-preserving 1D-1V Vlasov solver prototype code using semi-Lagrangian methods.
- Self-studied the Kinetic Theory and Magnetohydrodynamics lecture notes and completed exercises from the Oxford University MMathPhys course.

- Attended weekly scientific talks related to fusion energy by internal and external researchers.

Jul 2022-
Sep 2022

UK Atomic Energy Authority, Undergraduate Research Assistant

- Analysed hard X-ray (HXR) observations in MAST-U, managing big data using Python and MATLAB to quantitatively investigate the correlation between HXR and neutron emission.
- Proposed an explanation for observations relating to relativistic runaway electron generation and presented my findings to internal researchers in both presentation and report form.

Jun 2022-
Jul 2022

Swansea University, Undergraduate Research Assistant

- Created and deployed an automated workflow using Python and Paraview to perform lifecycle analysis of a fusion energy heat exchange component design.
- Analysis was based on the results of a thermo-mechanical simulation with finite element analysis performed on irradiated and unirradiated forms of an ITER-like monoblock divertor target.

Additional Work Experience

Sept 2025-
present

The Green Runners CIC, Freelance Support

- Supporting the expansion of The Green Runners—a running community trying to reduce our environmental footprint—by leading the development of The Greener Clubs scheme to translate the current membership model to running clubs.

Leadership Experience

May 2022-
Jun 2023

Durham University Ultrarunning Club, Founder & President

- Founded an inclusive and friendly ultrarunning club for students to develop as runners, free of charge, reaching 150+ members during my year as president.
- Organising weekly training runs, hills sessions, and termly weekend aways to the mountains as well as inviting guest speakers to help inspire the club's members.

Jun 2021-
Jun 2022

Durham University Charity Committee, Endurance Officer

- Liaised with charities, having regular 1-1 and team meetings, to plan five endurance events to help DUCK raise £300,000+ annually.
- Recruited and managed a team to help support 100+ students participating in events through biweekly meetings, information events, training plans, and fundraising workshops.

Languages

Welsh and English (Fluent)
Python, MATLAB

Other Interests

(Un)sponsored Re-Action Athlete | Ambassador for Moggans Socks | Ultrarunner – 135 km ultramarathon for Macular Society | Blog writer | Native Welsh Speaker | Passionate about education and outreach.

Affiliations

Affiliate member: Institute of Physics.

References available upon request.