Exciting Faraday Undergraduate Summer Experience (FUSE) paid internship opportunities for summer 2024.

Studying a STEM degree? Wondering what career to pursue? Interested in finding out more about the battery sector? Keen to spend time with a dynamic community of pioneering battery researchers seeking to find solutions to support a fully electric future?

The Faraday Institution is offering a total of 55 internships, for undergraduate students to spend 8-weeks working on battery related projects.

Project title: Characterising the effects of pressure distribution on parallel-connected lithium-ion batteries

Project description:

Previous work has attempted to find the relationship between pressure and cell performance. They show that the pressure has an impact on the discharge capacity of a cell, but that this effect is current-dependent. Other work has attempted to find the optimum pressure that would minimise degradation and investigated the distribution of currents and degradation between two cells connected in parallel.

You will:

- Conduct a literature review on pressure variation within cells, to identify the operating region of interest
- Work from an existing rig design to build an experiment capable of varying pressure between pouch cells
- In the lab, collect performance data from your experimental rig from the selected range of operating conditions
- Analyse the data in python using a range of existing diagnostic techniques to identify the effects of pressure on the measured degradation state

Desired skills and experience:

- Have an interest in lithium-ion batteries and how they work
- Be comfortable working in a lab environment
- Be confident in mechanical design for manufacture
- Have used coding languages (Python/Matlab) for data processing

Supervisor: Dr Monica Marinescu and Tom Holland

University: Imperial College London

Location: In person, South Kensington Campus

Start date: The internship is a full-time role for 8 weeks during June – September 2024

Eligibility:

- Be registered full-time undergraduate student from a UK university.
- Undertake the internship within the years of their undergraduate study (i.e., not in final year or during a subsequent Masters' programme).
- Not have been a FUSE intern in a previous year

Funding:

A salary of up to £12.00/ hour across the UK or up to £13.15 / hour in London will be provided. This will be determined by the working address of the appointee, not the university's location. The funding is provided by the Faraday Institution.

Additional activities:

During the FUSE internship you will be able to attend Faraday Institution cohort events which will focus on a variety of topics to further develop your understanding of career opportunities in battery sector. At the end of the programme, you will be invited to to share a poster about your work and prizes will be awarded.

Application:

In order to apply for this Faraday Undergraduate Summer Experience (FUSE) 2024 internship, you need to complete the following form: **APPLY HERE**

You are encouraged to apply early. The deadline for applications is 26th April 2024, or until the position is filled.

Diversity:

The Faraday Institution is committed to creating a dynamic and diverse pool of talent for the fields of battery technology and energy storage. Tackling the global challenges of the future, such as climate change, will require a truly diverse, creative approach. For Imperial to be at the forefront of this effort, we will need to draw upon the talents of staff and students who come here from all backgrounds and from all over the world.

You can read Imperial College's full Equality, Diversity and Inclusion strategy here:

https://www.imperial.ac.uk/media/imperial-college/administration-and-support-services/equality/public/2018-Imperial-EDI-Strategy---updated.pdf