

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: Modelling electrode coating with PyBaMM

Project description:

Manufacturing has not only a significant impact on battery performance and lifetime, but also on its cost and environmental impact. Some of the steps of the process are really resource-intensive, so optimising them is key to achieve better and greener batteries. Modelling has proved to be a very useful tool to optimise battery design, and has a lot of potential to improve battery manufacturing as well.

Electrode coating is one of the key manufacturing steps and determines several electrode properties that have a significant impact on the battery performance. The goal of this project is to study and implement simple coating models that can relate the parameters of the coating process to those of the final electrode. The models will be implemented in PyBaMM (www.pybamm.org), serving as a proof of concept of whether PyBaMM could support in the future a library of models for battery manufacturing.

Supervisors: Ferran Brosa Planella (University of Warwick) & Masoud Jabbari (University of Leeds)

University: University of Warwick

Location: In person if possible, but hybrid or online options are also available

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

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 £12.00/ hour across the UK or £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 share a poster about your work and prizes will be awarded.

Application:

In order to apply for a Faraday Undergraduate Summer Experience (FUSE) 2024 internship, you need to fill the form in <https://forms.office.com/e/y1q1Qjd1gW> and send your CV (pdf, 1 page

max) to Ferran.Brosa-Planella@warwick.ac.uk by the 1st of May 2024 at 23:59. Shortlisted candidates will be invited to a virtual interview during the second week of May.

Diversity:

The Faraday Institution is committed to creating a dynamic and diverse pool of talent for the fields of battery technology and energy storage.

The Department of Mathematics and the University of Warwick are proud of their diverse community of staff, students, and visitors, and are committed to maintaining an excellent record in teaching and research by ensuring that there is equality of opportunity for all, fostered in an environment of mutual respect and dignity.

We are committed to supporting staff to achieve their potential. The Department of Mathematics holds a bronze Athena SWAN award and the University of Warwick holds Athena SWAN silver awards. [Athena SWAN](#) is a national initiative that recognizes the advancement of gender equality, representation, progression and success for all in academia.