

Development of educational resources to explain battery management

Project description:

While Li ion batteries are abundant in everyday life from smart phones to electric vehicles, there is a general lack of educational resources that can explain their operation, or how they are manufactured. It is also important that any such resource can be understood by a wide range of age groups and backgrounds. We have recently been developing a range of resources to explain the operation of Li ion batteries, which has also included resources for students with visual impairment. Examples include the use of jenga to explain the operation of Li ion batteries (including more advanced topics such as battery degradation and challenges with charging these batteries at high rates), and “The Lithium Shuffle Project “: an educational battery video to explain the components and operation of a Li ion battery (<https://www.youtube.com/watch?v=r1fXpQdqHgE&feature=youtu.be>)

An important additional aspect concerning Li ion batteries is battery management. The battery management system manages the safe operation of the battery pack in the vehicle. There is, however, an additional aspect of battery management to consider, associated with what to do with the battery after use (i.e. the management of the valuable resources within the battery). This summer internship (associated with the Faraday Institution ReLiB project) will focus on the development of educational resources to explain both these aspects and the challenges associated with them. The student will be supervised by Professor Peter Slater (University of Birmingham).

Due to the ongoing COVID-19 situation, the entire project will be running remotely.

As part of The Faraday Institution’s 2020 intern cohort you will enter an end-of-project poster competition – the winners of which will be invited to present their poster at the Faraday Institution Conference in November 2020.

Eligibility

In order to partake in the project you must be:

- A full-time registered undergraduate student at a UK university
- Undertake the internship within the years of undergraduate study (i.e. not be currently in your final year)

Funding

A salary of £9.30/hour across the UK or £10.75/hour in London will be provided. This will be determined by the working address of the appointee not the universities location. The internship is a full-time role for 8 weeks beginning in early July. The funding is provided by The Faraday Institution. Deadline Please send you CV and a brief cover letter to p.r.slater@bham.ac.uk by June 8th