



Industrial Postgraduate Programme (IPP) PhD Thesis - Investigate into mechanisms of Li Ion battery aging and degradation

Job description

Industrial Postgraduate Programme (IPP) PhD Thesis

Infineon is offering a PhD thesis topic on "Investigate into mechanisms of Li Ion battery aging and degradation. Develop degradation models based on lump circuit and data-driven deep learning" under the Industrial Postgraduate Programme (IPP) from the Economic Development Board (EDB).

Background/ Objective:

Li Ion cell degradation is becoming more acute as penetration of EVs increases. The issue becomes serious when it leads to thermal runaway causing fires. It is not enough to detect over temperature /pressure change or gas emissions. What is desirable is a method to predict degradation that can potentially cause thermal runaway.

Scope of Work:

- Research into mechanisms of Li ion cell degradation
- Develop models to simulate cell degradation and aging
- Models can be lump circuit and based on data driven based on measured datasets .
- Validate models in lab and on real driving conditions.
- Implement models into an MCU in a Battery Management System (BMS).
- Quantify performance accuracy based on real BMS performance.

The candidate will receive:

- A monthly stipend of S\$4,000
- Full sponsorship of school fees

Profile

You are best equipped for this task if you are/ have:

- Singaporean Citizen or Permanent Resident at the time of application
- Be eligible for full-time PhD studies
- Have an interest in machine and deep learning models

At a glance

Location: **Singapore**

Job ID: **52915**

Apply to this position online by following the URL and entering the Job ID in our job search:

Job ID: **52915**

www.infineon.com/jobs



- Knowledge in battery Electro chemistry and or Matlab Simulink, C, Embedded programming

