

## SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING  
COLLEGE OF DESIGN AND ENGINEERING  
Website: <https://cde.nus.edu.sg/ece>

**Area: Power and Energy Systems (PES)**

**Host: Assoc Prof Peng Chih-Hsien Jimmy**

<b>TOPIC</b>	:	<b>Battery State-of-health Using Limited Target Domain Data with Transfer AdaBoost Strategy</b>
<b>SPEAKER</b>	:	<b>Mr Li Shiqi Graduate Student, ECE Dept, NUS</b>
<b>DATE</b>	:	<b>Friday, 24 April 2026</b>
<b>TIME</b>	:	<b>2:00PM-3:00PM</b>
<b>VENUE</b>	:	<b>E2-03-32</b>

### ABSTRACT

Data-driven state-of-health (SOH) estimation for lithium-ion batteries faces significant challenges regarding domain shift and data scarcity in real-world applications. While existing transfer learning (TL) strategies heavily rely on computationally expensive deep learning models and extensive target datasets, this study proposes a novel data-efficient SOH estimation framework. A robust feature extraction strategy is proposed using partial charge capacity curves, tailored to the operational voltage windows of diverse cell chemistries, which ensures engineering feasibility. Experimental results demonstrate the remarkable accuracy, robustness, and generalization capabilities of the proposed SOH estimation framework compared to other three transfer learning strategy.

### BIOGRAPHY

Mr. Li Shiqi is currently pursuing a PhD degree in Assoc. Prof. Jimmy Chih-Hsien Peng's group. His research interests include lithium-ion battery thermodynamics, fast charging, state-of-charge, state-of-health, Ragone plot, etc.

<https://cde.nus.edu.sg/ece/highlights/events/>