



University of Hawai'i at Mānoa

## **Hawai'i Natural Energy Institute**

School of Ocean & Earth Science & Technology

# **A Roadmap to Estimate Service Life of Energy Storage Systems**

This presentation will attempt to show a roadmap to bridge laboratory and real life battery testing data and analyses into a coherent approach which can allow us to develop a realistic model to simulate battery performance, including life prediction in real applications. Using electric vehicle field testing results, we explain how to handle real-life data through driving cycle analysis to establish a “building block” scheme that can be validated with test results obtained in the laboratory. We also show that a simple battery model can be built upon laboratory test data and validated with real-life duty cycles, and, therefore, more realistic understanding of battery performance can be derived. The building blocks that can be validated with both laboratory and real-life data can then be used to synthesize any hypothetical duty cycle for simulation of battery performance in future applications.

**Bor Yann Liaw**

Specialist

Hawaii Natural Energy Institute

**Tuesday, October 17, 2006**

**3:15 – 4:15 PM**

**HIG Auditorium, Room 110**

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