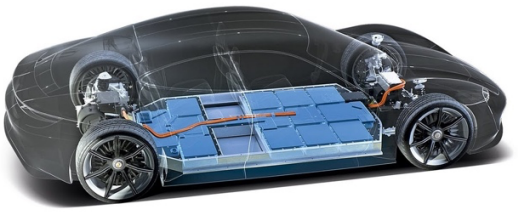
# Technical Talk on EV Battery Packs

## By Clive Ford AIMechE
## Senior Principal Research Engineer A*STAR

## Co- hosted by IMechE and IET

In determining the technical hierarchy amongst cars, the battery pack is as important to an EV as the Internal Combustion Engine is to a "Conventional" vehicle.



But what is in the battery pack, how do manufacturers select between different cell types, pack sizes, thermal management systems, whilst meeting requirements for performance and expected life.

In this talk our speaker will explain the basic design principals of the battery pack, including cells, thermal system and battery management system. The models that are used to develop the pack and confirm the expected performance meets design goals and some trends towards increasing energy density and vehicle design.

*Clive Ford is a Senior Principal Research Engineer with the Institute of High Performance Computing (a research institute under the Agency for Science Technology and Research, A*STAR). Clive has been with A*STAR since 2019 and is the Innovation Lead for Digital Manufacturing (Design and Processes) and Manager of the Electronic Materials and Electrification Systems Group in the Engineering Mechanics Department at IHPC. He moved to Singapore in 2002, to join Worley as Manager of their Singapore' Advanced Analysis Consultancy Group. In this role he helped clients to advance the use of simulation across various industries, building on his experience at British Steel's Technology Centre whilst in the UK. Clive studied Mechanical Engineering at Sheffield University and Information Technology at the University of Nottingham. Clive is also the ASEAN contact for NAFEMS, the international association for modelling and simulation.*

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## Where and When : 12 October 2023 (Thursday)

**Time**: 6.30pm – 10pm (Registration from 6.30pm)
**Venue**: Singapore Polytechnic Graduates' Guild
Carnation Room Level 3
1010 Dover Road
Singapore 139658
**Fee**: Free for members and non-members
**Registration deadline**: 10 October 2023

## Agenda :

6.30pm – Registration
6.40pm – Dinner Networking
7.30pm –Introduction of IMechE Activities
7.45pm – Introduction of IET Activities
8.00pm – Technical Talk on Battery Packs
9.00pm – Q&A
9.30pm – Networking Discussions
10.00 – End of programme

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