

Co-organized by IMechE Malaysia, and Mechanical Engineering Technical Division of IEM



Physical Technical Talk: “Beyond the Machine: Integrating Sustainability into Mechanical Design”

Biodata of Speaker

Joshua Chia Sheng Jin is the East Asia Sustainability Leader and Associate at RWDI, with more than 12 years of experience in sustainability consulting. His expertise includes green building certification, sustainability advisory, net-zero strategies and building performance optimisation under frameworks such as LEED and GreenRE. He has contributed to major projects including Kuala Lumpur Eco City, Menara Maxis, TM ONE KVDC and several healthcare energy-efficiency initiatives.

Joshua graduated from the University of New South Wales (UNSW) with a Bachelor of Engineering in Renewable Energy. He is a registered Graduate Engineer with the Board of Engineers Malaysia (BEM), a member of the GreenRE Technical Panel, and holds professional accreditations including LEED AP, Green Mark AP, Green Star Associate and WELL AP.

Synopsis

Traditional mechanical engineering education trains students to optimize machine elements for strength, fatigue, cost, and manufacturability. However, the modern engineering landscape requires a paradigm shift. Today’s mechanical components—ranging from HVAC equipment and industrial machinery to building services—play a critical role in the global race toward decarbonization. This guest lecture bridges core mechanical theory with real-world sustainability, examining how engineering choices dictate the operational and environmental performance of major developments.

In this session, attendees will explore how mechanical engineering principles intersect with environmental stewardship across three core pillars:

- **Defining Sustainability in Mechanical Contexts:** Demystifying what sustainability truly means beyond greenwashing—balancing finite resource consumption, system longevity, and circular engineering principles.
- **Decarbonisation Across the Life Cycle & GHG Protocol:** Evaluating carbon emissions through a holistic lens—from embodied carbon in materials (A1–A5) to operational energy during use (B1–B7). We will examine how mechanical systems map to Scope 1, 2, and 3 emissions under the GHG Protocol.
- **The Engineer’s Role in Decarbonisation:** Practical strategies for engineers to drive decarbonisation, including system right-sizing, and passive-first design integration.

Date : 8th September 2026 (Tuesday)
Time : 6:00 pm – 8.00 pm (Refreshments will be served at 5.30 pm)
Venue : Monash University Malaysia, Jalan Lagoon Selatan, Bandar Sunway, 47500 Subang Jaya, Selangor
 (Registrants will be informed on the lecture room number via emails)
Fee : **Free of charge (for IMechE Malaysia Members and IEM Members)**

Registration closes on
1st September 2026.

BEM CPD : 2 CPD
Ref. No.: IEM26/HQ/380/T

*Interested participants are to **register** by filling up this **form**. No walk in is allowed. The organizers will not be liable for any injury, damage, or loss sustained by participants.