The Institution of Engineers, Malaysia

WEBINAR TALK ON

DIGITAL TWIN TECHNOLOGY IN ROV SELECTION FOR OFFSHORE USE: A CASE STUDY

BEM APPROVED CPD: 2 **REF NO: IEM24/HQ/016/T (w)**

ORGANISED BY:
MARINE ENGINEERING AND NAVAL ARCHITECTURE TECHNICAL DIVISION, IEM

4 MARCH 2025, TUESDAY
9.00AM - 11.00AM

SPEAKER:

Assoc. Prof. Dr. Ahmad Faisal Mohamad Ayob

Recorded Webinar

In conjunction with World Engineering Day Celebration from 1st March till 7th March 2025

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SYNOPSIS

In offshore structure inspections, the shift to mini-Remotely Operated Vehicles (ROVs) has improved operations, reducing the need for divers and vessels. However, these ROVs face maneuverability issues when carrying additional equipment like Field Gradient, Flooded Member Detection, and Ultrasonic Testing probes.

To overcome these challenges, a blend of simulation and physical testing is suggested for evaluating mini-ROVs before offshore deployment. This approach aims to detect and solve any inefficiency-related issues. Performance tests will mimic ROV maneuverability in various underwater conditions with payloads, ensuring they meet inspection requirements under specific weather conditions. These tests are also cross-verified with real-world testing in controlled or open sea environments.

The presentation of this case study focuses on the methods, obstacles, and solutions in choosing the optimal ROV for offshore tasks, highlighting how digital twin technology aids in decision-making.

SPEAKER'S PROFILE

Dr. Ahmad Faisal Mohamad Ayob is an Associate Professor at the Faculty of Ocean Engineering Technology at Universiti Malaysia Terengganu since 2008. He is also a Principal Consultant for VSG Labs Sdn. Bhd., an engineering analysis and software development company under UMT.

Dr. Faisal obtained his Bach. Degree in Mechanical Engineering from Universiti Malaya, and PhD in Mechanical Engineering from the University of New South Wales at the Australian Defence Force Academy. His major focus is ship design, particularly in high-speed craft.