The Institution of Engineers, Malaysia

PRE-RECORDED VIDEO
IN CONJUCTION WITH
WORLD ENGINEERING DAY CELEBRATION
FROM 4th - 9th MARCH 2024

WEBINAR TALK ON

THE EVOLUTION OF SIMULATOR DEVELOPMENT: FROM HISTORICAL MILESTONES TO MODERN TECHNOLOGIES AND APPLICATIONS

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

BEM APPROVED CPD: 2 **REF NO: IEM23/HQ/061/T (w)**

Presented by:

Assoc. Prof. Dr. Ahmad Faisal bin Mohamad Ayob

4 March 2024, Monday
4.00pm - 6.00pm

REGISTRATION FEE :

IEM STUDENT : FOC
IEM MEMBERS: RM15
NON IEM MEMBERS: RM70

SYNOPSIS

The history of simulator development can be traced dating back to the 1910s, with an emphasis on military training. Edward's flight simulator in the 1920s was a key element in World War II, mainly known as The Link Trainer.Within the civilian domain, the NASA space simulator, which transformed simulator technology, is one of the key milestones highlighted in this seminar's comprehensive review of simulator development. The discussion shifts to more recent instances of simulator development, including physics engines that faithfully represent the mechanics of a simulated world and reaction simulators used in robotics and virtual reality systems. There are also discussions of recent developments in simulator creation, such as flying, driving, oil and gas, and maritime simulators. By providing training scenarios that accurately reflect real-world conditions, these simulators assist in lowering the danger to trainees and actual situations.

With well-known examples like Bullet, Havok, and PhysX being covered, the usage of response simulators and physics engines in simulator construction is investigated. Utilizing these technologies has both benefits and drawbacks that are discussed. The presentation ends by providing insightful information on the simulator development industry and how it is now influencing various sectors. Simulator development is still going strong and bringing new uses to various industries. This session offers a thorough review of its historical evolution, the technologies, and the capabilities that enable the creation of realistic simulations, as well as the advantages of virtual training environments.

SPEAKER'S PROFILE

Dr. Ahmad Faisal Mohamad Ayob is an Associate Professor at the Faculty of Ocean Engineering Technology and Informatics in Universiti Malaysia Terengganu since 2008. He is also a Managing Director of a start-up company incubated by UMT named VSG Labs Sdn. Bhd., focusing on the creation of vehicle simulators, virtualized learning and product design.

Dr. Faisal is an active industry collaborator in the field of artificial intelligence, vehicle designs and robotics. Other than actively involved with PETRONAS in the awareness programme in AI, Dr. Faisal constructed simulator softwares for several local Ship Building and Ship Repair (SBSR) companies to further understand the dynamics of ship in virtual environment.

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 Defense Force Academy. His major focus is ship design, particularly in high speed craft.