

**REGISTRATION FEES**

IEM Students: FOC

IEM Members: RM15 (Online) / RM20 (Offline)

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**Date:**  
**27<sup>th</sup> October 2022 (Thursday)**

**Time:**  
**2.00pm to 4.00pm**

**Venue:**  
**Virtual Platform - Zoom**

**BEM Approved CPD/PDP Hours: 2 Ref No: IEM22/HQ/372/T (w)**

# **Webinar Talk on "Development of Computer Aided Design (CAE) Applications; Past, Present and Future"**

**Organised by:**  
**Mechanical Engineering Technical Division, IEM**

**Synopsis**

Numerical modelling has existed since decades ago; in the 60s – 70s finite element method was deployed for structural analysis in the aerospace industry. The advancement in computing hardware and the rapid adoption of 3D Computer Aided Design (3D CAD) in the late 90s, early 2000s, combined with the ever-demanding industrial need of producing things at a faster rate and at a lower cost; proved to be a major catalyst in the development of Computer Aided Engineering (CAE).

General purpose and dedicated solution in the CAE domain flourished; helping companies to perform virtual test using virtual prototype. For example, a full virtual model of vehicle (car) undergoing rigorous crash tests within stipulated regulations can be carried out in High Performance Computing (HPC) facility to allow various iterations to be considered even before a real prototype is crash tested in a lab. This enable early design optimization; reducing cost and time comparing with doing this entirely using physical models. Various other dedicated CAE solutions were developed; such as solution that predicts manufacturing defects based on material and process input, solution that predicts acoustic and noise based on multiple sources, etc.

New challenges emerge in this outcome economy, and we find the role of CAE technology becoming more diverse yet inclusive. The goal is to share this journey of constant change; how it has impacted in the past and where it will stand in the future.

**Biodata of Speaker**

**Mr Chan Yin Chau** is currently holding the position of Director for Sales (SMB & Channel Business) for Asia in ESI Group, a leading innovator in Virtual Prototyping software and services. Specialist in material physics, ESI has developed a unique proficiency in helping industrial manufacturers replace physical prototypes by virtual prototypes, allowing them to virtually manufacture, assemble, test and pre-certify their future products. In the early days, his role involved developing expertise and applications know how (Computer Aided Engineering) especially in the manufacturing domain. His current responsibilities requires him to oversee the business development and overaall operation of the entire region, particularly in ASEAN.

He joined a local SME involving in the area of CAD/CAM application technology after completing his Bachelors of Engineering (Mechanical) Degree from Universiti Teknologi Malaysia in 2001. This first exposure in the virtual engineering world developed his interest further specifically in the area of numerical modeling. He joined Lotus Engineering Malaysia in 2003, as a crash analyst, focussing mainly in numerical analysis of vehicle crash simulation.

For the past 13 years, he has been travelling extensively especially within ASEAN region, raising the awareness and the adoption of simulation tools. With the recent advancement in the digital world, he is keen to promote new understanding of numerical simulation and its role in the product development landscape.

**Ir. Dr. Aidil Chee Tahir**  
**Chairman**  
**Mechanical Engineering Technical Division, IEM**

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