The Institution of Engineers, Malaysia

Virtual Half Day Course

HARNESSING AERODYNAMICS: INDUSTRY APPLICATIONS AND INNOVATION

Organised by:
Engineering Education Technical Division, IEM

REF NO: IEM24/HQ/493/C (W)
BEM APPROVED CPD: 4

SPEAKER:

Ir. Ts. SUKHAIRUL NIZAM BIN ABDUL RAZAK

DATE: 30 NOVEMBER 2024, SATURDAY

TIME: 9AM - 1PM

CLOSING DATE:
20 NOVEMBER 2024

	ONLINE (Log-in for registration & payment: www.myiem.org.my/member/login.aspx)	**NORMAL FEE** (by fax & email) Payment by cash, credit card and bank-in
IEM Student Member	40.00	50.00
IEM Graduate Member	75.00	90.00
IEM Corporate Member	125.00	150.00
Non-IEM Member	240.00	300.00

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COURSE SYNOPSIS

This workshop explores the critical role of aerodynamics across various industries, highlighting innovations that optimize performance, efficiency, and sustainability. From automotive and aerospace engineering to renewable energy and architecture, aerodynamics is a driving force behind technological advancement. Participants will learn how mastering airflow dynamics can lead to enhanced fuel efficiency in vehicles, improved wind turbine designs, and the creation of environmentally sustainable buildings. The session will also feature cutting-edge research, case studies, and practical applications, offering insights into how aerodynamics is shaping the future of multiple sectors.

Key Topics Covered for this workshop:

1.Aerodynamic Basics and Principles

Content:

a. Overview of fluid dynamics and key aerodynamic principles (e.g., drag, lift, turbulence).
b. The physics behind aerodynamic forces and their impact on industrial applications.
c. Importance of aerodynamics in enhancing efficiency and reducing energy consumption.

Learning Outcome: Attendees will grasp fundamental aerodynamic concepts and their relevance to various industries.

2.Automotive and Aerospace Applications

Content:

a. How automotive and aerospace sectors use aerodynamics to improve vehicle performance (e.g., reducing drag, increasing fuel efficiency).
b. The role of wind tunnels and simulations in designing vehicles and aircraft.
c. Case studies of modern innovations in electric vehicles (EVs) and airplanes focusing on aerodynamic designs.

Learning Outcome: Attendees will gain insights into the importance of aerodynamics in the automotive and aerospace industries.

3.Industrial Applications of Aerodynamics

Content:

a. Aerodynamics in industrial machinery, HVAC systems, and building design.
b. How aerodynamic principles are used to optimize wind energy turbines.
c. The impact of aerodynamic efficiency in reducing operational costs and environmental impact in factories and production lines.

Learning Outcome: Attendees will understand the broader industrial applications of aerodynamics beyond transportation.

4.Emerging Technologies in Aerodynamics

Content:

a. Cutting-edge research in computational fluid dynamics (CFD) and its role in the future of aerodynamics.
b. The influence of AI and machine learning in optimizing aerodynamic designs.
c. Future trends in aerodynamic applications, including urban air mobility (drones, flying taxis), and sustainable energy solutions.

Learning Outcome: Attendees will be familiar with the latest technological advancements and how they could impact future industry standards.

WHO WILL BENEFIT WITH THIS WEBINAR

- Engineers and technical professionals in automotive, aerospace, and energy sectors.
- Industry managers and leaders focused on efficiency, performance, and sustainability.
- Engineering students with an interest in fluid dynamics, mechanics, and industrial applications.

SPEAKER'S PROFILE

Ir. Ts. Sukhairul Nizam Abdul Razak received an early education at SMK Methodist ACS Klang Selangor, UTM Skudai in Bachelor of Mechanical (Aeronautical) Engineering and MBA from Charles Sturt University Australia. Registered as Asean Chartered Professional Engineer (ACPE), Professional Mechanical Engineer with practicing certificate (PEPC) since year 2016 with Board of Engineers Malaysia and registered as Professional Technologist with MBOT since year 2020. Started career at Proton's Manufacturing since 1995 as RND's body design engineer follow with other positions in various departments in Proton Edar for nearly 18 years such as a Car Body Design Engineer, Branch Sales Manager, Manager Sales Standard, Manager Warranty Operations, Manager Equipment Tools & Calibration, Head of Division Office and worked with Accenture Malaysia for Daimler Group's project. He was a Regional Director for Leanmax Pro Sdn Bhd, was a Senior Lecturer for City University Malaysia, currently appointed as Programme Coordinator for First City University College and as Director for Enviroklar Tech Sdn Bhd. Ir Ts Sukhairul Nizam has experienced designed, developed automotive components as well managed anti-corrosion and painting development, aerodynamic development, and crash test development for the national car company. Ir Ts Sukhairul Nizam is also specialised in automotive sales training or coaching and managing product recall for automotive industry. Entrepreneurship is one of his subject teaching students for degree in Mechanical Engineering.

Cancellation Policy

No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with 7 days prior notification and substitute will be charged according to membership status.

Personal Data Protection Act

I have read and understood the IEM's Personal Data Protection Notice published on IEM's website at http://www.myiem.org.my and I agree to IEM's use and processing of my personal data as set out in the said notice.

Chairman,
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REGISTRATION FORM

VIRTUAL WORKSHOP ON
"HARNESSING AERODYNAMICS: INDUSTRY APPLICATIONS AND INNOVATION"
30 NOVEMBER 2024 (SATURDAY)

Closing Date : 20 NOVEMBER 2024

No	Name(s)	Email Address	IEM Membership No.	Grade	Fee (RM)
				SUB TOTAL	
				+SST 8%	
				Total Payable	

PAYMENT DETAILS :

☐ Cash RM_____

☐ Cheque no._____for the amount of RM_____(non-refundable) .

FULL PAYMENT must be settled before commencement of the course, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participant fails to attend the course, the fee is to be settled in full. If the participant failed to attend the course, the fee paid is non refundable. The Registration Fee includes lecture notes, refreshment and lunch.

For **ONLINE REGISTRATIONS,** please note that payment **MUST** be made **BEFORE the closing date.** If payment is not received within the stipulated time, the registration fee will be reverted to the normal registration fee.

Contact Person: _____Designation:_____

Name of Organization: _____

Address : _____

_____

Telephone No. : _____(O) _____(Fax No.)

_____(H) _____(HP)

Email :_____

_____
Signature & Stamp

_____
Date

Photocopies are acceptable