

**TECHNICAL TALK ON**  
**“STRUCTURAL WIND LOADING TECHNIQUES:**  
**FORCE BALANCE & PRESSURE INTEGRATION”**

Organised by the Civil and Structural Engineering Technical Division (CSETD)

**BEM Approved CPD/PDP: 2.0 Hours**

**Ref : IEM19/HQ/477/T**

**Date** : **14<sup>TH</sup> NOVEMBER 2019 (THURSDAY) – Rescheduled until further notice -**  
**Time** : **5.30 p.m. – 7.30 p.m.**  
**Venue** : **Malakoff Auditorium**  
**Speakers** : **Ground Floor, Wisma IEM, Petaling Jaya, Selangor**  
**Mr. Masoud Moinfar & Mr. Ganesh Krishnan**

## SYNOPSIS

### Session 1:

Structural Wind Loading studies form part of the core Wind Tunnel Testing services provided by Wind Engineering Consultants and can be undertaken for a variety of structures: towers, stadia, bridges, ships, trains, etc. The benefits of the studies can broadly be categorized into ‘design verification’ (e.g. verification of design values, quantification of project risk and margin-of-safety, etc.) and ‘optimization’ (e.g. significant cost savings, reduction in material usage, etc.). Structural Wind Loading studies for towers are able to provide accurate foundation / superstructure wind loads, floor-by-floor wind loads, and wind-induced accelerations as they relate to occupant comfort levels. The lecture will cover wind tunnel model technology, aerodynamic phenomena of interest, and structural parameters that impact overall wind loads. Several case studies will be explored, showcasing the benefits of Structural Wind Loading studies on real projects around the world. Naturally, the lecture will touch upon Wind Climate / Meteorology, Wind Tunnel Model Design / Build / Fabrication from the digital space through to physical construction. Façade / Cladding Pressures and Wind Microclimate Studies will additionally be touched upon during the course of the lecture.

### Session 2:

The Wind Engineering of sustainable cities can benefit from a combination of experimental and numerical approaches. Urban Physics studies are able to increase occupant comfort levels, enhance public perception, and optimize the performance of high-value developments through sophisticated numerical simulations. The lecture will touch upon wind-driven natural ventilation (design for energy efficiency), outdoor airflow ventilation (pollution reduction), outdoor microclimate (thermal comfort), wind-driven rain (penetration and wetting patterns), and stack effects (fire safety / smoke propagation).

## ANNOUNCEMENT TO NOTE FEES

(Effective 1<sup>st</sup> October 2017)

### Members

Registration Fee :	No Charge
Administrative Fee :	
<u>Online</u>	RM15
<u>Walk In</u>	RM20

### Non-Members

Registration Fee :	RM50
Administrative Fee :	RM20

- Limited seats are available on a "first come first served" basis (maximum 100 participants).
- **To secure your seat, kindly register online at [www.myiem.org.my](http://www.myiem.org.my)**

## PERSONAL DATA PROTECTION ACT

I have read and understood IEM's Personal Data Protection Notice published on IEM's website at [www.myiem.org.my](http://www.myiem.org.my) and I agree to IEM's use and processing of my personal data

### CPD Hours Validation:

Name: .....

Membership No.: .....

Signature: .....

**“IEM reserves the right to alter or cancel the programme due to unforeseen circumstances at its discretion”.**  
**For intending participants who choose to ‘walk in without prior registration’, IEM SHALL NOT be responsible for any direct or consequential losses”.**

## **SPEAKER BIODATA – Rescheduled until further notice -**



**Mr. MASOUD MOINFAR** is the Managing Director of Fenestra Malaysia Sdn Bhd. He is a mechanical building services engineer and has more than 35 years of professional experience in design and construction management of a wide range of projects. Masoud has extensive experience in many aspects of building engineering with a strong focus on value engineering and project management. Masoud has a keen appreciation of costs, buildability and cost effectiveness of design solutions. He is passionate about reducing energy consumption of buildings and an ardent advocate of introduction of green technologies in commercial developments. Masoud has been a green engineering practitioner for many years and is a registered Malaysia Green Building Index Facilitator.

### **Qualifications and Memberships**

- Bachelor of Mechanical Engineering University of Canterbury (1981)
- Post Graduate Diploma in Arbitration – Massey University (2005)
- Member of the New Zealand Institute of Heating and Ventilating Engineers
- Member of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
- Fellow Member of the Asian Institute of Alternative Dispute Resolution (AADR)

### **Expertise**

First and foremost, Masoud is an engineer. He specialises in design and specification of building services systems and their components. He has been involved in design and construction of a variety of buildings including educational or correctional facilities, commercial or recreational amenities. Having been involved in both consultancy and contracting sides of the industry has given him a keen appreciation of value management and buildable solutions.



**Mr. GANESH KRISHNAN** is currently the Business Development Manager in BMT for the Built Environment, with a specific focus on the Asia Pacific region. Ganesh has experience in managing wind tunnel projects, supervising local and remote engineering staff, scheduling daily team project tasks, supporting business development activities, managing project finances, and overseeing / conducting all aspects of project engineering work including wind tunnel testing, data analysing, and results reporting.

Ganesh's professional experience includes engineering consultancy, project management, project planning, team / resource management, business development, financial management / project costing, research and development, prototype building and testing, failure analysis, systems design & optimization, and problem-solving experience spanning the fields of aerospace engineering, automotive engineering, and wind engineering consultancy in civilian, offshore oil & gas, and military applications.

### **Qualifications and Memberships**

- Bachelors of Science in Aerospace Engineering, Embry-Riddle Aeronautical University (air-breathing propulsion systems)
- Masters of Science in Aerospace Engineering, Georgia Institute of Technology (Systems Design and Optimization) (2012)
- Chartered Engineer, Institution of Mechanical Engineers, UK
- IMechE, AIAA, TBП

### **Expertise**

Ganesh specialises in wind engineering projects for civil and offshore structures, with heavy involvement in cladding pressure, wind microclimate, and wind-induced noise studies. Specific recent involvements included the following projects:

- Expo Link 2020, Dubai, UAE
- Harbour Central, London, UK
- Finsbury Avenue, London, UK
- La Mer Ring Show, Dubai, UAE
- Waldorf Astoria, Al Rai, Kuwait
- The Emerald, Cebu, Philippines
- Dream Tower, Jeju, South Korea
- Oberoi Garden City, Mumbai, India
- Premier Oil / SBM Sea Lion (FPSO)
- Museum Of The Future, Dubai, UAE
- Hebron Heavy Oil Field, ExxonMobil
- One Oak Tower, San Francisco, USA
- Lucas Museum of Narrative Art, USA
- Littoral Combat Ship (Frigate), DCNS
- Caspian Waterfront, Baku, Azerbaijan
- St. Louis Riverfront Stadium, MO, USA
- Luma at Miami World Centre, Miami, FL, USA
- Security Forces Medical Centre, Riyadh, KSA
- Saudi British Bank Headquarters, Riyadh, KSA
- The Quay Club (Bank Street Pavilion), London, UK
- Wind Tunnel Testing Of A Regional Train (Rail), UK
- Greenwich Peninsula Upper Riverside, London, UK
- Incheon International Airport Terminal 2, South Korea
- Bukit Jalil Parcel F (The Park 2), Kuala Lumpur, Malaysia
- Tenaga Nasional Berhad Towers, Kuala Lumpur, Malaysia

## **Ir. CHONG CHEE MENG**

### **Chairman, Civil and Structural Engineering Technical Division**