

# BUILDING ENVELOPE DESIGN SEMINAR

## Topic 1 Façade Engineering Fundamentals – Materials

Speaker: **Masoud Moinfar**

As the introduction to the seminar, the speaker will present a brief history of the emergence of façade engineering and its significance in construction of modern buildings.

The presenter will discuss the role of the façade as an important barrier between indoor environment and outdoor elements. The audience will be taken through the manufacture and properties of major elements used in the in the façade of contemporary buildings from glass to composite panels, stone, precast panels and various coatings

## Topic 2 Façade Engineering Fundamentals – Systems

Speaker: **Zulkarnain Abdullah**

The presenter will focus on the major types of cladding systems used for the skin of the contemporary buildings. These systems include stick-wall, unitised and semi-unitised curtain walls, point fixing, glass fins, tension wire or cable net systems as well as precast concrete and stone fixings.

The speaker will also present a series of façade failures and the lessons learnt from the failures through a variety of real life examples.

## Topic 3 Building Codes and Building Envelopes

Speaker: **Ar. Chong Yee Loon**

In the first part of the presentation, the speaker will highlight the mandatory requirement for fire barriers to be installed on the exterior of buildings and the requirement for smoke stops at each floor. The spread of fire on building envelopes and the use of different cladding materials, in particular aluminium composite panels will be examined. In the second part of the presentation, the speaker will review the safety standards dealing with use of glass in buildings. This topic covers the provision of safety glass in building fenestrations including skylights and tilted glass walls. In the final part, the presentation will deal with the new clause 38A in the Uniform Building Bylaws which mandates a limit on OTTV and roof U Values of all new buildings.

## CPD Seminar 2018



**PAM** Northern Chapter

Pertubuhan Akitek Malaysia  
Malaysian Institute of Architects

2 LAM CPD Points

Free  
Admission

Time: **8:30 am to 3:00 pm**  
Date: **Thursday 26 July 2018**  
Venue: **Macalister Ballroom,  
E&O Hotel, Penang**

This seminar provides design oriented information to assist architects in making informed choices on facade materials and systems

Who should attend:

**Architects, Structural Engineers,  
Developers**

Please register at the PAM Northern Chapter website.

Organised in association with:



**Fenestra Malaysia Sdn Bhd**

J-5-12 Solaris Mont Kiara  
2 Jalan Solaris  
50480 Kuala Lumpur  
T: +603 6205 1288  
www.fenestra.com.my

## Topic 4 Sustainable Building Envelopes

Speakers: **Masoud Moinfar + Ar. Chong Yee Loon**

The presenters will take the audience through each and every one of the outside elements which when penetrate the building envelope barrier, will affect the building performance. The first and the most prominent element being the heat gain through radiation and convection will be examined in relative detail. This will provide a clear understanding of the building envelope properties which will reduce the energy consumption of the building while providing better daylighting for the occupants. The speakers will introduce various tools to evaluate and quantify the heat load and daylighting simulation to the audience.

## Topic 5 Wind Engineering Fundamentals

Speaker: **Masoud Moinfar**

This is a brief introduction to wind engineering for the architects. The presenter will discuss the modern trend in design of buildings which invariably results in lighter and generally taller structures using more articulated façades. This necessitates a degree of understanding of effects of wind on buildings.

The presenter will demonstrate how the form and orientation of buildings can affect their performance in wind and will take the audience through the ambit of the wind engineering process, touching on structural behaviour of buildings in wind, measurement of pressure on the building cladding and human comfort in and around the buildings.

## Topic 6 Deciphering Façade Shop Drawings

Speaker: **Ar. Chong Yee Loon**

In building projects that do not have the services of a façade engineer, the task of reviewing shop drawings and specifications prepared by the specialist façade contractor usually falls on the shoulders of the unsuspecting architect. Acquiring the important skillset of understanding façade shop drawings, will allow architects to confidently approve or reject and comment on the façade contractor's submissions. Participants will be taken through the different components that make up the façade shop drawings as well as the intended installation method.

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## PROGRAM

**08:30 – 09:00** Registration | Product Display

**09:00 – 09:45** Façade Engineering Fundamentals – Materials

**09:45 – 10:30** Façade Engineering Fundamentals – Systems

**10:30 – 10:50** Tea Break | Product Display

**10:50 – 11:20** Building Codes and Building Envelopes

**11:20 – 12:20** Sustainable Building Envelopes

**12:20 – 12:30** Q+A

**12:30 – 13:30** Lunch | Product Display

**13:30 – 14:00** Wind Engineering

**14:00 – 14:30** Deciphering Façade Shop Drawings

**14:30 – 15:00** Extended Q+A

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## SPEAKERS

**Mr. Masoud Moinfar**

**Managing Director, Fenestra Malaysia Sdn Bhd**

Masoud is a mechanical building services engineer. He has more than 30 years of professional experience in design and construction management of a wide range of projects including large residential apartments, hospitals, institutional facilities, commercial buildings, educational and office developments. Masoud has wide experience in all aspects of building engineering including design, documentation, project administration and construction management. His experience has a strong focus on value engineering and project management. Masoud is passionate about reducing energy consumption of buildings and an ardent advocate of introduction of green technologies in commercial developments. Masoud is a registered GBI Facilitator and a WELL Accredited Professional.

**Mr. Zulkarnain Abdullah**

**Executive Director, Fenestra Malaysia Sdn Bhd**

Zulkarnain is a façade engineer with over 20 years of experience in design and construction supervision of façade systems. He has a wide experience of working in design offices as well as working with contractors which has given him a full understanding of the diversity of façade systems in design, fabrication and site installation. Through many years of close study of façade materiality, Zulkarnain possesses an excellent knowledge of building materials, such as glass, aluminium, stainless steel, masonry and stone.

**Ar. Chong Yee Loon**

**Executive Director, Fenestra Green Sdn Bhd**

Yee Loon has over 30 years of experience in the architectural field. She has an in-depth understanding of building engineering and construction systems, as well as keen awareness of budget and schedule control. Yee Loon is passionate about sustainable developments and green design in buildings. As a qualified LEED Accredited Professional, WELL Accredited Professional and registered GBI Facilitator, she is well positioned to guide and assist developers and design teams in pursuance of green building certification. Yee Loon heads Fenestra's Environmentally Sustainable Design team.