Building Façades & Fire Safety Seminar 2018
19 April 2018 (Thursday)       8.30am – 5.00pm
Copthorne King’s Hotel, Singapore

Who should attend?
This seminar is recommended for developers & building owners, architects, engineers, contractors, façade designers & consultants, façade contractors, building & facility managers, fire & security companies, testing & certification agencies, government departments, academic & research institutions, and others.

Guest-of-Honour: Er. Dr Lee Bee Wah (MP for Nee Soon GRC / IES Past President)

Seminar Fee: IES Member @ SGD 250.00 per person; non-member @ SGD 320.00 per person (prices before GST)
Group Booking: Enjoy 10% group discount for 5 or more persons

Programme Highlights

Fire Safety Engineering for Buildings – an Overview
by Ms Ruth Wong, Associate Principal / Leader - Fire Safety Engineering, Arup

New Realities in the Fire Performance of Tall Building Facades
by Mr Mathieu Meur, Director, DP Facade

The use of Aluminium Composite Materials in the Cladding of Buildings - Fire Retardancy Considerations
by Dr Tarek Haddad, CEO Architecture & Display Asia, 3A Composites, Dubai

Standards and Building Façades
by Dr John Minn, Chairman, Sustainable and Green Sub-committee, Singapore Institute of Building Limited, and Member, Technical Committee on Building Maintenance and Management, Singapore Standardisation Programme

Fire Performance of Mass Engineered Timber (MET)
by Mr Kevin Hill, Managing Director, Venturer Pte Ltd

Fire Protective Performance of Building Materials: Our Recent Innovations
by Asst Prof Aravind Dasari, Assistant Professor, School of Materials Science and Engineering, Nanyang Technological University

Testing & Certification
by Mr Natarajan Somou Suresh, Lab Director, Singapore Test Services

DuPont Thermoman Collaboratory
by Prof Richard Jin, Research Investigator, DuPont China Holding Company Ltd

This seminar is brought to you by the IES Publications Committee

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# Programme Timetable

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<tr>
<td>9.00am</td>
<td>Welcome Speech by Guest-of-Honour, <strong>Er. Dr Lee Bee Wah</strong>, MP for Nee Soon GRC / IES Past President</td>
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<tr>
<td>9.15am</td>
<td><strong>Ms Ruth Wong</strong> – Fire Safety Engineering for Buildings – an Overview</td>
<td>Arup</td>
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<td>9.45am</td>
<td><strong>Mr Mathieu Meur</strong> – New Realities in the Fire Performance of Tall Building Facades</td>
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<td>10.15am</td>
<td>Tea Break</td>
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<tr>
<td>10.45am</td>
<td><strong>Dr Tarek Haddad</strong> – The use of Aluminium Composite Materials in the Cladding of Buildings – Fire Retardancy Considerations</td>
<td>3A Composites, Dubai</td>
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<tr>
<td>11.15am</td>
<td><strong>Dr John Minn</strong> – Standards &amp; Building Facades</td>
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<td>Panel Discussion &amp; Q&amp;A Session</td>
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<td>2.00pm</td>
<td><strong>Mr Kevin Hill</strong> – Fire Performance of Mass Engineered Timber (MET)</td>
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<td>2.30pm</td>
<td><strong>Asst Prof Aravind Dasari</strong> – Fire Protective Performance of Building Materials: Our Recent Innovations</td>
<td>Nanyang Technological University</td>
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<td>3.00pm</td>
<td>Tea Break</td>
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<tr>
<td>3.30pm</td>
<td><strong>Mr Natarajan Somou Suresh</strong> – Testing &amp; Certification</td>
<td>Singapore Test Services</td>
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<tr>
<td>4.00pm</td>
<td><strong>Prof Richard Jin</strong> – Dupont Thermoman Collaboratory</td>
<td>Dupont China Holding Company Ltd</td>
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<tr>
<td>4.30pm</td>
<td>Panel Discussion &amp; Q&amp;A Session</td>
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<td>5.00pm</td>
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Synopsis of the Talks & Speakers Corner:

**Fire Safety Engineering for Buildings - an Overview**

Ms Ruth Wong
Associate Principal / Leader - Fire Safety Engineering, Arup

It has been 14 years since the implementation of Performance-based Fire Engineering in Singapore. There have been significant developments in terms of how it is applied to current building design, what aspects are typically addressed and how even the Prescriptive Code currently incorporates Performance-based Fire Engineering aspects within its requirements.

The presentation will provide an overview of the statutory submission and design process involved in undertaking Fire Engineering. It will cover how Fire Engineering is typically incorporated into iconic and complex developments, how it influences the design of more typical residential and commercial buildings, as well as its impact on the use of new materials in building construction.

**New Realities in the Fire Performance of Tall Building Facades**

Mr Mathieu Meur
Director, DP Façade

As a response to the spate of cladding-related fire events, the presentation will review several recent fires, involving building envelopes in Asia and around the world. The talk will then focus on the methods available for assessing the Fire Performance and for the testing of cladding materials. This will lead to an outlook on regional regulations relating to the Fire Performance of building envelopes. The presentation will conclude by considering the current and optimal detailing of curtain wall fire-stops.

**The use of Aluminium Composite Materials in the Cladding of Buildings - Fire Retardancy Considerations**

Dr Tarek Haddad
CEO, Architecture & Display Asia, 3A Composites

Incidents such as the Grenfell Tower fire in the UK and the fire at the industrial building in Toh Guan Road in Singapore, both of which resulted in tragic loss of life, have turned the spotlight on fire safety issues governing the use of Aluminium Composite Panels (ACPs). At the same time, fire-rated ACPs have been successfully installed in a range of projects in Singapore and world over, since the mid-1990s.

The presentation identifies the characteristics of the ‘right’ fire-rated ACPs & Systems and looks into the specifications, design and installation, that have contributed to their achieving a strong track-record, in terms of aesthetic appeal and functional performance. The talk also offers constructive suggestions to address the current challenges surrounding the use of ACPs for building facades.
Synopsis of the Talks & Speakers Corner:

**Standards and Building Façades**

In the built environment, the building facade is significantly influenced by environmental factors, ecology of the building, people’s mindsets and policies. These common factors in the context of the built environment should be reflected in the standards and codes of practice.

Eye-catching façade designs of the present day have not only produced aesthetics, but have also provided answers for varieties of surprising challenges, at the same time. The explanatory presentation on ‘Standards and Building Façades’ will provide the participants with potential prototypical façades of upcoming built environments. This talk will also present how challenges that are prevailing today will impact the knowledge requirements for building façades and potential standards for the built environment industry.

Offering an overview, this presentation will highlight current practical challenges and opportunities created by the different phases in the life cycle of a building, and will share various advancements in today’s technologies, solutions and best practices adopted by diverse professions, in shaping some important standards for the future smart generation of the built environment.

**Fire Performance of Mass Engineered Timber (MET)**

The use of MET for the structural components of buildings will increase, on account of the innumerable benefits it offers. These include increased productivity gains through lower manpower costs, reduced construction time and ease of handling. MET is also a sustainable material, owing to its lower carbon footprint, good thermal performance and recyclability.

This presentation is focused on the practical application of MET as a fire-resistant material, from the perspective of a Singapore MET design and installation business.
Synopsis of the Talks & Speakers Corner:

**Fire protective performance of building materials: our recent innovations**

Fire and polymers share a fierce relationship. Considering the extensive usage of polymer-based materials in modern construction, it is important to understand the balance between them. Our research activities specifically focus on this aspect, by exploiting the inherent characteristics of polymers and additives to achieve enhanced fire response, whether in bulk form or as coatings. Importantly, our research looks at the ‘scalability’, linking the materials-scale perspective of properties to structures. In this presentation, our recent efforts in the development of fire-rated boards, core materials of aluminium composite panels, and fire protection coatings for steel structures will be highlighted. The key attributes of these recent innovative developments will enable the building and construction sector to improve waste management; construction productivity; environmental resistance; protection of steel, concrete and timber; as well as, more importantly, cost-effectiveness.

**Testing & Certification**

Building façade and fire safety requirements are getting greater attention due to the recent global incidents of building fires spreading via building materials. As most cities are getting denser with increasing population, buildings are rising higher to accommodate the larger numbers of people.

To meet the increasing demands of cities, builders, as well as manufacturers and suppliers of materials, have to ensure their efficient functioning, even under harsh environments and especially in the event of a fire, so as to ensure the safety and security of buildings and their occupants.

Many countries have established regulatory frameworks to test and certify these products before they are put to use. In this seminar, the speaker will cover:

* Various building materials used and the respective standards governing their performance in the area of fire safety.
* Regulatory framework in Singapore, compliance and certification.
* Overview of BS 476 & NFPA 285 testing standards and testing methodology.
* Insight on fire door testing to SS 332 requirements.

**DuPont Thermoman Collaboratory**

This presentation shares fire-safety experiences and expertise, leveraging on the best safety practices across several industries, as well as innovation in materials, developed for fire protection.

The ThermoMan Collaboratory provides a platform to complement safety research and elevate fire safety awareness, with the goal to save lives, by effectively simulating the real-life flash fire scenarios and predicting burn injuries. Established in Singapore in 2016, the ThermoMan testing facility, the fifth of its kind worldwide, is an advanced thermal burn injury evaluation device and features a life-sized instrumented mannequin, covered with 122 heat sensors.
TERMS & CONDITIONS

Registration
Registration will be on a first-come-first-served basis and will only be confirmed upon receipt of full payment by the Committee unless otherwise invoiced to company.

All registration must be submitted with the completed on-line Registration Form.

Closing Date & Payment
The closing date for registering for the seminar shall be by Friday, 13 April 2018. The payment via credit card, paypal and invoice should be settled at least 3 business days before the event.

Confirmation of Registration
Confirmation of registration will be given 5 business days prior to the seminar via email, and you are required to acknowledge it.

We reserve the right to allow only confirmed registrants to attend the event.

Refunds and Cancellations
No refunds will be made for withdrawals. Replacement will be allowed only if written notice is received by us at least 3 business days before the seminar. However, when an IES member is replaced by a non-member, the participant shall pay the difference in the relevant fees at least 3 business days before the seminar.

Course Cancellation/Postponement
Changes in venue, date, time and speakers for the Events can occur due to unforeseen circumstances. The Committee reserves the full right to cancel or postpone the Event under such circumstances without prior reasons. Every effort, however, will be made to inform the participants or contact person of any cancellation or postponement.

Fees will be refunded in FULL if the Event is cancelled by the organizer.

Enquiries
For more information, please email to: fenda.ngo@iesnet.org.sg