Partners in Fire Safety
Building a Safer Tomorrow

Suntec Singapore . 12 - 14 October 2011

www.fisac.com.sg
In tandem with the rapid economic and population growth in Asia, the issue of fire safety for properties and people has framed the concerns and policies of government officials and fire professionals, for decades. Independently, Asian governments have formulated codes and guidelines that have promoted and provided fire safety requirements in homes and public places.

In order to discuss and share best practices in the Asian fire safety industry, the Singapore Civil Defence Force and the National Fire and Civil Emergency Preparedness Council are jointly launching the inaugural Fire Safety Asia Conference (FiSAC) 2011 to be held at the Suntec Singapore from 12-14 October 2011.

Commissioner’s Message

Singapore’s population, including non-citizens, grew from 3.9 million to almost 5 million over the past 6 years. If this trend holds, an increase to a projected 6.5 million target would be achieved in 20 years. And despite a limited land area of about 710 square kilometers, Singapore has built a rich mix of commercial, industrial and residential premises, an urban landscape variegated in design and function. So, it is no surprise that the island nation has been named the second most densely populated in the world after Monaco. This high density of people living and working in close proximity necessitates creative and innovative fire safety solutions. As buildings get taller and closer, fire safety becomes even more challenging for architects and the various fields of building professionals; a challenge to institute smart fire safety regulations that not only ensure that living spaces are fire safe, but are also livable.

The Singapore Civil Defence Force (SCDF) has been at the fore-front of such challenges. As such, the SCDF has recently adopted the performance-based fire safety approach which opens up new opportunities for our building designs to be even more aesthetically pleasing without compromising on safety. And we can see that as countries get more developed and modernised, cities around the globe have no choice but to create denser and more closely-spaced, high-rise population centres which give rise to the same challenges that Singapore faced in earlier days. Thus, it is now an opportune time to gather fire safety practitioners from around the region to share experience, good practices and new ideas to build safe cities for the future.

On this note, the inaugural Fire Safety Asia Conference 2011 is targeted at bringing fire safety practitioners from local institutions as well as institutions from the region and beyond together. We believe that critical knowledge, ideas and best practices will be gained from being connected. In addition, I am sure that the conference papers, discussions and site visit will be an enriching experience for all the participants. Looking ahead, we are equally excited about the prospects of this new platform germinating ideas for a safe city tomorrow.

Given that fire safety is an integral part of a building’s DNA, one of the core functions of the SCDF is ensuring that we have the necessary and relevant fire safety regulations and provisions that provide for safe living and work spaces. As the fire authority in Singapore, the SCDF is pleased, in collaboration with the NFEC, to jointly organise this inaugural Fire Safety Asia Conference 2011.

I wish all participants a fruitful and enriching experience ahead.

Comr Peter Lim Sin Pang
Commissioner
Singapore Civil Defence Force
Chairman’s Message

The rapidly-growing Asian market economies have brought new challenges in fire safety to the countries of Asia. The growth in urbanisation has outpaced the development and implementation of fire safety standards and services in many countries. Recent fire disasters in the region have brought fire safety in buildings under public scrutiny and highlighted the need to enhance the fire safety design and engineering standards of buildings and facilities. This will not only help to save lives but also reduce costs due to fire damage and bring about substantial economic savings.

It has always been a difficult task to compare and identify the most efficient way to invest our economic resources in effective fire safety practices because of the cultural, social and systemic differences that exist between countries. One of the best ways I know is to learn from each other. This is the aim of Fire Safety Asia Conference 2011: to be Partners in Fire Safety – Building a Safer Tomorrow.

The inaugural 2011 conference will be held in Singapore to present, discuss and debate the technologies used to improve fire safety in buildings. Singapore’s extensive global trade and communications networks will provide a great platform for networking and sharing of ideas amongst the region’s leading infrastructure and service providers and fire safety professionals. The Conference will also launch the Fire Safety Design Excellence Awards to encourage higher standards in fire-safety design and engineering of buildings in Singapore.

The National Fire and Civil Emergency Preparedness Council or NFEC was formed 25 years ago with a mission to make Singapore a Fire Safe and Secure nation. The NFEC has been active in organising various activities to engage the industry, the marketplace, schools and the community in fire safety and emergency preparedness throughout the years. On behalf of the NFEC, I would like to invite all established professionals in this trade to join us in the conference and support us in realising this goal. I look forward to welcoming all our local and overseas delegates from the region to the Fire Safety Asia Conference 2011.

Mr Alan Loh
Chairman
National Fire and Civil Emergency Preparedness Council

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**KEYNOTE SPEAKERS**

**Mr Randolph Tucker**
Secretary of the Board of Directors
National Fire Protection Association

Mr Tucker specialises in fire protection engineering, building code consulting, and litigation support for fire protection and code consulting.

He is currently the Secretary of the Board of Directors of National Fire Protection Association (NFPA). Besides, he is also the Associate Principal of CCRD Partners and Editorial Advisor for Building Design + Construction magazine in the United States.

With over 39 years of fire protection engineering consulting experience, Tucker has presented fire safety topics to building owners, developers, code officials, architects, engineers and security analysts globally.

**Mr Tay Hao-Giang**
International President
The Institution of Fire Engineers

Mr Tay is the International President of The Institution of Fire Engineers (IFE).

With over 32 years of experience in fire safety engineering, he is known for his contributions towards the development of national standards in the fire industry in Malaysia. He initiated the Fire and Rescue Academy Malaysia (FRAM) as the first IFE-approved training centre outside the United Kingdom.

In Malaysia, he lectures Building Services Engineering to post-graduate students, and is a Director in Fire Safety Engineering Sdn Bhd. He also sits on various governmental committees to scrutinise and evaluate fire safety practices and standardisations.

He is regularly invited to present papers at conferences in various countries.
Mr Randolph W Tucker  
Secretary of the Board of Directors, National Fire Protection Association, USA  
**Topic:** Historical background of NFPA’s missions and objectives, collaboration with industry to promote Fire Safety and Significant Changes in NFPA Codes & Standards.

Mr Boo Geok Kwang  
Director, Fire Safety & Shelter Department, Singapore Civil Defence Force, Singapore  
**Topic:** Embracing Change in a Dynamic Building Landscape

Datuk Dr Soh Chai Hock  
National Chairman of Fire Prevention Council, Malaysia, Malaysia  
**Topic:** Fire Safety Partnership with Community - The Malaysia’s experience

Representative of Macau Fire Services  
Macau Fire Services  
**Topic:** Macau Fire Services and Introduction to Application of Performance - Based Design

Mr Bryan Chin  
Senior Associate Director, Beca Carter & Hollings & Ferner (SEA) Pte Ltd, Singapore  
**Topic:** Fire Engineering as Main Stream Design Discipline - Are You Serious?

Mr Mahmut Horasan  
Director, Scientific Fire Services Pty Ltd, Australia  
**Topic:** A risk contour based methodology towards achieving a safer balance between conservative and speculative design requirements.

Mr Morgan J Hurley  
Technical Director, Society of Fire Protection Engineers, USA  
**Topic:** Performance Based Fire Safety Design - A Review of Past, Observations of the Present, and Predictions about the Future

Professor Ian Thomas  
Professor, Centre for Environmental Safety and Risk Engineering, Victoria University, Melbourne, Australia  
**Topic:** Limitations in Measuring Performance in Performance - Based Design

Mr Tay Hao-Giang  
International President of Institution of Fire Engineers, UK  
**Topic:** Sustainable Fire Engineering is the Future

Assoc Prof Charles Fleischmann  
Associate Professor, Department of Civil and Natural Resources Engineering, University of Canterbury, New Zealand  
**Topic:** Is prescribing the Design Fire the way Forward for Performance - Based Design

Prof Tan Kang Hai  
Associate Professor, School of Civil & Environmental Engineering, Nanyang Technological University, Singapore  
**Topic:** Behaviour and Modeling of Structural Joints under Fire Conditions

Mr Ho Chee Leong  
Engineer, Defence Science & Technology Agency, Singapore  
**Topic:** Fire Safety Design for Underground Ammunition Storage Facility

Dr Daniel Bak  
Technical Director, Building Engineering, AECOM, Singapore  
**Topic:** The European Draft on Smoke Control in Car Parks and Application Examples of Smoke Control in Large Car Parks

Professor Chow Wan-ki  
Chair Professor of Architectural Science and Fire Engineering and Head of Department, Department of Building Services Engineering, Hong Kong Polytechnic University, Hong Kong  
**Topic:** Fire Safety Concerns for Subway Systems in Hong Kong

Dr Cheong Mun Kit  
Assistant Manager, Mechanical Services, Land Transport Authority, Singapore  
**Topic:** Heat release rate estimate for Metro Train Fire in rail tunnel

Er Tony Tay  
Director (Mechanical & Electrical), Parsons Brinckerhoff Pte Ltd, Singapore  
**Topic:** Kim Chuan Depot - Fire Safety Design

Mr André Lovatt  
Director and Singapore Office Leader, Arup Singapore Pte Ltd, Singapore  
**Topic:** Performance - Based Design of Performing Arts Venue in Singapore

LTC Derek Tan  
Commander Fire Investigation Unit Singapore Civil Defence Force, Singapore  
**Topic:** Recent Fires in Singapore - Some Lessons Learnt
### Programme

**Day 1: 12 Oct 2011**

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<th>Time</th>
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<tr>
<td>8.00am – 9.00am</td>
<td>Registration</td>
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<td>9.00am</td>
<td>Opening Ceremony</td>
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<tr>
<td>9.15am – 9.20am</td>
<td>Opening Remarks by Mr Alan Loh, Chairman, National Fire and Civil Emergency Preparedness Council</td>
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<tr>
<td>9.20am – 9.30am</td>
<td>Welcome Address by Comm Peter Lim Sin Pang, Commissioner, Singapore Civil Defence Force</td>
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<tr>
<td>9.30am – 9.45am</td>
<td>Keynote Address by Mr Teo Chee Hean, Deputy Prime Minister &amp; Coordinating Minister for National Security &amp; Minister for Home Affairs</td>
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<td>9.45am – 10.45am</td>
<td>Tour of Exhibition</td>
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<td>10.45am – 11.10am</td>
<td>Welcome Reception</td>
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<td>11.15am – 11.45am</td>
<td>Keynote Paper A</td>
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<td>11.45am – 12.15pm</td>
<td>Paper 1</td>
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<td>12.15pm – 12.30pm</td>
<td>Q &amp; A (Presentation of souvenirs)</td>
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<tr>
<td>12.30pm – 1.45pm</td>
<td>Lunch Break</td>
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<tr>
<td>1.45pm – 2.15pm</td>
<td>Paper 2</td>
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<td>2.15pm – 2.45pm</td>
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<td>2.45pm – 3.15pm</td>
<td>Paper 4</td>
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<td>3.15pm – 3.30pm</td>
<td>Tea Break</td>
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<tr>
<td>3.30pm – 4.00pm</td>
<td>Paper 5</td>
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<td>4.00pm – 4.30pm</td>
<td>Paper 6</td>
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<td>4.30pm – 5.00pm</td>
<td>Paper 7</td>
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<td>5.00pm – 5.30pm</td>
<td>Q &amp; A (Presentation of souvenirs)</td>
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<td>7.00pm – 10.00pm</td>
<td>Awards Gala Dinner</td>
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Mr Mahmut Horasan  
Director  
Scientific Fire Services of Australia

He has worked as a Senior Lecturer at Victoria University, Australia and Section Manager at Scientific Services Laboratory, Australia. Having been in the Fire Safety Engineering industry for almost 20 years, he has conducted research, published various papers, presented in international conferences and contributed to the development of fire engineering guidelines. He is actively involved in projects in Australia and South-east Asia.

**Day 2: 13 Oct 2011**

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<tbody>
<tr>
<td>9.00am – 9.30am</td>
<td>Keynote Paper B</td>
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<tr>
<td>9.30am – 10.00am</td>
<td>Paper 8</td>
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<td>10.00am – 10.30am</td>
<td>Paper 9</td>
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<td>10.30am – 10.45am</td>
<td>Tea break</td>
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<td>10.45am – 11.15am</td>
<td>Paper 10</td>
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<td>11.15am – 11.45am</td>
<td>Paper 11</td>
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<td>11.45am – 12.15pm</td>
<td>Q &amp; A (Presentation of souvenirs)</td>
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<td>12.15pm – 1.45pm</td>
<td>Lunch Break</td>
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<td>1.45pm – 2.15pm</td>
<td>Paper 12</td>
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<td>2.15pm – 2.45pm</td>
<td>Paper 13</td>
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<td>2.45pm – 3.15pm</td>
<td>Paper 14</td>
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<td>3.15pm – 3.30pm</td>
<td>Tea Break</td>
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<tr>
<td>3.30pm – 4.00pm</td>
<td>Paper 15</td>
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<tr>
<td>4.00pm – 4.30pm</td>
<td>Paper 16</td>
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<td>4.30pm – 5.00pm</td>
<td>Paper 17</td>
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<tr>
<td>5.00pm – 5.15pm</td>
<td>Q&amp;A (Presentation of souvenirs) and Conference Closing</td>
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<tr>
<td>5.30pm – 5.45pm</td>
<td>Closing Remarks by Mr Alan Loh, Chairman, National Fire and Civil Emergency Preparedness Council</td>
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<tr>
<td>8.30am – 9.00am</td>
<td>Registration</td>
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<tr>
<td>9.00am – 10.00am</td>
<td>First part of Workshop</td>
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<td>10.30am – 11.00am</td>
<td>Tea break</td>
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<td>11.00am – 1.00pm</td>
<td>Second part of Workshop</td>
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*Lunch is not provided

The information mentioned above may be subjected to further changes.

### Technical Visit Programme

**Venue:** Civil Defence Academy, Date: 14 October 2011  
**Time:** 2.30pm – 6.00pm

### Professional Accreditation

**Fire Safety Asia Conference**  
CPD hours accredited to FSE: 16 hours  
CPD points accredited to FSM: 7 points  
CPD points accredited by BOA: 6 points  
PDU points accredited by PEB: 11 points  
SDU points accredited by MOM: 9 points

**Fire Safety Engineering Workshop**  
CPD hours accredited to FSE: 4 hours  
CPD points accredited to FSM: 3 points  
CPD points accredited by BOA: 2 points  
PDU points accredited by PEB: 3 points  
SDU points accredited by MOM: 3 points
**EVENT HIGHLIGHTS**

1. **The Inaugural Fire Safety Design Excellence Awards 2011**
   The prestigious Awards give recognition to the individuals, organisations and the project teams for ingenious design processes and solutions in overcoming project challenges to achieve a high standard in fire safety design of building projects in Singapore.

   **The Awards aim to:-**
   - inculcate a strong fire safety culture among building professionals in developing our built environment;
   - give recognition to professionals, developers, building owners and project teams for fire safety engineering achievements; and
   - provide an avenue through which competition for design excellence can be enhanced.

   These Awards are to give recognition to Qualified Persons (QPs) and developers or building owners for attaining excellence in fire safety design. These Awards will be presented during the Awards Gala Dinner which will be held on the first night of the Fire Safety Asia Conference at Suntec Singapore. Representatives of the award-winning buildings will be invited to do a presentation of their award-winning designs during the Awards Gala Dinner.

   **There are two categories under Fire Safety Design Excellence Awards:**
   - Buildings with total construction costing less than S$100 million;
   - Buildings with total construction costing S$100 million or more.

2. **Awards Gala Dinner**
   Guest-of-Honor: Mr S Iswaran
   Minister, Prime Minister’s Office & Second Minister for Home Affairs & Trade and Industry
   Venue: Pan Pacific Hotel, Ballroom

   Award winners will also receive award certificates and specially-designed plaques, and the winning designs will be featured in SCDF publications.

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**CONCURRENT EVENTS**

**FIRE SAFETY ENGINEERING WORKSHOP**

Venue: Suntec Singapore  
Date: 14 October 2011  
Time: 8.30am – 1.00pm

**FIRE & DISASTER ASIA 2011**

Fire & Disaster Asia 2011, popularly known as FDA 2011, is a three-day exhibition organised to showcase the most innovative range of specialised rescue and disaster management products, and associated services that protect lives and properties on all levels of fire and emergencies.

Venue: Suntec Singapore  
Date: 12 – 14 October 2011  
Time: 10.00am – 6.00pm daily  
Website: www.firedisasterasia.com