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9TH INTERNATIONAL
CONFERENCE ON
PERFORMANCE-BASED
CODES AND FIRE SAFETY
DESIGN METHODS

HONG KONG
The Excelsior Hong Kong
20-22 JUNE 2012

**Co-Sponsors:
Society of Fire Protection Engineers
SFPE Hong Kong Chapter**



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THE INTERNATIONAL CONFERENCE ON PERFORMANCE-BASED CODES AND FIRE SAFETY DESIGN METHODS has established a reputation within the fire protection engineering community as the paramount event for keeping abreast of advancements in performance-based fire protection design. This year's conference provides a unique opportunity to learn from the world's leading experts from 25 countries.

Performance-based fire protection design continues to grow in use and acceptance. However, fire protection engineering has not reached the state of other engineering disciplines, where performance-based design is the norm. Because it is an advancing field, major new developments occur at a rapid pace.

Starting in 1996, the Society of Fire Protection Engineers, along with several partner organizations, has held a biennial conference to showcase the state of the art in performance-based code approaches and engineering design methods. Join us in Hong Kong for the 2012 conference.

A SPECIAL THANKS

PROTECTWELL[®]

SFPE and the SFPE Hong Kong Chapter would like to thank Gold Sponsor Guangzhou Protectwell Electronic & Technology Co., Ltd. for their generous support of SFPE's 9th International Conference on Performance-Based Codes and Fire Safety.

THE EXCELSIOR

The Excelsior Hong Kong
281 Gloucester Road
Causeway Bay
Hong Kong

ADVANCE REGISTRATION FEES
(Must be received by 30 April 2012)
\$800 U.S. Dollars for SFPE Members
\$950 U.S. Dollars for Non-Members

LATE REGISTRATION FEES
(Received after 30 April 2012)
\$925 U.S. Dollars for SFPE Members
\$1,075 U.S. Dollars for Non-Members



WEDNESDAY, 20 JUNE, 2012
PERFORMANCE-BASED CODES

0900-0915 Welcome

0915-0940 Developing a Performance-Based Building Regulation and Paving the Way Toward Electronic Submission of Building Permits and Automative Code Compliance Checks, B. Karlsson and B. Tomasson

0945-1100 Parallel Sessions

The Development of Performance-Based Design in China & the Influence of International Best Practices , B. Hu, F. Li, and M. Reiss	Enforcement of Performance-Based Building and Fire Codes in a Privatized Building Control System , G. du Chateau
A Decade of Experience with Performance-Based Codes in the USA , W. Koffel	One Building: Thirty Fire Strategies. Who is Right? Who is Wrong? , P. Williams
Outcomes of a 6 Year French Research Project on FSE , J. Kruppa, D. Dhima, N. Henneton, and P. Fromy	Performance-Based Design—Limits of Practice , L. Poon

1100-1130 Break

1130-1245 Parallel Sessions

The BCA and Performance-Based Fire Engineering in Australia—15 Years On , P. Johnson and D. Barber	Safety Factors for Advanced Fire Simulation , S. Weaver, J. Ockenden, and I. Moore
A New Framework for Performance-Based Fire Engineering Design in New Zealand , N. Saunders, P. Beever, C. Wade, C. Fleischman, M. Feeney, D. Scott, and P. Thorby	Development of a Risk-Informed Performance-Based Approach to Addressing Fire Safety in Existing Buildings , B. Meacham and J. Echeverria
New Swedish Building Regulations and a Framework for FSE , C. Cronsoie, M. Stromgren, and D. Tonegran	Education as Support for Performance-Based Fire Safety: A Joint International Effort , B. Merci, P. van Hees, R. Jönsson, and J. L. Torero

1245-1400 Lunch



WEDNESDAY, 20 JUNE, 2012 PERFORMANCE-BASED CODES continued

1400–1515 Parallel Sessions

Acceptance of Fire Safety Engineering as a Discipline in Scotland , J. McGonigal and T. Grace	Assessment of Timely Evacuation of Buildings , P. H. E. van de Leur and N. P. M. Scholten
The Impact of Performance-Based Codes on the Existing Prescriptive Regulation—Italian Context, Perspectives and Experiences , E. Gissi, A. Ferrari, L. Fiorentini, and R. Orvieto	Can Building Sustainability be Enhanced through Fire Engineering of Structures? , D. Barber
Fourteen Years of Experience with Performance-Based Fire Safety Engineering in Norway—Lessons Learned , H. Bjelland and O. Njå	Optimum Performance-Based Fire Protection of Cultural Heritage , I. Naziris and K. Papaioannou

1515–1545 Break

1545–1700 Parallel Sessions

Alternative Solutions and Acceptable Risk—A Canadian Context , P. L. Senez and K. D. Calder	Occupant Load in Multi-Use Buildings—Evaluation of the Bases of Codes Requirements vs. Real Data and Performance-Based Approach , T. Cisek and M. Cisek
The Effect of New Detailed Regulations on Fire Safety Engineering and Societal Risk Acceptance , T. Rantatalo, J. Norén, and J. Bengtsson	Performance Basis for the Development of a Fire Safety Standard for Three-Story Wooden School Building , Y. Hasemi, N. Yasui, E. Hori, T. Naruse, I. Hagiwara, T. Kaku, J. Izumi, N. Itagaki, J. Suzuki, K. Kato, A. Ida, J. Inagaki, S. Higuchi, H. Komatsu, T. Osaka, M. Seki, T. Hebiishi, M. Hirai, A. Suzuki and M. Yasukawa
A Study of the Nature of Fire Risks in Tall Buildings , D. Charters	Applying Air Jet Smoke Protection Systems in Places with Large, Inconvenient Evacuees , K. C. Chung





THURSDAY, 21 JUNE, 2012
FIRE SAFETY DESIGN METHODS

0900-0925 Development of a Design Fire Generator for a Risk-Informed Fire Safety Engineering Tool,
G. Baker, M. Spearpoint, C. Fleischmann, and C. Wade

0930-1045 Parallel Sessions

Lessons Learned in the ICFMP Project for Verification and Validation of Computer Models for Nuclear Plant Fire Safety Analysis, M. Dey	Guidelines for Estimating Smoke Detector Response, J. Milke
"Test Bed" Environment Process for Assessing the Appropriateness of Engineering Tools to be Used in Performance-Based Design Applications, A. Alvarez and B. Meacham	Predicting Smoke Spread from Mechanically Ventilated Compartments Using FDS, Taking into Account the Importance of Leakage, J. Wahlqvist
Uncertainty of Smoke Filling Calculations in a Large Atrium through Comparison to Experimental Results, G. Vigne, C. Gutiérrez-Montes, and G. Rein	Numerical Simulation of Smoke Damage in a Semiconductor Cleanroom, Y. Xin and J. Newman

1045-1115 Break

1115-1230 Parallel Sessions

Research on the Mobility of Patients and the Number of Employees in Hospital Wards, T. Takagi, Y. Hasemi, and S. Tsuchiya	Increasing Building Fire Safety by Bridging the Gap Between Architects and Fire Safety Engineers, H. Park, B. Meacham, and N. Dembsey
The Historical Basis for Determining Occupant Loads, K. D. Calder and H. A. Locke	Commissioning of Performance-Based Fire Systems, C. Kilfoil
Simulation in the Improvement of Egress Safety in Tall Buildings, T. Nieminen	Addressing Uncertainty in Fire Risk Assessment of Fire Safety Systems Using a Bayesian Network, F. W. Akashah, J. Zhang, and M. Delichatsios

1230-1400 Lunch

1400-1515 Parallel Sessions

Structural Fire Engineering: Who Cares, and Why Bother, A. Law, L. Bisby, and J. Torero	Considerations for the Development of a Quantitative Life Safety Design Concept Using Performance-Based Fire Engineering Methods, M. Siemon, C. Albrecht, and D. Hosser
Thermal Analyses of Protected Steel Structures, L. Rzdolsky and P. D. Gandhi	Fire Brigade Intervention Times in High-Rise Buildings, L. Kamstrup, T. S. Franck, and A. S. Dederichs
Performance-Based Structural Design with Traveling Fires, J. Stern-Gottfried and G. Rein	Quantitative Design Decision Method: Performance-Based Design Tool Utilizing Risk Analysis Framework, M. Hurd and E. Weckman

1515-1545 Break



THURSDAY, 21 JUNE, 2012 PERFORMANCE-BASED CODES continued

1545–1600 Parallel Sessions

<p>Analysis of Fire Scenarios in Order to Ascertain an Acceptable Safety Level in Multi-Functional Buildings, M. Nilsson, P. van Hees, H. Frantzych, and B. Anderson</p>	<p>The Use of Scale Modeling in Fire Safety Design & Investigation, J. G. Quintiere</p>
<p>Modeling the Effect of Sprinklers on Fire Development Using a Risk-Informed Design Tool, K. Frank, M. Spearpoint, C. Fleischmann, and C. Wade</p>	<p>Fire Detection in High Ceiling Spaces—Recent Code Developments in the UK for Aspirating Smoke Detection Technology, P. Massingberd-Mundy and Y. Jiang</p>
<p>A Cost-Benefit Analysis of Fire Protection Systems Designed to Protect Against Exterior Arson Fires in Schools, N. Johansson, P. van Hees, and M. S. McNamee</p>	<p>Cold Case Study, F. Magnusson, M. Nordberg, M. Skjöldebrand, and J. Hagman</p>

1600–1615 Conference Summary

1800 Conference Gala Dinner

One conference gala dinner ticket will be included with each registration. Additional tickets are available at \$100 U.S. per person. (See registration page for additional information.)



Attendees at the 2010 International Conference in Lund, Sweden



FRIDAY, 22 JUNE, 2012

CASE STUDIES

- 0830-0845** **Introduction**
- 0845-0930** **Hong Kong Case Study**, W. K. Chow, Hong Kong Polytechnic University, et al.
- 0930-1015** **New Zealand Case Study**, Charles Fleischmann, University of Canterbury, et al.
- 1015-1045** **Break**
- 1045-1130** **Australian Case Study**, Tobias Salomonsson, Philip Chun Fire, et al.
- 1130-1215** **Korean Case Study**, Kim Woon-Hyung, SFPE Korean Chapter, et al.
- 1215-1330** **Lunch**
- 1330-1415** **Finnish Case Study**, Juha-Pekka Laaksonen, L2 Fire Safety, et al.
- 1415-1500** **Swedish Case Study**, Johan Lundin, WSP Fire & Risk, et al.
- 1500-1530** **Break**
- 1530-1615** **USA Case Study**, William Koffel, Koffel Associates, et al.
- 1615-1700** **Japan Case Study**, Kiyoshi Fukui, SFPE Japan Chapter, et al.
- 1700-1725** **A Perspective Review of the International Case Studies**, J. Lundin, C. Hofmeister



LOCATION, TRAVEL, AND ACCOMMODATION



HOTEL RESERVATIONS

The 9th International Conference on Performance-Based Codes and Fire Safety Design Methods will be held at **The Excelsior Hong Kong**, 281 Gloucester Road, Causeway Bay, Hong Kong. Telephone: (852) 2894 8888. Room Reservation Email: exhkg-reservations@mohg.com. **Hotel reservations must be made before 19 May 2012. (See page 10 for registration.)**

TRANSPORTATION

By limousine—You can organize your choice of a three seater Mercedes Benz S320/S350 or a five seater Toyota Alphard. The journey time depends on traffic conditions but should be approximately 30 to 40 minutes.

By airport express—This is an efficient and pleasant way to reach Hong Kong Central. Trains run every 12 minutes and the journey takes 24 minutes. Fares are currently HKD 100.

Shuttle bus—The Excelsior offers a door-to-door shuttle bus service departing approximately every 30 minutes between 5:30 am and 10:30 pm from the hotel and 6:30 am to 12:30 am from the airport. The journey takes 30 to 40 minutes.

From out of town by Star Ferry—The Star Ferry has connected Hong Kong and Kowloon since 1898. It runs up to 11:30 at night. There are two decks; the upper deck offers the best views and fresher air. At HKD 2.20 it is the cheapest and most scenic ferry ride in the world. The crossing takes approximately eight minutes and if you have the time, it is a really worthwhile trip, particularly at night.

Island Ferries—Ferries and jet foils connect Hong Kong to the outlying islands leaving from Central ferry pier. Ask the Concierge for a timetable and details.

GETTING AROUND TOWN

By foot—It is easy to reach all the shops and businesses of Causeway Bay by foot from The Excelsior. There are plenty of air conditioned shopping malls to step into for a refreshing cooler in the mid summer humidity. Central is a brief taxi ride away.

By MTR—The MTR (Mass Transit Railway) underground system stretches across the New Territories and out to Lantau island with a super fast Airport Express train service. It is clean and reliable. The Causeway Bay station is a few steps from The Excelsior. But for more local flavour you could squeeze onto a tram. The Octopus card is the essential item for getting around Hong Kong. Available to purchase at any MTR station it waves you through all buses and MTR and as a stored value card even some news agents and small shops accept it as payment.

By taxi—Taxis are very good value transport around the city and the fares are low compared to most cities. Red taxis serve Hong Kong Island and Kowloon; green ones serve the New Territories and blue taxis, Lantau. Many drivers speak some English but it is wise to have your destination written in Chinese characters. The Concierge will always be happy to do this for you. Please note that drivers cannot pick up or drop off passengers on restricted streets, which are marked with yellow lines.

By bus—The bus system covers all of Hong Kong, except, of course, the outlying islands. They are mainly air conditioned and the frequency is excellent although the traffic jams make MTR a better option if you have a meeting. The one exception is travel to the South of the island, to Repulse Bay and Stanley, where the coastline trip is a fabulously scenic journey.

By minibus—Minibuses require a certain amount of local knowledge to master. Some are run by independent operators who may change route according to the traffic. They generally stop anywhere, much as a taxi might, which is a benefit. You pay either when boarding or leaving according to the bus, with the exact fare according to the route. For most tourists this would be an experience rather than a means of transport.

By tram—The tram system is a fun link particularly from Central to Wan Chai and Causeway Bay. During rush hours, though, they are so crammed that it is not a pleasant option, nor is it a particularly fast route. It is, however, cheap. Just drop HKD 2.00 in the box on exit.

USEFUL INFORMATION

Time zone—Hong Kong is UTC/GMT + 8 hours.

Currency—The local currency is the Hong Kong Dollar (HKD).

Electrical standard—The local voltage is 220 volts AC. You will need an adaptor for your 110-volt appliances and electrical equipment. Electrical outlets in Hong Kong take a British standard, square pin, three-pronged plug.

THINGS TO DO IN HONG KONG



The Peak Tram in Hong Kong

The Peak Tram is, as most passengers agree, the only way to truly experience the beauty of Hong Kong's natural wonders. Tens of millions of people from every corner of the globe have taken the ride, which affords a uniquely spectacular perspective of the city.

Located also at the Garden Road Peak Tram Lower Terminus is The Peak Tram Historical Gallery. The Gallery is like a time tunnel with more than 200 memorabilia exhibited. Divided into 15 theme sections, it will take you back to Hong Kong in the 19th century.



Oriental Golden Pavilion of Chi Lin Nunnery and Chinese Garden

Founded in 1934, this Buddhist temple complex is located in Diamond Hill, Kowloon, Hong Kong. Covering a space of more than 33,000 square meters, the temple complex includes a nunnery, temple halls, Chinese gardens, visitor's hostels, and a vegetarian restaurant.

The temple halls and the Chinese garden in front of the nunnery is open to the public daily without charge.



The Santa Casa de Misericordia in the Senado Square in Macau

Just a short ferry trip away lies the World Heritage Site, Macau, with neighbourhoods of cobblestone streets and baroque architecture.

Like Hong Kong, Macau is a diverse city where Eastern and Western cultures co-exist harmoniously. Apart from the obvious Chinese and Portuguese influences, you can find Dutch, Moorish, Spanish and British legacies in the older parts of town. The historic centre of Macau, which includes the oldest western architectural feature on Chinese soil, joined the World Heritage List in 2005.

Since the reversion of sovereignty, there has been much new development, spearheaded by a string of casinos and entertainment complexes that have transformed certain areas into dynamic new tourist attractions.

HOTEL RESERVATION FORM

THE EXCELSIOR, HONG KONG

GROUP CODE: (3EU55A)

281 Gloucester Road, Causeway Bay, Hong Kong
Telephone (852) 2894 8888/Facsimile (852) 2895 6459
Email General Inquiry: exhkg-info@mohg.com
Email Room Reservation: exhkg-reservations@mohg.com
www.excelsiorhongkong.com

9TH INTERNATIONAL CONFERENCE ON
PERFORMANCE-BASED CODES AND FIRE
SAFETY DESIGN METHODS

The Excelsior Hong Kong
20-22 June 2012

Guest Name _____ Company Name _____
Mr./Mrs./Ms. (Last) (First)

Arrival Date: _____ Departure Date: _____

Arrival Flight/ETA: _____ Departure Flight/ETD: _____

Telephone Number: _____ Fax: _____ Email: _____

ROOM TYPE/DAILY ROOM RATE (SINGLE/DOUBLE OCCUPANCY)

ROOM PREFERENCE (subject to availability)

Run-of-House—Standard or Superior Room (280 sq. ft./26 sq. m.)	<input type="checkbox"/> HK \$1,700	<input type="checkbox"/> Smoking	<input type="checkbox"/> Nonsmoking
Superior Side Harbour View Room (323 sq. ft./30 sq. m.)	<input type="checkbox"/> HK \$1,900	<input type="checkbox"/> King Bed	<input type="checkbox"/> Twin Bed
Deluxe Full Harbour View Room (366 sq. ft./34 sq. m.)	<input type="checkbox"/> HK \$2,100	<input type="checkbox"/> Others _____	

Rates are subject to 10% service charge and prevailing government tax (subject to government regulations) per room per night. Each room category carries a fixed inventory within the group block. Alternate room categories and the respective rate will be applied if the requested category is not available.

The above rates are inclusive of complimentary use of the Excelsior Fitness Centre (except massage and spa treatments), daily newspaper of choice (subject to availability), and complimentary use of internet connection.

Optional: Daily buffet breakfast at Cafe on the 1st, 1/F at special rate HK \$150 plus 10% service charge per person per day on consumption basis.

ARRIVAL TRANSFER

Hotel Shuttle (HK \$150 per person per trip/HK \$300 for roundtrip) One way Roundtrip

Hotel Limousine (HK \$690 per car per trip/HK \$1,380 for roundtrip) One way Roundtrip

Full charges will be levied in the event of "no show" or for a cancellation received less than 2 hours prior to reserved time.

CREDIT CARD FOR RESERVATION GUARANTEE

Card Holder's Name: _____ Number: _____

AMEX VISA MasterCard Diners Others Expiry Date: _____

TERMS AND CONDITIONS

All reservations must be guaranteed by credit card at the time of booking; otherwise, The Excelsior reserves the right to release non-guaranteed rooms.

Once guaranteed, a one night room charge will be posted to the credit card in case of no show, amendment, or cancellation after 19 May, 2012

Check-in time is 2 p.m. and the check-out time is 12 noon. For an extension up to 6 p.m., 50% of the daily room rate will be charged. After 6 p.m., the full day room rate will be applied.

I/We agree to the above terms and conditions and to guarantee this reservation by the credit card number provided above.

Printed Name: _____ Signature: _____

Reservation requested by: _____ Company: _____

Telephone Number: _____ Fax: _____ Email: _____

Please forward the above reservation before 19 May, 2012 to Reservations Department via facsimile on (852) 2576 7715 or email: exhkg-reservations@mohg.com

Hotel Confirmation Numbers (For Hotel Use): _____ Confirmed by: _____ Date: _____

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REGISTRATION FORM

MAIL to SFPE at 7315 Wisconsin Avenue,
Suite 620E, Bethesda, MD 20814

EMAIL to conference@sfpe.org

FAX to +1.301.718.2242

REGISTER ONLINE at www.sfpe.org

Reserve your place at the world's premiere event on performance-based fire protection design.

Name _____

Organization _____

Address _____

City/Town _____ Prov/State _____ Postal Code _____

Country _____

Phone _____ Fax _____

Email _____ Nickname _____

Please list any special requirements: _____

REGISTRATION FEES

Advance Registration Fees

(Must be received by 30 April 2012)

\$800 U.S. Dollars SFPE Members \$ _____

\$950 U.S. Dollars Non-Members \$ _____

Late Registration Fees

(Received after 30 April 2012)

\$925 U.S. Dollars SFPE Members \$ _____

\$1,075 U.S. Dollars Non-Members \$ _____

Gala Dinner Ticket

1 Ticket included with Registration fee \$ Free

Additional Tickets:

Qty _____ x \$100 U.S. Dollars \$ _____

TOTAL: \$ _____

NOTE: **After 25 May 2012, registration will be available on-site only.** On-site Registration will be offered on-site Wednesday 20 June 2012 from 0730 to 1700 at the Excelsior Hong Kong.

Special Requirements

If you have any special requirements due to disability or special dietary needs (such as vegetarian, pork, shell fish, etc.), please contact SFPE headquarters at +1.301.718.2910 ext. 104 or via email at jgordon@sfpe.org or indicate on the conference registration form.

TAKE A DISCOUNT! CHOOSE 1 OF 3 WAYS...

I'm an SFPE member. Please apply discounted member rates! My SFPE member number is _____.

Sign me up as a NEW SFPE member today and apply discounted member rates to this conference! I understand the annual dues are \$215 U.S.

Enjoy full benefits as an Affiliate Member just as soon as we receive your payment. Your welcome packet will include a detailed application for upgraded membership as an Associate or Professional Member, which is based on educational and practice accomplishments and entitles you to a certificate and special recognition.

Method of Payment

Check enclosed, made payable to SFPE.

AMEX MasterCard VISA

Card Number _____

Expiration Date _____

CVV Security Code _____

Name on Card _____

Signature _____

Payment must accompany the registration form. A receipt will be sent as confirmation via email. We accept American Express, Visa, or Mastercard payments. All cheques must be made payable in U.S. dollars to SFPE.



SFPE Educational & Scientific Foundation
7315 Wisconsin Avenue, Suite 620E
Bethesda, MD 20814

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