



6th International Conference on Performance-Based Codes and Fire Safety Design Methods



REACHING NEW HORIZONS

June 14-16, 2006

**The International Conference Hall
of Waseda University
Tokyo, Japan**

Sponsored by:

- Society of Fire Protection Engineers
- Japan Association of Fire Science and Engineering
- International Council for Research and Innovation in Building and Construction (CIB)
- SFPE Japan Chapter

About the Conference

Since the first conference on performance-based codes and fire safety design methods was held in 1996, many countries have developed, or are in the process of developing, performance based codes and design methods. However, use of these approaches has generally been limited to high-end projects, and the percentage of projects where performance-based design is used varies among countries.

This conference will present the state-of-the-art in performance-based code approaches and engineering design methods. Papers will be presented on newly emerging technologies, as well as perspectives on approaches that have worked well and approaches that have not worked as well as originally desired. The conference will be held in Japan, which has a larger proportion of projects designed according to a performance-basis than most other countries.

Over the last ten years, this conference has earned a reputation among the fire protection engineering community as the preeminent event for information on the leading-edge technology in the areas of performance-based codes and engineering design methods. Papers will be presented on subjects relating to current developments and observations relating to the use or implementation of performance-based codes or fire safety design methods.

Program Committees

Performance-Based Codes

- **Brian Ashe**, Buro Happold, UK
- **Olav Berge**, National Office of Building Technology and Administration, Norway
- **Richard Bukowski**, National Institute of Standards and Technology, USA
- **Yoshinobu Hirano**, National Institute for Land and Infrastructure Management, Japan
- **Morgan Hurley**, Society of Fire Protection Engineers, USA
- **Ai Sekizawa**, National Research Institute of Fire and Disaster, Japan
- **Beth Tubbs**, International Code Council, USA

Fire Safety Design Methods

- **Richard Bukowski**, National Institute of Standards and Technology, USA
- **David Charters**, Building Research Establishment Ltd., UK
- **Morgan Hurley**, Society of Fire Protection Engineers, USA
- **Peter Johnson**, ARUP Fire, Australia
- **Robert Jönsson**, Lund University, Sweden
- **Joël Kruppa**, CTICM, France
- **Ai Sekizawa**, National Research Institute of Fire and Disaster, Japan

Organizing Committee

- **David Evans**, Society of Fire Protection Engineers, USA
- **Julie Gordon**, Society of Fire Protection Engineers, USA
- **Yuji Hasemi**, Waseda University, Japan
- **Ai Sekizawa**, National Research Institute of Fire and Disaster, Japan

Registration

There are three easy ways to register:

- 1. Register Online:** Register online on SFPE's secure web site: www.sfpe.org/Education/6thInternationalConferenceonPerformanceBasedCodesandFire-SafetyDesignMethods.aspx. Follow the easy online directions.
- 2. Register by Fax:** Complete the registration form in the back of this brochure and fax it to SFPE at +(301) 718-2242.
- 3. Register by Mail:** Complete the registration form in the back of this brochure and mail to: "6th International Conference on Performance-Based Codes and Fire Safety Design Methods," c/o Society of Fire Protection Engineers, 7315 Wisconsin Avenue, Suite 620E, Bethesda, MD 20814, USA.

Payment MUST accompany the registration form, and a receipt will be sent as confirmation via U.S. postal mail. SFPE accepts American Express, Visa or MasterCard payments, and all checks must be made payable in U.S. dollars to "SFPE."

Advance Registration is available now through Monday, 1 May 2006. Late Registration is available from 2 May 2006 until 31 May 2006. After 31 May 2006, registration will be available on-site only. On-site registration will be offered on-site Wednesday, 14 June 2006 from 0730 to 1700 at the International Conference Hall of Waseda University in Tokyo, Japan.

Special Requirements

Please identify any special requirements due to disability, or special dietary needs such as: vegetarian, pork, shell fish, etc., to SFPE Headquarters at +(301) 718-2910 ext. 104, via email at education@sfpe.org, or on the *Conference Registration Form*.

Conference Program

Wednesday, 14 June, 2006

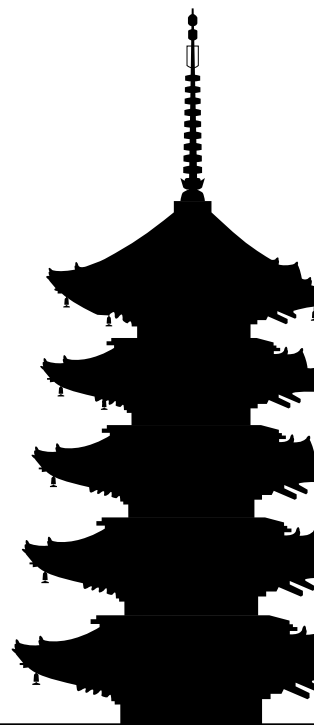
Performance-Based Codes

- 0900 – 0915** Welcome
- 0915 – 0945** **Invited Paper:** The Future of Fire Safety Engineering in Japan, *Y. Hasemi*
- 0945 – 1015** **Invited Paper:** Implementation and Practice of Performance-Based Design in China, *L. Du*
- 1015 – 1045** **Invited Paper:** The Implications of the NIST Instigation's Findings and Recommendations on Performance-Based Design, *R. W. Bukowski*
- 1045 – 1115** Break
- 1115 – 1205** Parallel Sessions

Session I	Session II
Training for Objective-Based Codes in Canada, <i>D. Bergeron</i>	Fire Safety and the Performance-Based New Zealand Building Code, <i>G. C. Thomas</i>
Structured Design and Presentation of Alternative Solutions Based on the Objective-Based Canadian National Building Code, <i>K. M. Wong and G. A. Gibson</i>	Performance Based Fire Engineering in New Zealand in 2005 - Changes and Lessons Learned, <i>D. Scott, R. Carter, and V. Ahmed</i>

- 1205 – 1330** Lunch
- 1330 – 1355** Role of Fire Safety Engineer on Technology Transfer, *F. Tsui, M. C. Hui, and M. Luo*
- 1355 – 1420** Where Do We Go Next?, *D. Gemeny*
- 1420 – 1445** Quality Management in Fire Protection Engineering, *A. Lurz, H. Schomberg, and T. Prein*
- 1445 – 1510** Situation and Problem of Performance-Based Fire Safety Design Viewed by a Fire Safety Engineer, *S. Tsuchiya*
- 1510 – 1545** Break
- 1545 – 1700** Parallel Sessions

Session I	Session II
AIJ Recommendations on Performance-Based Fire Safety Design of Buildings, <i>T. Tanaka and M. Kadoya</i>	Approval of Performance-Based Fire Engineering: The NSW Experience, <i>M. Foley</i>
Performance-Based Regime in Singapore, <i>N. K. Leong, C. Tan, H. C. Liang, and E. Choo</i>	Fire Safety Engineering in Australia—A Critical Review and Preliminary Recommendations for Design Consistency, <i>L. Poon and P. Gardner</i>
Performance-Based Fire Safety Design in Singapore—One Year On, <i>A. Lovatt and S. Y. Kee</i>	Performance Based Building Codes and Regulations for Existing Buildings in Australia, <i>G. Du Chateau</i>



Conference Gala Dinner

The Conference Gala Dinner will take place on Wednesday, 14 June 2006, starting at 1800 hours. One Conference Gala Dinner ticket will be included with each registration. Additional tickets are available at \$100 U.S. dollars per person.

Conference Program

Thursday, 15 June, 2006

Fire Safety Design Methods

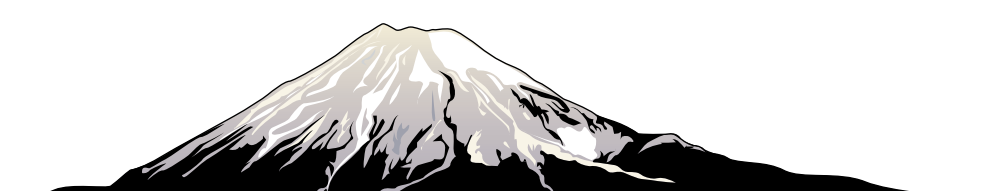
- 0900 – 0925** Development of a Design Framework for Localized Fire Scenarios, *K. Harada, S. Yagi, Y. Ohmiya, A. Natori, T. Wakamatsu, and H. Notake*
- 0925 – 0950** Selection of Design Fire Scenarios in Performance Based Fire Safety Design of Buildings, *J. Yamaguchi and T. Tanaka*
- 0950 – 1015** Using Performance-Based Design to Help People Adapt to Uncertainty during Fire Emergencies, *N. E. Groner*
- 1015 – 1045** Break
- 1045 – 1200** Parallel Sessions

Session I	Session II
The Fire Engineering Approach and a Discussion of the Design Fire, <i>W. K. Chow</i>	A Comparative Study of the Axisymmetric Plume Equations and Methods for Smoke Control Applications in Buildings, <i>E. Yii, A. Slattery, and N. McPhail</i>
Determining Design Fires for Design-Level and Extreme Events, <i>R. W. Bukowski</i>	Is Adequate Conservatism Being Provided—Using Fire Dynamics Simulator to Evaluate Performance-based Atrium Smoke Control System Design, <i>M. Ferreira</i>
Predicting Fire Exposures to Structures, <i>M. J. Hurley</i>	Performance Verification Method of Pressurization Smoke Control System for a Staging Area of Firefighting and Rescue Activity, <i>N. Hiroake</i>

- 1200 – 1330** Lunch
- 1330 – 1515** Parallel Sessions

Session I	Session II
Structural Fire Safety Design by a Frame Level Analysis Method, <i>K. Ikeda</i>	Experiences of a Performance-Based Design for the Fire Safety in the Underground Public Transport: The Experience of Metro de Madrid, <i>G. Santos and F. Vigarà</i>
Buckling Length of a Steel Column for Fire Design, <i>J. P. Rodrigues, F. T. Gomes, and P. P. Costa</i>	A Research of the Elevator Evacuation Performance for the Taipei 101 Financial Center, <i>K. H. Hsiung, W. J. Wen, S. W. Chien and B. J. Shih</i>
Robust Structural Fire Engineering of Tall Buildings in a Performance-Based Design Environment, <i>B. Lane and S. Lamont</i>	The Fire Safety Performance of Converted Buildings—The Study on Conversion of Offices to Residences, Welfare, Dining, Commercial and Amusement Facilities, <i>S. Moriyama, Y. Hasemi, T. Fujimura, and M. Kifune</i>
Practical Reliability Analysis Techniques for Use in Performance-Based Fire Design, <i>O.A. Ezekoye and L. Manuel</i>	An FDS Analysis of Sprinklers and Draft Stops at Floor Openings, <i>B. Gagnon and J. A. Maddox</i>

- 1515 – 1545** Break



Conference Program

Thursday, 15 June, 2006 *(continued)*

1545 – 1700 Parallel Sessions

Session I	Session II
A Risk-based Approach to Determine Fire Safety Improvements of 'Old' Buildings, <i>M.C. Hui</i>	Making Intelligibility Intelligible – A Proposed Hand Calculation Method for Design of Simple Intelligible Emergency Voice/Alarm Communications Systems for Fire Alarm System Designers, <i>D. Klepitch</i>
Using a Fire Risk Index Method for Multistorey Apartment Buildings in the Design Process, <i>B. Karlsson, B. Tómasson, and V. Stenstad</i>	Design Concept and Application of a Fire-phase Information Management System, <i>S. Kakegawa and T. Kawamori</i>
A Study of Fire Risk Performance Parameters, <i>D. Charters</i>	Development of the SFPE Guide for Estimating Fire Department Contributions towards Achieving Fire Safety Goals, <i>D. Barber and C. Jelenewicz</i>

Friday, 16 June, 2006

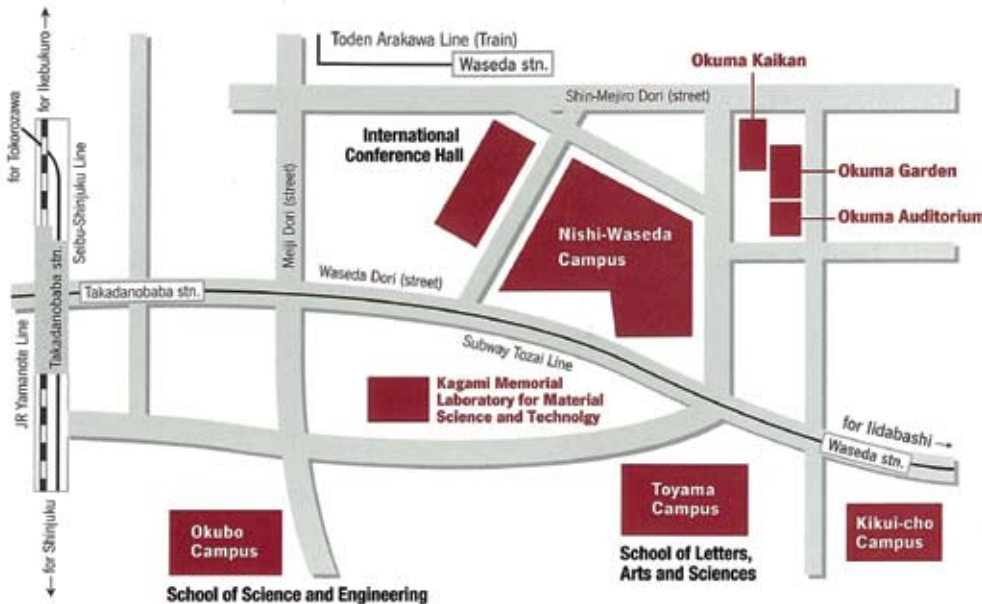
Conference Case Studies

- 0900 – 0915** Introduction
- 0915 – 1000** Japanese Case Study, Kazunori Harada, Kyoto University, et al.
- 1000 – 1045** American Case Study, William Koffel, Koffel Associates, et al.
- 1045 – 1115** Break
- 1115 – 1200** French Case Study, Joël Kruppa, CTICM, et al.
- 1200 – 1245** Hong Kong Case Study, W. K. Chow, Hong Kong Polytechnic University, et al.
- 1245 – 1400** Lunch
- 1400 – 1445** Australian Case Study, Ian Thomas, Victoria University, et al.
- 1445 – 1515** Break
- 1515 – 1600** Canadian Case Study, Peter Senez, Senez Reed Calder Fire Eng Inc, et al.
- 1600 – 1645** Swiss Case Study, Jerzy Respondek, Sicherheitsinstitut, et al.



Traveling & Hotel Information

International Conference Hall is located on the Nishiwaseda Campus at 1-104, Totsuka-machi, Shinjuku-ku, Tokyo 169-8050, Japan



By JR Yamanote Line or Seibu-Shinjuku Line
Takadanobaba Station (approx. 20 min. walk)

By Subway Tozai Line
Waseda Station (approx. 5 min. walk)

By Tokyo City Bus
Routes: Shinjuku Station (West Exit) to Waseda/RIHGA Royal Hotel (Bus Stop: Sodai Seimon/approx. 1 min. walk)
Shibuya Station to Sodai Seimon or Ueno Matsuzakaya to Waseda/RIHGA Royal Hotel (approx. 2 min. walk)

By Tokyo City Bus (School Bus)
Route: Takadanobaba Station to Sodai Seimon

By Toden Arakawa Line (Tram)
Route: Minowabashi to Waseda (approx. 5 min. walk)

Official SFPE Conference Hotel—The RIHGA Royal Hotel Tokyo

Address: 1-104-19, Totsuka-machi
Shinjuku-ku, Tokyo 169-8613, Japan
Phone: +81-3-5285-1121
Fax: +81-3-5285-4321
Website: www.rihga.com/tokyo/index.html
Reservation code: _SFPE_Symposium

Room Rate:
Single room: ¥22,200 JPY
Twin room: ¥28,200 JPY

The above rates are inclusive of 10% service charge and 5% consumption tax. The above rates include a daily complimentary breakfast served in the restaurant.

Alternate Hotels (No SFPE Block Reserved—rooms rates are subject to change)

Hotel Sunroute Takadanobaba

1 minute walk from Takadanobaba Station.
Address: 1-27-7 Takadanobaba,
Shinjuku-ku, Tokyo, Japan
Phone: +81-3-3232-0101
Fax: +81-3-3209-2349
Website: www.sunroute.jp/SunrouteTopHLE.html

For reservations via the webpage, click on Booking>Kanto>Takadanobaba>Booking.

Room Rate

Standard single room: ¥9,500 JPY
Superior single room: ¥9,900 JPY
Superior single room with PC/TV: ¥10,500 JPY
Standard twin room with PC/TV: ¥16,800 JPY
Superior twin room with PC/TV: ¥18,900 JPY

Consumption tax is included in the above rates.

The AGNES

Address: 2-20-1 Kagurazaka, Shinjuku, Tokyo 162-0825, Japan
Phone: +81-3-3267-5505
Fax: +81-3-3267-5513
E-mail: info@agneshotel.com
Website: www.agneshotel.com/english/index.html

Room Rate

	1 Person Use	2 Persons Use
Double Room (28m ²)	¥23,000 JPY	¥29,000 JPY
Twin Room (32m ²)	¥24,000 JPY	¥32,000 JPY
Superior Room (45m ²)	¥30,000 JPY	¥42,000 JPY

The above rates are inclusive of 10% service charge, 5% consumption tax, and are subject to applicable accommodation tax. The above rates are inclusive of daily complimentary breakfast served in the restaurant.

Conference Registration Form



Please complete this form and return it to:

6th International Conference on Performance-Based Codes and Fire Safety Design Methods

Society of Fire Protection Engineers

7315 Wisconsin Avenue | Suite 620E | Bethesda, MD 20814 USA | p: 301.718.2910 | f: 301.718.2242 | www.sfpe.org

Name _____
(first) (initial) (last)

Organization _____ Title _____

Address _____

City/Town _____ Prov/State _____ Postal Code _____

Country _____

Phone _____ Fax _____

Email _____

Nickname _____

Special Requirements _____
(dietary or accessibility)

Registration Fees

Advance Registration Fees *(Must be received by 1 May 2006)*

- \$825 US dollars for SFPE/CIB Members \$ _____
- \$950 US dollars for Non-Members \$ _____

Late Registration Fees *(Received after 1 May 2006)*

- \$925 US dollars for SFPE/CIB Members \$ _____
- \$1,050 US dollars for Non-Members \$ _____

Gala Dinner Ticket

- 1 Ticket included with registration fees \$ FREE
- Additional Tickets: Qty: ____ x \$100 U.S. Dollars \$ _____

TOTAL \$ _____

Member Information

This section must be completed to receive member discount:

- SFPE Member or CIB
- *My member number is _____
- *must include member number to receive discount*

- Non-member

Method of Payment

- Check Enclosed *(made payable to SFPE)*
- Credit Card *(please check one)*
- American Express MasterCard Visa

Card Number _____

Exp. Date _____

Name on Card _____

Signature _____

Payment MUST accompany registration form.



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