

## SPEAKER

### DR CHARLES FLEISCHMANN

Department of Civil Engineering  
University of Canterbury  
Christchurch, New Zealand

D a t e

2 May 2012 (Wed)

T i m e

7.00 – 8.30 pm

V e n u e

Room N001  
The Hong Kong  
Polytechnic University

Reply to:

Miss Y.Y. Yeung

Tel: 2766 5862 Fax: 2765 7198

E-mail: beelize@polyu.edu.hk

Department of Building Services Engineering

The Hong Kong Polytechnic University

Hung Hom, Kowloon

[Ref: Performance-based design in New Zealand  
and the New Verification Method - A Case Study]

- I enclose a cheque of HK\$200 for the registration for the lecture course on 2 May 2012.
- I am an IFE/HKIE member/BSE Alumni\*. I enclose a cheque of HK\$150 for the registration for the lecture course on 2 May 2012.
- I am a SFPE member/BSE Alumni Association member\*. I enclose a cheque of HK\$100 for the registration for the lecture course on 2 May 2012.

Name (in Full): \_\_\_\_\_

IFE/HKIE/BSE Alumni/SFPE/BSE-AA\*

Membership No: \_\_\_\_\_

Company Name: \_\_\_\_\_

Company/Home\* Address: \_\_\_\_\_

\_\_\_\_\_

Tel: \_\_\_\_\_

E-mail: \_\_\_\_\_

(Upon receipt of payment, reservations will be confirmed by e-mail. Cheques to be made payable to **The Hong Kong Polytechnic University**. Substitute delegates allowed provided advance notification is given. "First come first served" basis.)



THE HONG KONG  
POLYTECHNIC UNIVERSITY

DEPARTMENT OF  
BUILDING SERVICES ENGINEERING



C P D L E C T U R E

## Performance-based design in New Zealand and the New Verification Method - A Case Study

### Organized by

Professor W.K. Chow

Director, Research Centre for Fire Engineering

Head of Department, Department of Building Services  
Engineering

Leader, Former Area of Strength: Fire Safety Engineering  
The Hong Kong Polytechnic University

## PROGRAM SCHEDULE

6.45 – 7.00 pm	.....◆	Registration
7.00 – 7.05 pm	.....◆	Introduction
7.05 – 8.15 pm	.....◆	Talk by Dr Charles Fleischmann
8.15 – 8.30 pm	.....◆	Questions and answers

## ABSTRACT

The popularity of performance-based design (PBD) has continued to increase over the last two decades and many consider PBD provides cost effective and innovative solutions to fire safety challenges. Fundamental to PBD for life safety, is the principle that the occupants have enough time to exit the building before being overcome by the effects of fire. In fire engineering terms the available safe egress time (ASET) must exceed the required safe egress time (RSET) with an appropriate margin of safety. In most jurisdictions the necessary input and acceptance criteria are left up to the designer to decide with the approval from the authority having jurisdiction (AHJ). Unfortunately the conventional guidance on design scenarios, design fires and acceptance criteria are typically more qualitative than quantitative in nature which often leads to widely varying interpretation and significant differences in the safety levels for buildings that are substantially similar. To overcome this problem the Department of Building and Housing in New Zealand has recently published a Verification Method that specifies the design fire scenarios, design fires, pre-travel activity time and acceptance criteria. This presentation will briefly discuss the Verification Method and the 10 scenarios that define the framework. An exemplary case study will be presented for a multistory hotel and function centre that will demonstrate how Verification Method is applied to a building.

## Speaker

Dr Fleischmann is an Associate Professor of Department of Civil Engineering of University of Canterbury, New Zealand. His main research interests are on compartment fire modeling, computer modeling, backdraft and flashover.

He has more than 80 publications including chapters in two text books on the fire testing of furnishings. He was the lead author on the chapter, "Analytical Methods for Determining the Fire Resistance of Concrete Members" in the SFPE Handbook of Fire Protection Engineering and he was key contributor to the development of the SFPE Engineering Guide to Piloted Ignition of Solid Materials under Radiant Exposure. Research results from his work have been used in the development of the NIST Fire Dynamic Simulator.

In 2010, he received the University of Canterbury Teaching Award. The Teaching Award is recognition of an outstanding and sustained contribution to the teaching of fire engineering and a demonstrated commitment to enhancing the learning environment. In 2011, he received the Arthur B. Guise Medal at the 2011 SFPE Annual Meeting. The Medal recognizes eminent achievement in the advancement of the science and technology of fire protection engineering and is named in memory of the achievements of Arthur Guise, who singularly developed dry chemicals for use as fire extinguishing agents.