



The 3rd Education Symposium on Advanced Fire Research

9 December 2004

Hong Kong Fire Services

Senior Officers' Mess, 4/F Tsimshatsui Fire Station Campus

Chairman: Professor W.K. Chow

Chair Professor of Architectural Science and Fire Engineering, The Hong Kong Polytechnic University; Guest Professor and Supervisor of Doctorate Candidates, University of Science and Technology of China; Advisor, China Public Security

Organized by:

- Research Centre for Fire Engineering and Areas of Strength: Fire Safety Engineering, The Hong Kong Polytechnic University, Hong Kong Special Administrative Region, China
- State Key Laboratory of Fire Science, The University of Science and Technology of China, Hefei, Anhui, China
- China Public Security, official organization of the Ministry of Public Security, China

Supported by:

- The Chinese Academy of Sciences, China

Objectives:

- Enhancing higher degree education, fire research, exchange and interflow between Mainland China and the Hong Kong Special Administrative Region (HKSAR)
- Promoting the new subject Fire Safety Engineering in China to give a safe country
- Identify new research and applied area

The Programme

This is the third time offering this kind of education symposium in fire engineering; and the first time offered in Hong Kong. In addition to post-graduate and undergraduate students from The Hong Kong Polytechnic University and University of Science and Technology of China, research students from the City University of Hong Kong, Zhejiang University, and Tsinghua University attended as well. As there was a typhoon in Taiwan during that period, otherwise students from Taiwan could also attend.

In the opening address, several areas to consider by young researchers were pointed out by Professor Chow:

- Linking up with overseas.
- Application to industry, related to career opportunities and getting funding for applied projects.
- Scientific elements in research.
- English communications should be improved in the order of reading, writing, listening and speaking.

The programme schedule is shown in the following.



The delegates

Conference Schedule

- 8:30 - 9:00 am** **Opening Address**
- Welcome: Professor W.K. Chow Research Centre for Fire Engineering, Areas of Strength: Fire Safety Engineering
Professor R. Huo State Key Laboratory of Fire Science
Ms Shen Guihua Chinese Academy of Sciences
- 9:00 - 9:50 am** **A talk on “Fire Engineering Education” by Professor K.T. Yang**
University of Notre Dame, Notre Dame, Indiana, USA
- 9:50 – 10:35 am** **Session 1 - Chairman : Professor R. Huo**
- 9:50 - 10:05 am The research of nitrogen/4-bromo-3,3,4,4-tetrafluorobutene binary fire extinguishing agent
Zhou Xiaomeng
University of Science and Technology of China
- 10:05 - 10:20 am Review on the equations used in calculating the heat release rate in an oxygen consumption calorimetry
S.S. Han and W.K. Chow
The Hong Kong Polytechnic University
- 10:20 - 10:35 am Experimental studies on the breaking strength of electric facilities under operation of ultra-fine water mist fire suppression system with additives 含添加剂超细水雾作用下电气设备击穿强度实验研究
Fang Yudong 房玉东
University of Science and Technology of China 中国科学技术大学
- 10:35 - 11:00 am** **Coffee Break**
- 11:00 - 11:45 pm** **Session 2 - Chairman : Dr. N.K. Fong**
- 11:00 - 11:15 am Single-fluid high-pressure water mist extinguishing system 单相流高压储罐式细水雾灭火系统
Liu Jianghong 刘江虹
University of Science and Technology of China 中国科学技术大学
- 11:15 - 11:30 am Fire extinguishing mechanism of the gas clean agent heptafluoropropane
Z. Jiang and W.K. Chow
The Hong Kong Polytechnic University and University of Science and Technology of China
- 11:30 - 11:45 am Application of 2-dimensional cellular automation in evacuation in supermarkets 二维元胞自动机模型在超市人员疏散中的应用
Zhao Daoliang, **Yang Lizhong**, Zou Lan, Zhu Yi, Li Jian 赵道亮, **杨立中**, 邹兰, 朱艺, 李健
University of Science and Technology of China 中国科学技术大学
- 11:45 - 2:00 pm** **Lunch at Theatre Lounge, G/F, Chung Sze Yuen Building, The Hong Kong Polytechnic University**
- 2:00 - 3:15 pm** **Session 3 - Chairman : Professor L.Z. Yang**
- 2:00 - 2:15 pm A brief review on eight flame spread models
C.W. Leung
The Hong Kong Polytechnic University

- 2:15 - 2:30 pm To evacuation from bare staircases in atrium -- Performance-based fire protection design
Zhang Cunfeng, Li Yuanzhou, Wang Haobo, Huo Ran
University of Science and Technology of China
- 2:30-2:45 pm Thermal kinetic study of PMMA: Application on iso-conversional method
W.R. Zeng, W.K. Chow, S.F. Li
The Hong Kong Polytechnic University and
University of Science and Technology of China
- 2:45 - 3:00 pm Combining pre-evacuation time distribution with evacuation time calculation in performance-based fire protection design
Chu Guanquan, Sun Jinhua
University of Science and Technology of China
- 3:00 - 3:15 pm Comparison between turbulence models for numerical simulation and experiment on stack effect
Ji Jie, Yuan Hongyong, Zhang Jingyan, Huo Ran
University of Science and Technology of China and Tsinghua University
- 3: 15 – 3:45 pm** *Coffee Break*
- 3:45 - 4:45 pm** **Session 4 - Chairman : Professor S.X. Lu**
- 3:45 - 4:00 pm A review on the pyrolysis and ignition of wood
D.K. Shen, M.X. Fang and W.K. Chow
The Hong Kong Polytechnic University and Zhejiang University
- 4:00 - 4:15 pm Progress in studies of pedestrian evacuation 某大型商贸中心的人员疏散性能化分析
Yu Yanfei, Song Weiguo 于彦飞, 宋卫国
University of Science and Technology of China 中国科学技术大学
- 4:15 - 4:30 pm Airport evacuation on comparing SIMULEX against buildingEXODUS
Candy M.Y. Ng
The Hong Kong Polytechnic University
- 4:30 - 4:45 pm An artificial neural network approach for single compartment fires
Eric W.M. Lee, Richard K.K. Yuen, Sherman C.P. Cheung, Kitty K.Y. Yuen, S.M. Lo
City University of Hong Kong
- 6:00 pm** **Dinner** **Golden Delight Seafood Restaurant (2/F Regal Kowloon Hotel, 71 Mody Road, Tsimshatsui East, Kowloon**
金彩海鮮酒家 (尖沙咀麼地道 71 號富豪酒店 2 樓)