



An introduction to
Department of Building Services Engineering
And
MSc in Fire and Safety Engineering
The Hong Kong Polytechnic University





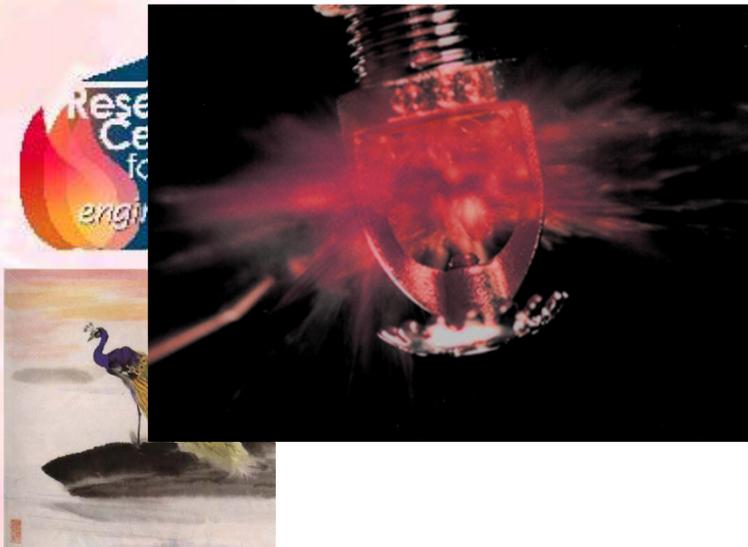
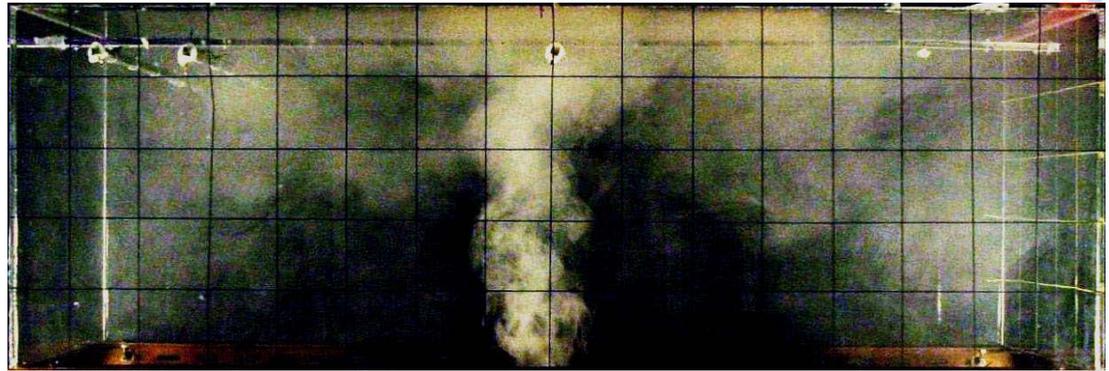
Research Focuses of RCFE

(Director: Professor W.K. Chow)

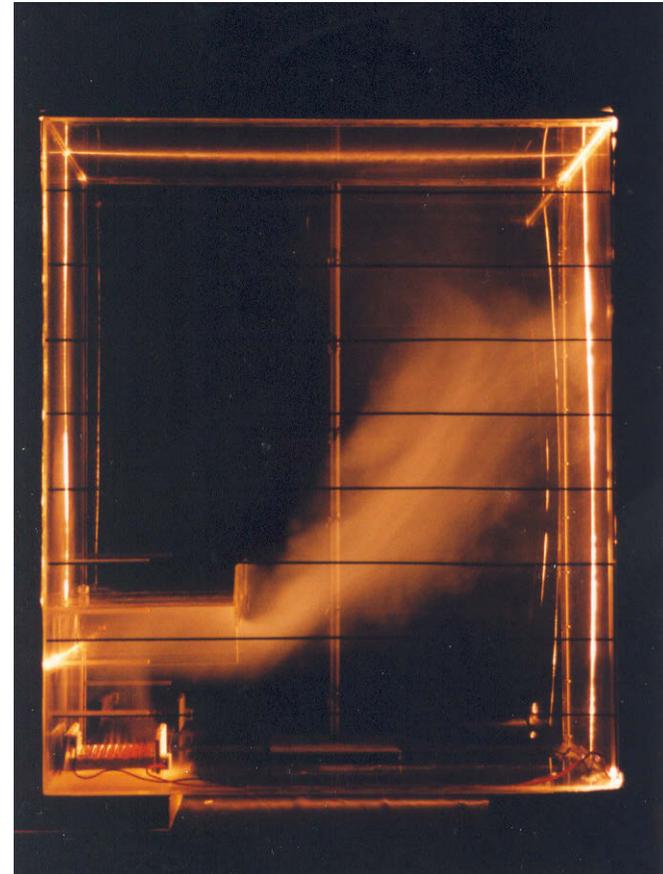
- **Fire modeling**
- **Fire suppression systems**
- **Advanced topics in fire**



Fire & Safety Engineering



Fire & Safety Engineering



Water mist

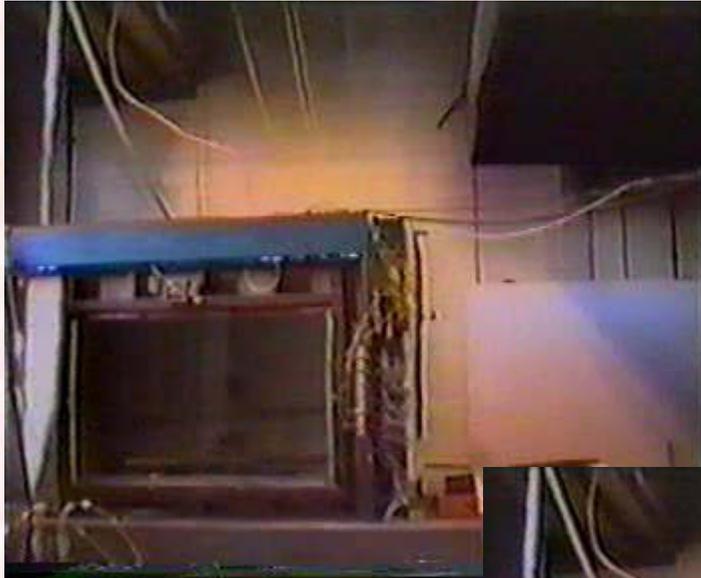


Smoke Stratification





Backdraft



Sprinklers





大空间火灾实验厅

中国科学技术大学 香港理工大学

大空间建筑 火灾安全与技术 研究中心

一九九七年六月二十一日

· 九七回归 · 九七回归 · 九七回归 · 九七回归

开展火灾科学研究
造福人民造福社会
索赐
一九九七年
六月一日





Large Space Fire Test





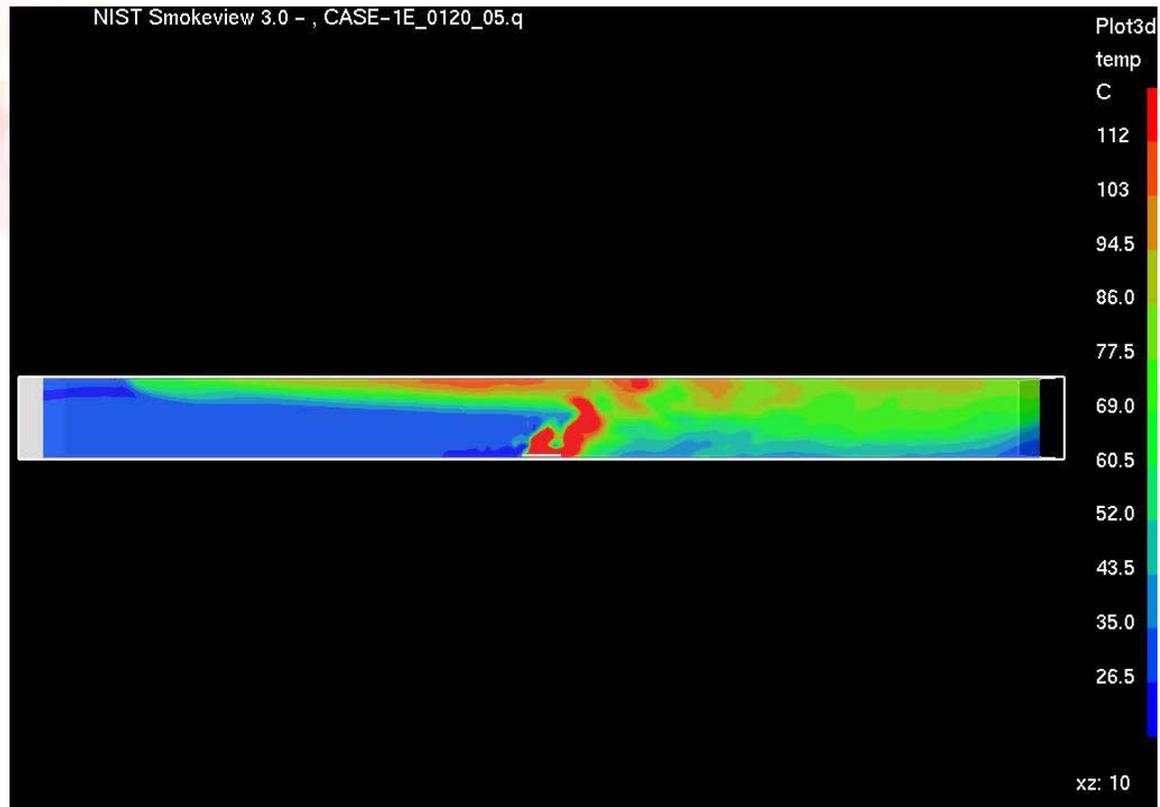
Atrium Hot Smoke Test



Megabox



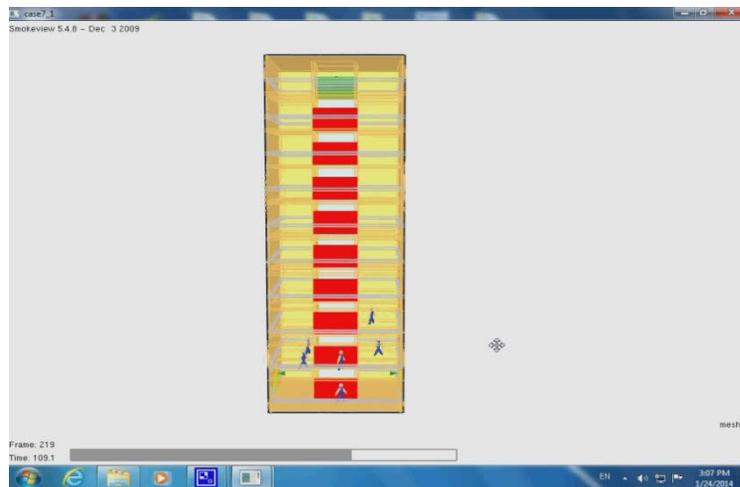
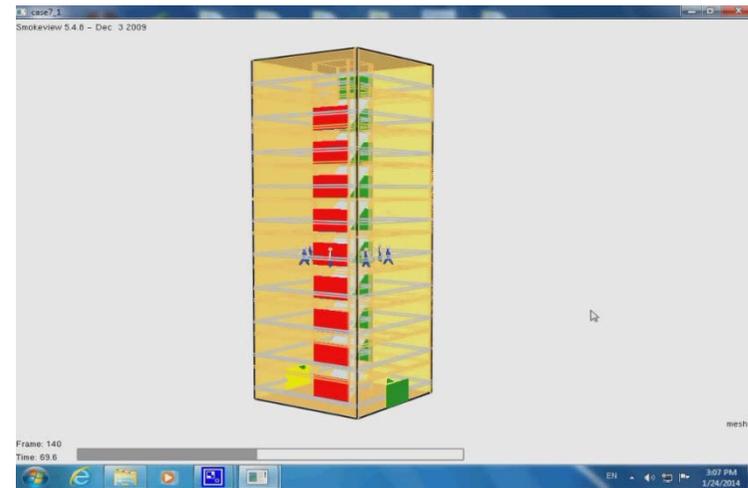
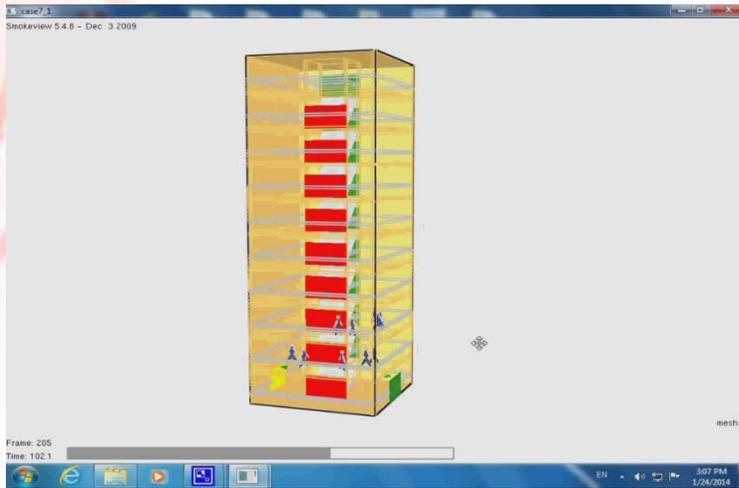
Tunnel fire simulation



Residential sprinkler test

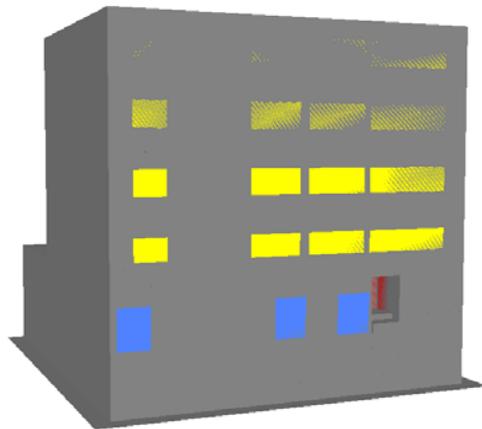


Evacuation study

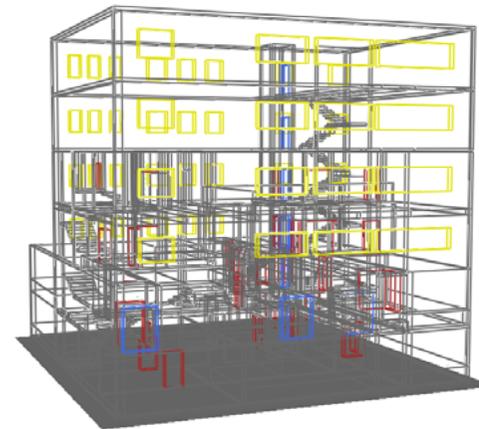


Building Fire Simulation

club_house_fire
Smokeview 5.4.6 - Oct 22 2009



club_house_fire
Smokeview 5.4.6 - Oct 22 2009



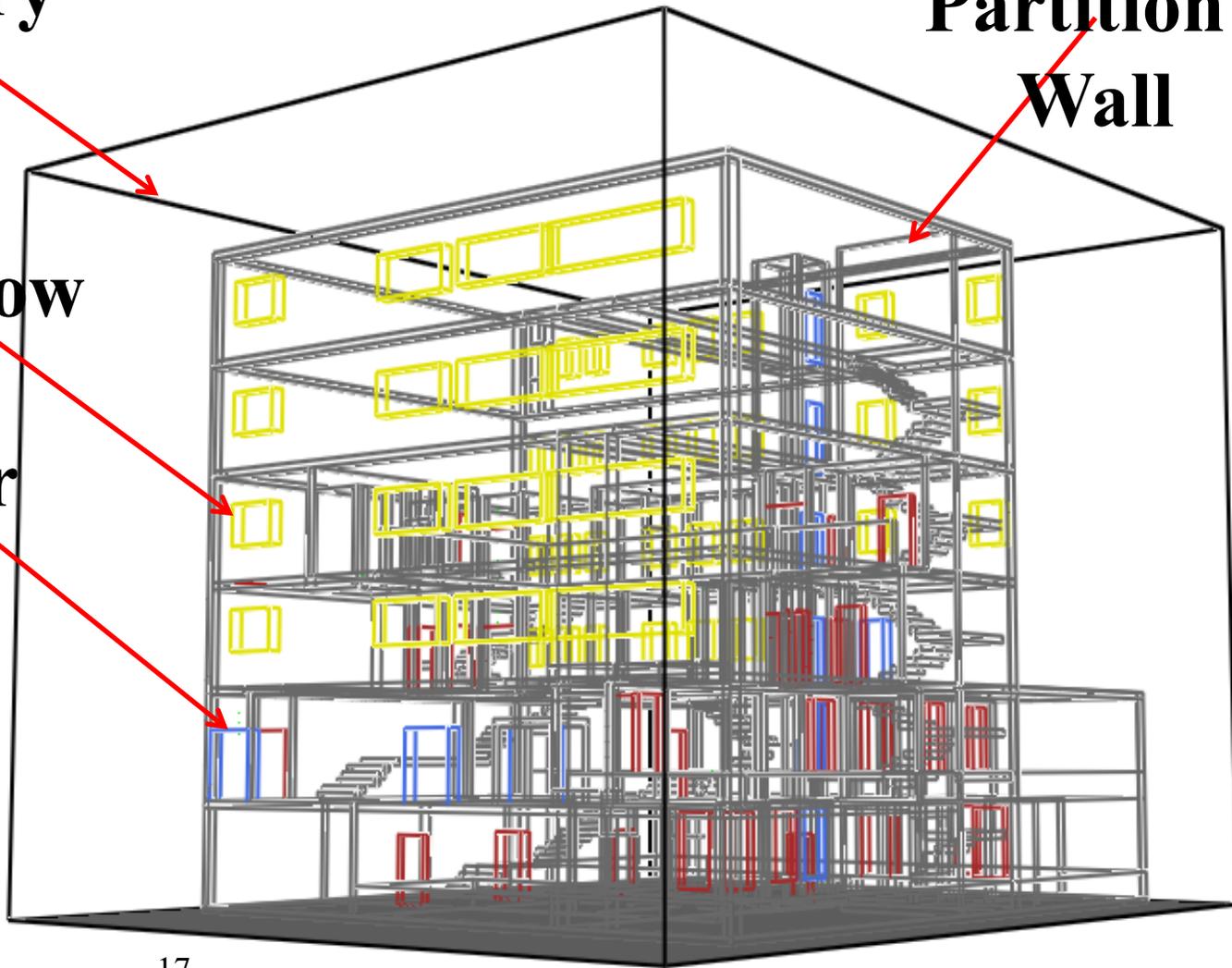
Outline of Building in Simulation

**Boundary
Line**

**Partition /
Wall**

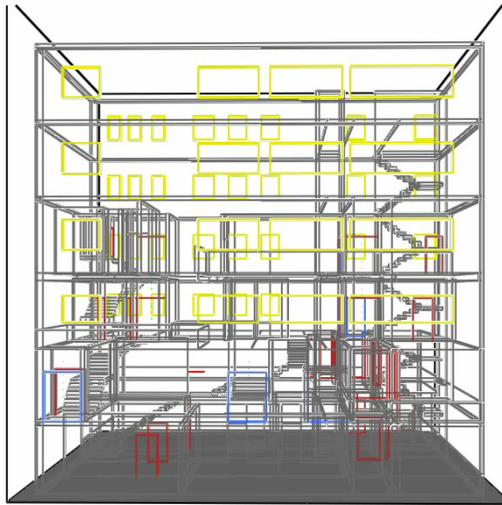
Window

Door



Soot condition

club_house_fire
Smokeview 5.4.6 - Oct 22 2009

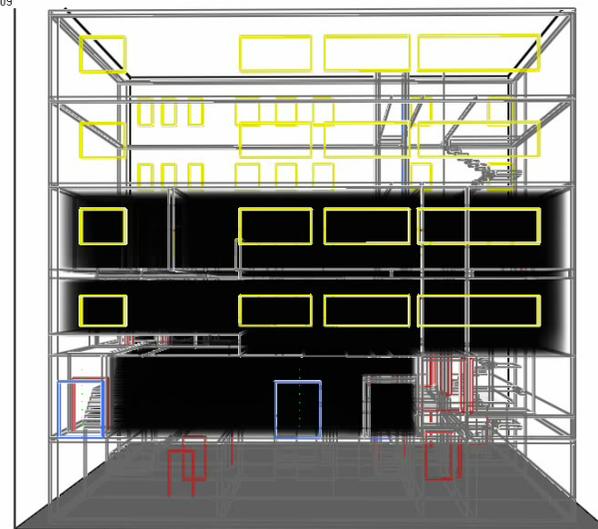


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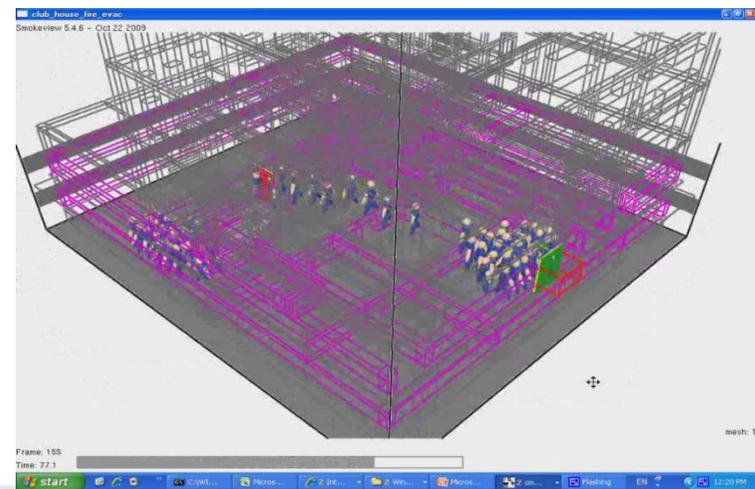
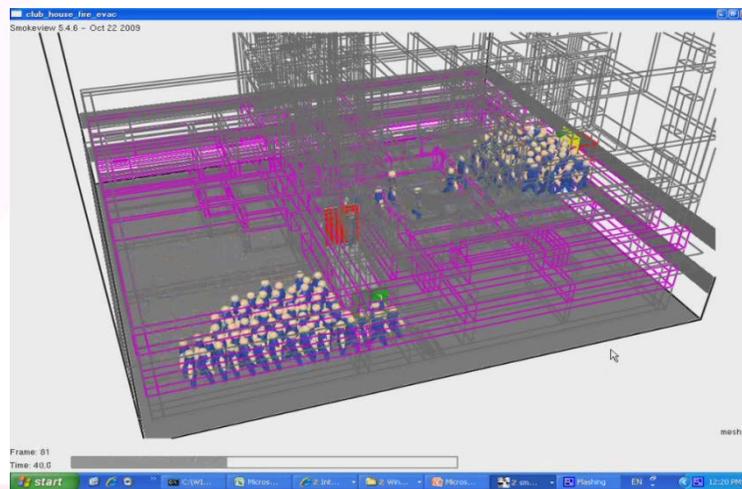
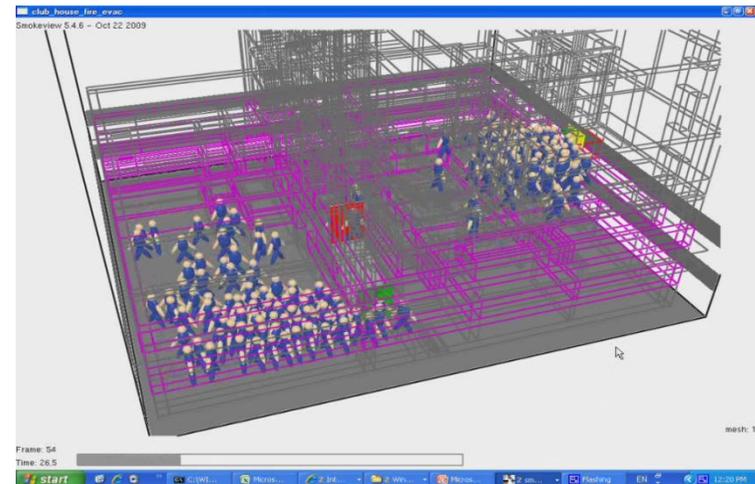
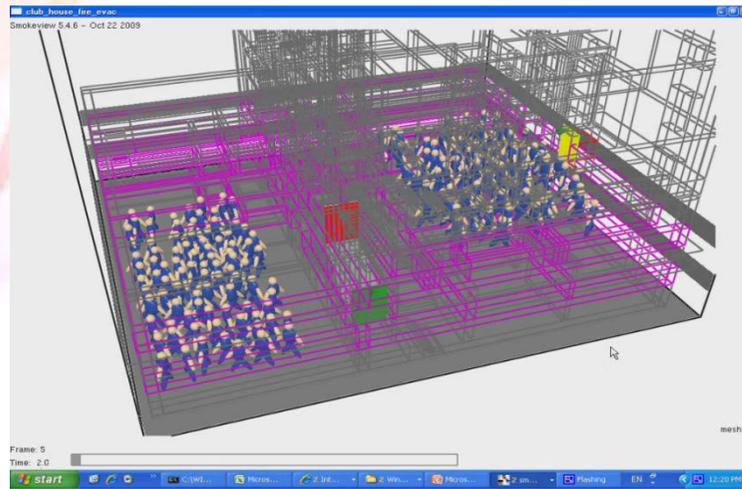
009



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Evacuation



To provide better housing for all.
To develop a secure and safe city.

Host Department:

Department of Building Services Engineering

Programme Duration:

The normal duration:

For MSc, 2.5 years (PT) / 1 year (FT)

For PgD, 2 years (PT) / 9 months (FT)

Aims of the Programme:

The aim of the programme is to provide continuing education in fire and safety engineering to those with qualifications at professional level.

The programme aims to develop students' knowledge in fire and safety engineering as well as their learning attitude, study skills and their intellectual and imaginative power.

It concentrates on fundamental analysis and the development of fire and safety science and engineering concepts.

It is intended for students to understand the requirements for providing fire safety in all aspects, and how this is achieved through appropriate design, installation, operation and fire safety management. Students need to consider how fire designs integrate with the building, and satisfy building usage. One aim is to enhance quality teaching in Hong Kong on the new topic of engineering performance-based fire codes.

In safety engineering, emphasis is put on improving the safety aspect of buildings. Accident prevention, hazard assessment, risk analysis, safety management and auditing, and safety in construction sites would all be discussed.



Fire and Safety Engineering



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– For MSc

- 2.5 years (PT)
- 1 year (FT)

– For PgD

- 2 years (PT)
- 9 months (FT)



Aims of the Programme

- ★ To provide continuing education in fire and safety engineering to those with qualifications at professional level
- ★ To develop students knowledge in fire and safety engineering as well as their learning attitude, study skills and their intellectual and imaginative power



Aims of the Programme

- ★ Concentrates on the fundamental analysis and the development of fire and safety science and engineering concepts
- ★ Intended for students to understand the requirements for providing fire safety in all aspects, and how this is achieved through appropriate design, installation, operation and fire safety management.



Aims of the Programme

- ★ Students need to consider how fire designs integrate with the building, satisfy building usage.
- ★ To enhance quality teaching in Hong Kong on the new topic of engineering performance based fire codes



Aims of the Programme

- ★ In safety engineering, emphasis is put on improving the safety aspect of buildings.
- ★ Accident prevention, hazard assessment, risk analysis, safety management and auditing, and safety in construction sites would be all discussed.



Programme Structure

Code	Subject title	Credit
Compulsory Core Subject		
BSE 532	Fire Engineering Systems	3
BSE 533	Fire Dynamics	3
BSE 574	Research Methods	3



Programme Structure

Code	Subject title	Credit
Core Subject: (Discipline Elective#) At least one of the following		
BSE 558	Accident Prevention, Hazard Assessment & Control	3
BSE 559	Safety Management System and Safety Auditing	3
# offers subject to availability		

Code	Subject title	Credit
Other Core Subject: (Discipline Elective#)		
BSE 531	Computational Fire Modelling for Building Design	3
BSE 534	Legislation Aspects of Fire Safety Management	3
BSE 535	Design Considerations for Fire Safety Management	3
BSE 5510	Safety Aspects in Construction	3
BSE 5511	Occupational Health and Ergonomics	3
# offers subject to availability		



Programme Structure

Code	Subject title	Credit
Optional Research Dissertation		
BSE 590	BSE Dissertation	9



Programme Structure for MSc / PgD Award

MSc Award (Without dissertation):

4 Cores + 3 Discipline Electives + 3 Other Electives

MSc Award (With dissertation):

4 Cores + 3 Discipline Electives / Other Electives

PgD Award:

4 Cores + 3 Discipline Electives / 3 Other Electives



Fire Laboratory



Contact information

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Thank you

