

Fire Division Annual Report (2020/2021)

It is my great honour to serve the HKIE Fire Division as Chairlady for Session 2020/2021. With the robust establishment by the predecessor division committees and the dedication of the outgoing committee, we strived to have an engaged and fruitful session despite the prolonged restriction of social gathering for COVID-19 precaution. I take this opportunity to thank the committee and members for their enduring support and contribution. Let me report briefly our activities as below.



12th Annual Symposium

2. The 12th Annual Symposium themed “Practising Fire Safety for Cavern and Underground Development” was held on 6 November 2020 in hybrid modes of webinar and live event at Hong Kong Convention and Exhibition Centre, Theatre 2. Mr YU Tak-cheung, JP, Director of Buildings officiated at the opening ceremony and delivered an insightful speech on control of fire safety for cavern developments. Eight presentations were made by prominent speakers from Hong Kong, Mainland and Denmark. Topics covered i) fire safety design in carven developments, road tunnels and massive underground transportation facilities, ii) digital technology research for fire-fighting and iii) Internet Of Things application for smoke detection. Over 330 participants including university students attended the symposium. A student essay competition was conducted to encourage and nurture our young generation to appreciate how fire engineering has contributed to a fire safe community.

CPD Course 2021

3. The CPD Course 2021 commencing from 18 February 2021 to 25 March 2021 was conducted with more than 300 attendees participated online. It included six lectures covering the six domains of fire engineering. Experienced professionals and government officials were invited to deliver lectures on fire science, human psychology and physiology, active fire protection systems, passive fire protection systems, law regulations and standards, and fire risk management. Topics involved advanced testing methods for fire resisting products in tunnels, designs for special treatment plants and metro tunnel ventilation outside Hong Kong, high-rise landmark building fire management, Fire Safety (Industrial Buildings) Ordinance Cap 636, FSD Circulars 5/2020 and 4/2020 for sprinkler installations and electric vehicle parking facilities, respectively.

12th Annual Dinner

4. The 12th Annual Dinner was postponed from 7 December 2020 to 2 March 2021 to 10 June 2021 and currently to 9 November 2021 in response to the COVID-19 precaution. Preparatory works including venue reservation, invitations of Guest of Honour / guests/ sponsors have been ongoing. Organizing Committee will closely monitor the COVID-19 situation and endeavor to hold the event subject to venue arrangement and the latest notification by the Centre for Health Protection.

Media interviews

5. I was interviewed by Ming Pao in November 2020 following the fire incident in Yau Ma Tei old building. Professional views on the applicability and suitability of performance-based approach and prescriptive approach to address fire safety in old buildings were shared. Our Past Chairman Ir Gilbert LAW was interviewed by TVB News in March 2021 for programme (時事多面睇) on “3-nil” building fire safety (三無大廈消防安全).

Overseas online knowledge exchange and Technical webinars

6. A first international webinar “Science and Technology of Battery Fire Safety” in collaboration with the HKIE Australia Chapter and the Society of Fire Safety New South Wales was held on 26 January 2021. Over 270 participants from Hong Kong, Macau, Sydney and London attended the talk delivered by Professor Guillermo Rein from Imperial College, London. Among many webinars held, the technical talks on “new stand-alone fire detectors” and “the Practical Guide for Design, Installation, Acceptance and Maintenance of Fire Service Installations and Equipment” delivered by representatives of Fire Services Department were received overwhelming registrations (about 1000).

List of activities

7. The activities including symposium, technical talks and webinars of the Fire Division for Session 2020/2021 are tabulated in **Appendix**.

Research and academic advocation (BIM, AI, VR, 5G, IoT) *¹

8. I was invited by The Hong Kong Polytechnic University (PolyU) to join the external Advisory Board for the Smart Urban Resilience and Firefighting Research (SureFire) project undertaken by Department of Building Services Engineering (BSE). More collaboration between Fire Division and The PolyU on the SureFire project is expected in coming years. Our Past Chairman Ir Thomas CHUNG was nominated to participate the VR Fire Emergency Response Experience research invited by the University of Hong Kong.

Nurturing Young Engineers and Students

9. I in the capacities of PolyU Outstanding BSE Alumni 2020 and division Chairperson was invited by The PolyU to attend the Ming Pao JUMP interview to share insight of the solid industrial demand on quality engineers to practice fire engineering and BSE. Division committee also contributed the article “Challenging + Interesting Career of a Fire Engineer – Who are they?” in Classified Post (CPJobs) and Recruit online platforms. We were approached by Department of Civil and Environmental Engineering of The PolyU to include our Division video 2016/2017 (project applications) in the new video for JUPAS programme introduction. The HKIE Student Chapters Engineers’ Night 2021 was sponsored and supported by the Division. The Division sponsored 5 scholarships for university students on fire engineering related study with excel performance.

10. For the exchange of technical knowledge through joint activities, we have continued to collaborate with other divisions/ institutions/ organizations including Fire Services Department, The Institution of Fire Engineers (Hong Kong Branch), HKIE Building Services Division, HKIE Civil Division, Building Services Operation and Maintenance Executives Society, and The Chartered Institute of Plumbing and Heating Engineering – Hong Kong Branch. The newly collaborated organizations for Session 2020/2021 contain International Institute of Utility Specialists, Hong Kong Institute of Utility Specialists and the Mainland institutes / universities / associations for 2021 第十届火灾科学与消防工程国际研讨会.

11. Members from the outgoing division committee had been nominated to sit on the Advisory Panel on Licensing of Hotels and Guesthouses of Home Affairs Department, the Technical Committee on the Code of Practice for Precast Concrete Construction and Technical Committee on the Code of Practice for Dead and Imposed Loads both of Buildings Department, the Advisory Committee under Fire Safety (Buildings) Ordinance Cap 572 and the Advisory Committee under Fire Safety (Industrial Buildings) Ordinance Cap 636 both of Fire Services Department. We have been the working group

*¹ BIM – Building Information Modelling, AI – Artificial Intelligence, VR – Virtual Reality, IoT – Internet of Things

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member and offered views for the booklet “Best Practices for Operation and Maintenance Service of Fire Service Installations” published by Electrical and Mechanical Department.

Way ahead

12. The Fire Division on one hand will continue to promote fire engineering and encourage more young engineers to join the profession, and on the other hand will plan activities for a better positioned and equipped professional engineer to take the future challenges and opportunities in Hong Kong, other cities of Greater Bay Areas and overseas. We will maintain close liaison with government bureaux and departments to offer views on various fire safety issues including the implementation of the upcoming Registered Fire Engineer Scheme. We will also enhance collaboration with related local and overseas institutions and associations in pursuit of knowledge and excellence in fire engineering.

13. Lastly, I appreciate your continued support to the Fire Division and the dedicated contribution under the new normal situation at work for health precaution.



Ir Dr Fiona TSUI Suk-chong
Chairlady (Session 2020/2021)
3 May 2021

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Appendix

Date <i>(in chronological order)</i>	Activities	Remarks
26/08/2020	Technical Webinar on Firestop Inspection with Proper Documentation	Co-organized with ⁱ IFE HK Branch
06/11/2020	The 12 th Annual Symposium themed “Practising Fire Safety for Cavern and Underground Development” (Live & Online) including Student Essay Competition	
09/11/2020	Technical Webinar on Building (Minor Works) (Amendment) Regulation 2020	Co-organized with Fire Services Department, ⁱ IFE HK Branch
26/01/2021	Technical Webinar on Science and Technology of Battery Fire Safety	Co-organized with HKIE Australia Chapter and Society of Fire Safety New South Wales
28/01/2021	Technical Webinar on Testing and Commissioning of Tunnel Ventilation System	Co-organized with ⁱⁱ HKIE BS Division, Fire Services Department and ⁱ IFE HK Branch
18/02/2021	Online CPD Course - Fire Risk Management 1. Implementation of Fire Safety Management on Fire Engineering Design 2. Challenges and opportunities of maintaining the high-rise landmark hazard free – the experience of International Commerce Centre	
23/02/2021	Technical Webinar on Major Changes of the Code of Practice for the Electricity (Wiring) Regulations 2020 Edition and its Practical Implementation	Supported by Fire Division
25/02/2021	Online CPD Course – Fire Science Practical application of computational fluid dynamics in fire engineering	
02/03/2021	Online CPD Course - Passive Fire Protection Systems 1. Advanced Testing Methods for Fire Resisting Products used in Tunnels – the ‘RWS heating curve’ 2. Innovative design in passive fire products	
03/03/2021	Online Technical Talk on Promotion of Wider Use of Standalone Fire Detectors in Hong Kong	Co-organized with Fire Services Department

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05/03/2021	Technical Webinar on General Proactive Fire Protection Systems in Hong Kong	
11/03/2021	Online CPD Course - Human Psychology and Physiology Building Evacuation – Modelling and Case Studies	
16/03/2021	Online CPD Course - Active Fire Protection Systems 1. Active fire protection consideration and design for special treatment plants 2. Experience sharing on the metro tunnel ventilation system design practice outside of Hong Kong	
25/03/2021	Online CPD Course - Law, Regulations and Standard 1. Fire Safety (Industrial Buildings) Ordinance Chapter 636 2. Specification for Automatic Sprinkler Installations (FSD Circular Letter No. 5/2020) 3. Additional Fire Safety Requirements for Car Parking Facilities Installed with Electric Vehicle Charing Facilities (FSD Circular Letter No. 4/2020)	
16/04/2021	Joint Technical Webinar on Introduction of Practical Guide for Design, Installation, Acceptance and Maintenance of Fire Service Installations and Equipment	Co-organized with Fire Services Department, ⁱⁱ HKIE BS Division and IFE HK Branch
ⁱⁱⁱ TBC 2021 in progress	第十届火灾科学与消防工程国际研讨会	中國消防協會 清華大學 中國科學技術大學 河南省消防協會 華北水利水電大學 河南理工大學 安陽工學院 鄭州輕工業大學 河南省安全生產和職業健康協會 IEEE and Others
Sept 2021 In progress	Utility Safety Competitions 2020 - 2021	Jointly organized with International Institute of

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		Utility Specialists and HK Institute of Utility Specialists
ⁱⁱⁱ TBC 2021	Smart Infrastructure Conference	Supported by Fire Division
09/11/2021 In progress	The 12 th Annual Dinner (previously scheduled on 07/12/2020, 02/03/2021 and 10/06/2021)	

ⁱ IFE HK Branch - The Institution of Fire Engineers (Hong Kong Branch)

ⁱⁱ HKIE BS Division – The Hong Kong Institution of Engineers, Building Services Division

ⁱⁱⁱ TBC – Date to be confirmed