

Time	Sunday, Oct. 21	Monday, Oct. 22	Tuesday, Oct. 23	Wednesday, Oct. 24	Thursday, Oct. 25
09:10		Opening (09:30-10:30) (401)	Keynote 1. Shen-Wen Chien, Guan-Yuan Wu : The analysis of the effects of critical velocity in tunnel fires with water spray system (402CD) 2. Chris Jelenewicz : Research needs for the fire safety engineering profession: The SFPE roadmap. (402AB)	Keynote 1. Jennifer Wen : Fire modelling from model development to practical applications. (402CD) 2. Fathi Tarada : Innovation in sustainable tunnel ventilation. (402AB)	Technical Tour (08:00-0810) Front Door of NTUH International Convention Center
09:50		Keynote (10:30-11:10) (401)	Parallel Sessions (402AB, 402 CD & 205)	Parallel Sessions (402AB, 402 CD & 205)	
10:05		Hong-Zeng (Bert) Yu : An overview of water mist fire protection.	Parallel Sessions (402AB, 402 CD & 205)	Parallel Sessions (402AB, 402 CD & 205)	
10:20			Parallel Sessions (402AB, 402 CD & 205)	Parallel Sessions (402AB, 402 CD & 205)	
10:35			Discussion (402AB, 402 CD & 205)	Discussion (402AB, 402 CD & 205)	
10:45		Break (11:10-11:20)	Break	Break	
11:05		Keynote (11:20-12:00) (401)	Parallel Sessions (402AB, 402 CD & 205)	Parallel Sessions (402AB, 402 CD & 205)	
11:20		Margaret McNamee, Patrick van Hees : Challenges for future fire research – Towards the “IAFSS Agenda 2030 for a Fire Safe World”.	Parallel Sessions (402AB, 402 CD & 205)	Parallel Sessions (402AB, 402 CD & 205)	
11:35			Parallel Sessions (402AB, 402 CD & 205)	Parallel Sessions (402AB, 402 CD & 205)	
11:50			Discussion (402AB, 402 CD & 205)	Discussion (402AB, 402 CD & 205)	
12:00		Lunch (402AB, 402CD & 205)	Lunch (402AB, 402 CD & 205)	Lunch (402AB, 402 CD & 205)	
13:40	Registration of Workshop (13:30-14:00) (403)	Keynote 1. Young-Jin Kwon : Analysis on the big fire incidents and disaster mitigation measures for fire safety policy in Korea (402CD) 2. Jie Ji : Studies on high-rise building fire behaviors: state of the art and future challenges.	Keynote 1. Bogdan Dlugogorski : Flammability of reduced sulfur species. (402CD) 2. Kazu Harada : Research supporting performance-based design of building fire safety. (402AB)	Keynote 1. Wan-Ki Chow : Fire Hazards and Performance-Based Approach to Determining Fire Safety Provisions for Green Buildings in the Asia-Oceania Regions (402CD) 2. Nobuyoshi Kawabata, Miho Seike : Quantitative assessment for road tunnel fire safety (behavior of smoke and evacuees). (402AB)	
14:20	Workshop: Diversity Workshop (14:00-15:00) (403)	Parallel Sessions (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	
14:35		Parallel Sessions (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	
14:50		Parallel Sessions (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	
15:05	Workshop: Large outdoor fires and the built environment working group (15:00-16:30) (403)	Parallel Sessions (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	
15:20		Discussion (402AB, 402CD & 205)	Discussion (402AB, 402CD & 205)	Discussion (402AB, 402CD & 205)	
15:30		Coffee Break	Coffee Break	Coffee Break	
15:50		Parallel Sessions (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	
16:05		Parallel Sessions (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	
16:20	Registration of Exchange Meeting of SFPE AO Chapters (16:30-17:00) (403)	Parallel Sessions (402AB, 402CD & 205)	Discussion (402AB, 402CD & 205)	Parallel Sessions (402AB, 402CD & 205)	
16:35		Parallel Sessions (402AB, 402CD & 205)	Poster Session (16:30-17:30) (4F Lobby B+C)	Discussion (402AB, 402CD & 205)	
16:50		Parallel Sessions (402AB, 402CD & 205)		Closing Ceremony (16:50-17:30) (402CD)	
17:05	Exchange Meeting of SFPE AO Chapters (17:00-18:00) (403)	Discussion (402AB, 402CD & 205)			
17:15		End of day			
17:30	Registration of Welcome Banquet (17:30-18:30) (403)		End of day	End of day	
18:00				Symposium Banquet (101)	
18:30	Welcome Banquet (402)				

Technical Program	
Oct. 21st (Sun)	
13:30-14:00	Registration of Workshop (403)
14:00-15:00	Workshop: Diversity Workshop (403)
15:00-16:30	Workshop: Large outdoor fires and the built environment working group (403)
16:30-17:00	Registration of Exchange Meeting of SFPE AO chapters (403)
17:00-18:00	Exchange Meeting of SFPE Asia-Oceania chapters (403)
17:30-18:30	Registration of Welcome Banquet (402)
18:30-21:00	Welcome Banquet (402)

Oct. 22nd (Mon)	
08:30-09:30	Registration
09:30-10:30	Opening (401)
10:30-11:10	Keynote 1 (401) Hong-Zeng (Bert) Yu : An overview of water mist fire protection. Session Chair: Kuang-Chung Tsai
11:10-11:20	Break
11:20-12:00	Keynote 2 (401) Margaret McNamee and Patrick van Hees : Challenges for future fire research – towards the “IAFSS agenda 2030 for a fire safe world”. Session Chair: Long-Hua Hu

12:00-13:40	Lunch Break (402AB, 402CD & 205)		
13:40-14:20	Keynote 3 (402CD) Young-Jin Kwon : Analysis on the big fire incidents and disaster mitigation measures for fire safety policy in Korea. Session Chair: Jennifer Wen	Keynote 4 (402AB) Jie Ji : Studies on high-rise building fire behaviors: state of the art and future challenges. Session Chair: Ming-Yuan Lei	
	Fire Physics and Chemistry (402CD) Session Chairs: Jennifer Wen and Richard Walls	Fire Investigation/Fire Services (205) Session Chairs: Yoshikazu Minegishi and Yee-Ping Lee	Urban, Wildland/Urban Interface and Forest Fires (402AB) Session Chairs: Sayaka Suzuki and Ming-Yuan Lei
14:20-14:35	1A-1 The influence of compartment temperature on backdraught dynamics Chia Lung Wu and Ricky Carvel.	1B-1 FDS model simulates and reconstructs the ammonia fire accident scene San-ping Ho, Hui-Pei Chang, Chin-feng Chen and Wan-Ki Chow.	1C-1 Influence of base sheathing material on wind-driven firebrand production during real-scale building component combustion Samuel Manzello, Sayaka Suzuki and Tomohiro Naruse.
14:35-14:50	1A-2 Numerical investigate the temperature profile of horizontally oriented jet fire with square fuel source Youbo Huang, Yanfeng Li and Bingyan Dong.	1B-2 Investigation report of Bei-Men hospital fire in Taiwan on October 23rd 2012 Teng-Yi Wang and Kuang-Chung Tsai.	1C-2 An investigation of fire smoke within street canyon with different building height ratios Changfa Tao, Qin Liu, Kai Wang and Peixiang He.

14:50-15:05	<p>1A-3 Fire dynamics in informal settlement “shacks”: Lessons learnt and appraisal of fire behavior based on full-scale testing</p> <p>Richard Walls, Charles Kahanji, Antonio Cicione and Mariska Jansen van Vuuren.</p>	<p>1B-3 Planning of intermediate refuge floors as a comprehensive measure for business continuity planning of after large earthquakes</p> <p>Yoshikazu Minegishi, Daisuke Matsuda, Ryosuke Shinozuka and Yuji Hasemi.</p>	<p>1C-3 Behavior of downslope fire spread through a pine needle fuel bed</p> <p>Zhuo Yang, Hongmin Zhang, Linhe Zhang and Haixiang Chen.</p>
15:05-15:20	<p>1A-4 Influence of initial humidity on the flame propagation rate of LPG/Air and LPG/O₂/N₂ mixtures</p> <p>Tomohiko Imamura, Masaya Ohtsuki, Shota Kumata, Yuki Furuya, Reito Ohno, Akira Tanaka and Akira Kawaguchi.</p>	<p>1B-4 Risk analysis of helicopter search and rescue hoist operation accident</p> <p>Fang-Chieh Shen and Yu-Hsiang Huang.</p>	<p>1C-4 EnKF based real-time prediction of large wildfire propagation</p> <p>Tengjiao Zhou, Jie Ji and Yong Jiang.</p>
15:20-15:30	Discussion	Discussion	Discussion
15:30-15:50	Coffee Break		
	<p>Fire Physics and Chemistry (402CD) Session Chairs: Fei You and Kyungok Kwon</p>	<p>Fire Investigation/Fire Services & Structural Behavior in Fire (205) Session Chairs: Youngjin Kwon and Chung-Hwei Su</p>	<p>Fire Statistics and Risk Assessment (402AB) Session Chairs: Wei-Guo Song and Yuan-Shang Lin</p>
15:50-16:05	<p>1A-5 Shape and oscillation of ethylene and propane laminar diffusion flames in micro and normal gravities</p> <p>Luyao Zhao, Dan Zhang, Jingwu Wang, Jun Fang, Kaiyuan Li, Jinfu Guan, Jinjun Wang and Yongming Zhang.</p>	<p>1B-5 Chinese Firefighter Fatalities 2007-2016</p> <p>Ye Hu and Jianzhang Shao.</p>	<p>1C-5 Assessing probability of fire in an administrative district</p> <p>Ching-An Lee, Yu-Chi Sung, Yuan-Shang Lin and Gary Li-Kai Hsiao.</p>
16:05-16:20	<p>1A-6 Investigation of the effect of DMMP addition on the methane-air premixed flame thickness</p> <p>Wei Li, Yong Jiang and Rujia Fan.</p>	<p>1B-6 Development of testing environment for thermal protective clothing at critical conditions</p> <p>Sungwook Kang, Minjae Kwon, J.Yoon Choi and Sengkwon Choi.</p>	<p>1C-6 Investigation of factors and construction of statistical models on predicting life casualties in building fires in New Taipei City</p> <p>Ting-Yu Huang and Yuan-Shang Lin.</p>
16:20-16:35	<p>1A-7 Effect of hydrodynamic instability on methane/air explosion</p> <p>Yanchao Li, Mingshu Bi, Bei Li, Dawei Zhang and Wei Gao.</p>	<p>1B-7 Effect of ice slurry on suppression and cooling of body temperature in firefighters</p> <p>Jongjin Jeong, Tetsuhito Akieda, Masayuki Mizuno, Shinya Yanagita, Shiro Ichimura, Takahiko Yamamoto, Yoshifumi Ohmiya, Tsuguo Genkai, Haruto Mochida, Shun Suzuki and Toshiyuki Kugai.</p>	<p>1C-7 Spectral characteristic analysis of burned area based on MODIS data</p> <p>Rui Ba, Weiguo Song, Siuming Lo and Zixi Xie.</p>

16:35-16:50	1A-8 Thermal degradation kinetics and mechanisms of polyformaldehyde under inert and oxidizing atmospheres Dan Zhang, Lin Jiang, Song Lu and Heping Zhang.	1B-8 Fire dynamics simulations for structural fire analysis Chao Zhang, Randall McDermott, Lisa Choe, Marcos Vanella and Glenn Forney.	1C-8 Fire Hazard assessment of typical flammable liquid oils in wind turbine nacelle Wei Sun, Fei You and Ping Li.
16:50-17:05	1A-9 Characteristics and mechanisms of low-temperature coal-oxygen coupling and oxidation processes of a low-rank bituminous coal with microscale particle sizes Wenhao Huangfu, Fei You, Wenda Wang, Yuanshu Zhu and Zonglin Fu.	/	1C-9 Preliminary investigation of critical separation distance between shacks in informal settlements fire Yu Wang, Lesley Gibson, Mohamed Beshir and David Rush.
17:05-17:15	Discussion	Discussion	Discussion

Oct. 23rd (Tue)

08:30-09:10	Registration		
09:10-09:50	Keynote 5 (402CD) Shen-Wen Chien, Guan-Yuan Wu : The analysis of the effects of critical velocity in tunnel fires with water spray system. Session Chair: Naian Liu	Keynote 6 (402AB) Chris Jelenewicz : Research needs for the fire safety engineering profession: The SFPE roadmap. Session Chair: Masayuki Mizuno	
	Fire Physics and Chemistry & Fire Properties and Testing Methods of Materials (402CD) Session Chairs: Naian Liu and Chin-Lung Chiang	Structural Behavior in Fire (205) Session Chairs: Kazunori Harada and Li-Hsien Chen	Human Behavior in Fire (402AB) Session Chairs: Masayuki Mizuno and Pei-Chun Shao
09:50-10:05	2A-1 Importance of intersystem crossing on flammability properties of carbon disulfide (CS ₂) Zhe Zeng, Bogdan Dlugogorski, Ibukun Oluwoye and Mohammednoor Altarawneh.	2B-1 An integrated tool for the simulation of structural response to real fires Liming Jiang and Asif Usmani.	2C-1 Human behavior during an evacuation of a large office building adjacent a fire site Mineko Imanishi, Yoshikazu Deguchi, Tsutomu Nagaoka and Tomonori Sano.
10:05-10:20	2A-2 Preparation and flame retardant properties of polyurethane composites using microencapsulation technology Ming-Yuan Shen and Chin- Lung Chiang.	2B-2 Small-scale tests on tensile membrane action of reinforced mortar slabs at elevated temperature Shiko Fukatsu, Zijing Liu, Toru Yoshida, Kenta Watanabe and Takeo Hirashima.	2C-2 Experimental study on single-file movement with different stop distances Qiao Wang, Weiguo Song, Jun Zhang, Liping Lian and Siuming Lo.

10:20-10:35	<p>2A-3 Enhancing the thermal stability and flame retardancy of transparent fire-retardant coatings applied on wood substrates by introducing multi-walled carbon nanotubes</p> <p>Zhisheng Xu, Yan Long, Nan Deng, Zhiyong Chu, Dingli Liu and Ye Xu.</p>	<p>2B-3 Investigation of fire-damage in concrete by post-peak control technique associated with acoustic emission</p> <p>Li-Hsien Chen, Wei-Chih Chen, Yao-Chung Chen, Chio-Fang Cai, Ming-Yuan Lei and Tien-Chih Wang.</p>	<p>2C-3 Study on pedestrian flow</p> <p>Natsuki Fujimoto, Misa Ogidani, Keiya Sakai, Saki Sumida, Yoshifumi Ohmiya, Jun-Ichi Yamaguchi, Tomonori Sano and Manabu Tange.</p>
10:35-10:45	Discussion	Discussion	Discussion
10:45-11:05	Break		
	<p>Fire Properties and Testing Methods of Materials (402CD) Session Chairs: Naian Liu and Chin-Lung Chiang</p>	<p>Structural Behavior in Fire & Fire Safety Design and Codes (205) Session Chairs: Kazunori Harada and Li-Hsien Chen</p>	<p>Human Behavior in Fire (402AB) Session Chairs: Masayuki Mizuno and Pei-Chun Shao</p>
11:05-11:20	<p>2A-4 Pyrolysis properties and flame retardant effects of cotton fabric finished by hybrid silica-based sols</p> <p>Yuanshu Zhu, Fei You and Huiting Zhou.</p>	<p>2B-4 Post fire mechanical properties of high strength Q690 structural steel</p> <p>Weiyong Wang and Kang Wang.</p>	<p>2C-4 Influence of congestion in upper floor on pedestrian flow in staircase based on observational survey of evacuation drill in a high-rise building</p> <p>Kosuke Fujii, Masayuki Mizuno, Hiroyuki Kadokura, Tomonori Sano and Ai Sekizawa.</p>
11:20-11:35	<p>2A-5 Pyrolysis kinetic analysis of forest combustible material: an improved method for optimization calculation</p> <p>Hong Zhu and Naian Liu.</p>	<p>2B-5 A Risk-based approach to the performance-based fire safety design of a building in regard to preventing building-to-building fire spread</p> <p>Keisuke Himoto.</p>	<p>2C-5 Time gaps for passing through bus exits in tunnel fires by an experimental evacuation and ordinary use</p> <p>Hung-Chieh Chung, Miho Seike, Nobuyoshi Kawabata, Masato Hasegawa, Shen Wen Chien and Tzu Sheng Shen.</p>
11:35-11:50	<p>2A-6 Burning of a polyurethane slab in open and in room environments</p> <p>Sho Akao, Kazunori Harada, Daisaku Nii, Sunchang Lee, Junghoon Ji and Tsuneto Tsuchihashi.</p>	<p>2B-6 A study on policy of revising building fire safety system in Vietnam based on the comparison of fire safety regulation between Vietnam and Japan on the evacuation safety</p> <p>Bui Haiduy, Mizuno Masayuki and Tsujimoto Makoto.</p>	<p>2C-6 Fire evacuation in a large railway interchange station</p> <p>C.Y. Ku and W.K. Chow.</p>
11:50-12:00	Discussion	Discussion	Discussion
12:00-13:40	Lunch Break, (402AB, 402CD & 205)		
13:40-14:20	<p>Keynote 7 (402CD) Bogdan Dlugogorski : Flammability Properties of Hydrogen Sulfide (H-2S) and Carbon Disulfide (CS2). Session Chair: Wei-Guo Song</p>	<p>Keynote 8 (402AB) Kazunori Harada : Research supporting performance-based design of building fire safety. Session Chair: Ricky Carvel</p>	

	Fire Properties and Testing Methods of Materials (402CD) Session Chairs: Margaret McNamee and Yu Wang	Fire Safety Design and Codes & Industrial Fires (205) Session Chairs: Chris Jelenewicz and Wei Gao	Human Behavior in Fire & Tunnel fires (402AB) Session Chairs: Ricky Carvel and Li-Zhong Yang
14:20-14:35	2A-7 The moisture evaporation rate of walls revisited and predicting temperature profile of moisture containing walls exposed to fire Tensei Mizukami and Takeyoshi Tanaka.	2B-7 Experimental studies of the effect of spray dynamics on radiation blockage by water curtains Haobo Wang, Libin Ding, Tian Xie, Jinyun Pu and Chao Ding.	2C-7 Study on subway station evacuation performance by the improved cellular automata evacuation model Peihong Zhang and Meng Lan.
14:35-14:50	2A-8 Diffusion of carbon monoxide through un-painted and painted gypsum wallboard Thomas Cleary and Jiann Yang.	2B-8 Full-scale experimental study of boilover suppression by floating perlites Tzu-Yan Tseng and Kuang-Chung Tsai.	2C-8 Investigation on residents' usage for public facility of evacuation at ordinary time Chun-Hao Shao.
14:50-15:05	2A-9 A method for translating compartment fire durations to equivalent fire resistance time at standard fire test condition Takeyoshi Tanaka and Tensei Mizukami.	2B-10 Experimental study on effectiveness of water mist containing potassium salts in extinguishing liquid pool fire Hao Liu, Tianwei Zhang, Dengyou Xia and Qiang Liang.	2C-9 Safety study on load limiting device for rope rescue San-ping Ho, Hue-Pei Chang, Chin-Feng Chen, Steven Chiang, Wei-chih Fang and Wan-Ki Chow.
15:05-15:20	2A-10 The breakage behavior of different types of glazing in a fire Yu Wang.	/	2C-10 Experimental study on confinement velocity in tunnel fires with longitudinal ventilation Min Peng, Xudong Cheng, Shaogang Zhang, Yongzheng Yao, Kun He and Wei Cong.
15:20-15:30	Discussion	Discussion	Discussion
15:30-15:50	Coffee Break		
	Fire Properties and Testing Methods of Materials (402CD) Session Chairs: Margaret McNamee and Yu Wang	Industrial Fires (205) Session Chairs: Chris Jelenewicz and Wei Gao	Tunnel fires (402AB) Session Chairs: Ricky Carvel and Li-Zhong Yang
15:50-16:05	2A-11 An experimental study on combustion characteristics of printers depending on geometrical type and kind of plastics used Jaeyoung Lee, Yoshifumi Ohmiya, Kazunori Harada, Ken Matuyama, Yuhsiang Wang, Fumiaki Saito, Seiji Okinaga, Yusuke Shintani, Akihide Jo and Jun Kitahori.	2B-11 Application of safety planning method based on quantitative risk analysis in oil pipeline Rong Yun.	2C-11 A piecewise prediction model for the maximum ceiling temperature rise in longitudinal ventilated tunnel fires Yongzheng Yao, Min Peng, Kun He, Long Shi and Xudong Cheng.

16:05-16:20	2A-12 Quantitative metallography discrimination of melted beads on stranded copper conductor based on principal component analysis and support vector machine Guanning Wang, Yang Li and Liang Deng.	2B-12 Characterization of thermal runaway propagation induced by thermal abuse in 18650 lithium ion battery module Linsheng Guo, Caixing Chen and Huichang Niu.	2C-12 Influence of ambient pressure on smoke backlayering distance and critical ventilation velocity in longitudinal ventilated tunnel fires Fangyi Guo, Zihe Gao, Jie Ji and Lizhong Yang.
16:20-16:30	Discussion	Discussion	Discussion

16:30-17:30	Poster Session (4F Lobby B+C)
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Oct. 24th (Wed)

08:50-9:10	Registration		
09:10-9:50	Keynote 9 (402CD) Jennifer Wen : Fire modelling from model development to practical applications. Session Chair: Yi Wang	Keynote 10 (402AB) Fathi Tarada : Innovation in sustainable tunnel ventilation. Session Chair: Tzu-Sheng Shen	
	Fire Properties and Testing Methods of Materials & Fire and Smoke Modeling and Experiment (402CD) Session Chairs: Yi Wang and Yulianto Sulisty Nugroho	Fire Detection and Suppression (205) Session Chairs: Hong-Zeng Yu and Shou-Xiang Lu	Tunnel fires (402AB) Session Chairs: Tzu-Sheng Shen and Miho Seike
09:50-10:05	3A-1 Experimental investigation of smoldering combustion of tropical peat layer under various moisture content Pither Palamba, Mohamad Lutfi Ramadhan, Luthfi Rizki Perdana, Afiri Dianti, Nadhira Gilang Ratnasari, Fahri Ali Imran, Engkos Achmad Kosasih and Yulianto Sulisty Nugroho.	3B-1 The search for environment friendly alternative aqueous film forming foams (AFFF): surface activity and foam properties of short-chain fluorocarbon and hydrocarbon surfactants mixed system Ning Jiang, Youjie Sheng, Changhai Li and Shouxiang Lu.	3C-1 Experiment on effects of sealing rate on fire behaviors in sealing tactics against tunnel fire Changkun Chen, Huang Xiao, Jie Chen, Xiaolong Zhao and Congxiang Zhu.
10:05-10:20	3A-2 Effect of external and internal heating on electrical wire fire Xinyan Huang, Whi Il Kim, Weiyu He, Andy Rodriguez and Carlos Fernandez-Pello.	3B-2 Experimental studies of roll-paper storage burning behavior with water application Xiangyang Zhou, Dong Zeng and Sergey Dorofeev.	3C-2 Influence of stationary vehicles to thermal fume backlayering length in tunnel fire Yu Tsung Ho, Nobuyoshi Kawabata, Miho Seike, Masato Hasegawa, Shen Wen Chien and Tzu Sheng Shen.
10:20-10:35	3A-3 Unsteady three-layer fluid model for smoke movement prediction Keichi Suzuki.	3B-3 A study on actual delivered density of water application under the effects of fire sources Chia-Hsin Chen, Masaki Noaki, Yoshifumi Ohmiya, Yuya Miyazawa, Kei Aoki, Kouki Yuki and Tetsuhito Akieda.	
10:35-10:45	Discussion	Discussion	Discussion

10:45-11:05	Break		
	Fire and Smoke Modeling and Experiment (402CD) Session Chairs: Yi Wang and Yulianto Sulisty Nugroho	Fire Detection and Suppression (205) Session Chairs: Hong-Zeng Yu and Shou-Xiang Lu	Tunnel fires (402AB) Session Chairs: Tzu-Sheng Shen and Miho Seike
11:05-11:20	3A-4 Experimental and numerical study of smoke control in a large underground subway depot with superstructures using hybrid ventilation Zhilei Wang, Xuhai Pan, Li Zhu, Juncheng Jiang and Min Hua.	3B-4 Water mist fire suppression modeling of rack-storage fires in open space Ning Ren, Karl Meredith, Hong-Zeng Yu, Xiangyang Zhou, Yi Wang and Sergey Dorofeev.	3C-3 Numerical studies on the smoke control parameters of water mist screens with transverse ventilation system in tunnel fires Qiang Liang, Hui Xu, Youbo Huang and Yanfeng Li.
11:20-11:35	3A-5 Hybrid ventilation performance used for fire-induced smoke control in a large single space building Yan Tong, Dekai Huo and Junhuan Peng.	3B-5 The experimental studies of the cooking oil fire by water mist fire extinguishing system with additive Kee-Chiang Chung, Yu-Chia Chen, Wei-Cheng Han and Ming-Yuan Lei.	3C-4 Fire experiment and simulation of model-scale tunnel with point extraction ventilation system Ti-Sheng Huang, Nobuyoshi Kawabata, Miho Seike, Masato Hasegawa, Futoshi Tanaka, Shen-Wen Chien and Tzu-Sheng Shen.
11:35-11:50	3A-6 Study on the effect of platform screen door of different types on smoke control of platform fire at a subway station Na Meng, Xiaona Jin and Yao Wang.	/	3C-5 The analysis of HGV fire scenarios in tunnel with point-extraction ventilation Li-Wu Fan and Guan-Yuan Wu.
11:50-12:00	Discussion	Discussion	Discussion
12:00-13:40	Lunch Break (402AB, 402CD & 205)		
13:40-14:20	Keynote 11 (402CD) Wan-Ki Chow : Fire hazards and performance-based approach to determining fire safety provisions for green buildings in the Asia-Oceania regions. Session Chair: Bogdan Dlugogorski	Keynote 12 (402AB) Nobuyoshi Kawabata, Miho Seike : Quantitative assessment for road tunnel fire safety (behavior of smoke and evacuees). Session Chair: Jie Ji	
	Fire and Smoke Modeling and Experiment (402CD) Session Chairs: Bogdan Dlugogorski and Wai-Cheong Tam	Fire Detection and Suppression (205) Session Chairs: Sergey Dorofeev and Long-Hua Hu	Tunnel fires (402AB) Session Chairs: Jie Ji and Yokota Masahiro
14:20-14:35	3A-7 Modeling on the effect of heat release rates on fire smoke control in multi-level underground parking garage Beline Alianto and Yulianto Sulisty Nugroho.	3B-6 A study on the effect of sprinkler and water mist spray droplet characteristics on smoke descending Seunghyeon Jin, Unggi Yoon, Byeongheun Lee, Sungha Park, Jiwoo Han, Hyewon Kim and Youngjin Kwon.	3C-6 Network flow modelling for optimizing fire smoke control in complex urban traffic link tunnels Dong Yang, Yingli Liu and Tao Du.

14:35-14:50	<p>3A-8 Numerical study on the smoke control effect of the air outlet setting in the vestibule of high-rise building</p> <p>Hua Yang and Si-Cheng Li.</p>	<p>3B-7 A study on the application of automatic sprinkler systems in AS/RS warehouses in Taiwan</p> <p>Pin-Ping Hsieh, Tzu-Sheng Shen, San-Ping Ho, Yu-Jen Chen, Hue-Pei Chang and Ming-Yuan Lei.</p>	<p>3C-7 Fire smothering and post-fire ventilation strategy for cable compartment in urban utility tunnel</p> <p>Jian Li, Congling Shi, Changkun Chen, Yingzhe Zhang, Xuan Xu and Jiehong Shi.</p>
14:50-15:05	<p>3A-9 An experimental study on pressurization smoke control system in stairwell-Influence of a dynamic pressure control system and opening vestibule doors, and confirmation of differential pressure adjustment damper performance-</p> <p>Park Hyun Woo, Mitsumura Tomohiro, Ohmiya Yoshifumi, Kishiue Masashi and Takahashi Wataru.</p>	<p>3B-8 Application of common-use temperature sensors to early fire detection</p> <p>Daisaku Nii, Mai Namba, Kazunori Harada, Ken Matsuyama and Takeyoshi Tanaka.</p>	<p>3C-8 A numerical study of the effect of tunnel slope on natural ventilation with vertical shaft in urban road tunnel fires</p> <p>Huaxian Wan, Jianyun Han, Jie Ji, Yongming Zhang, Haobo Wang and Dechuang Zhou.</p>
15:05-15:20	<p>3A-10 FDS software simulation for control effect of fire dikes on leakage of cryogenic ethylene storage tank</p> <p>Yuanchang Liu, Xuefeng Han, Jie Ji and Juncheng Jiang.</p>	<p>3B-9 Characterization of typical fire and non-fire aerosols by polarized light scattering for reliable optical smoke detection</p> <p>Qixing Zhang, Jia Liu, Jie Luo, Feng Wang, Jinjun Wang and Yongming Zhang.</p>	<p>3C-9 Prediction of the maximum ceiling gas temperature in tunnel fires based on the buoyancy plume temperature models</p> <p>Zihe Gao, Huaxian Wan, Jie Ji, Chuangang Fan, Lin Jiang and Zhaoxia Liu.</p>
15:20-15:30	Discussion	Discussion	Discussion
15:30-15:50	Coffee Break		
	<p>Fire and Smoke Modeling and Experiment (402CD) Session Chairs: Bogdan Dlugogorski and Wai-Cheong Tam</p>	<p>Fire Protection of Cultural Heritages & Fire Protection of High-rise Buildings (205) Session Chairs: Sergey Dorofeev and Long-Hua Hu</p>	<p>Tunnel fires (402AB) Session Chairs: Jie Ji and Yokota Masahiro</p>
15:50-16:05	<p>3A-11 Fire-induced horizontal vent flow pattern in a ceiling vented enclosure: theoretical analysis and experimental verification</p> <p>Xiao Chen and Shouxiang Lu.</p>	<p>3B-10 Fire protection and fire safety design of New Zealand heritage building</p> <p>Dennis Su Wee Pau, Christine Duncan and Charles Fleischmann.</p>	<p>3C-10 Effects of tunnel length on combustion efficiency in tunnel fires</p> <p>Tasuku Ishikawa, Keita Kasumi and Futoshi Tanaka.</p>
16:05-16:20	<p>3A-12 Assessment of radiation solvers for dire simulation models using RADNNET-ZM</p> <p>Wai Cheong Tam and Walter Yuen.</p>	<p>3B-11 Sensitivity analysis of smoke flow in high-rise stairwells</p> <p>Charles Fleischmann, Dennis Pau, Jack Montgomery and Logan Evans.</p>	<p>3C-11 Research on evacuation of train fire in extra-long channel tunnel</p> <p>Jie Kong, Zhi Sheng Xu and Wen Jiao You.</p>

16:20-16:35	3A-13 Side wind effect on the flow behavior of the window plume Junmei Li, Yuhang Zhao, W.K. Chow and T.K. Yue.	3B-12 Tall building evacuation strategy – the refuge floor concept revisited Leong Poon.	3C-12 Potential risks assessment method associated with Japanese expressway tunnel fires Masahiro Yokota, Tetsuya Yamazaki, Nobuyoshi Kawabata and Shiori Imai.
16:35-16:45	Discussion	Discussion	Discussion

16:50-17:30	Closing Ceremony (402CD)		
18:00-20:30	Symposium Banquet (101)		

Oct. 25th (Thu)	
08:00-08:10	Front Door of NTUH International Convention Center
11:00-14:00	Training Center of National Fire Agency (NFA) & Lunch (Nantou County)
16:30-18:30	Emergency and Rescue Command Center, Fire Department, New Taipei City Government (NTCG)
18:30-21:00	Dinner (New Taipei City)
21:00-21:30	Front Door of NTUH International Convention Center