

		<div>Preliminary Programme</div> <div>International Fire Safety Symposium 2025 (IFireSS 2025)</div> <div>Ulster University, Belfast, UK, June 25 - 27, 2025</div>				
Tuesday, June 24, 2025						
18:00	-	20:00	Registration and Opening Reception (Belfast Campus, Ulster University)		Hosted by Fire Safety Engineering Research and Technology Centre (FireSERT), Ulster University	
						
Wednesday, June 25, 2025						
08:00		-	08:45			
Registration (Ulster University, Block BC, Lower Ground Level, Belfast Campus, BC-LG-207)						
08:45		-	10:30			
Opening and Keynote Session (Conference Theatre 1)						
08:45		-	10:30		Paper ID	Proceeding Page
Conference Theme						
08:45		-	10:30		Session 1-A: Conference Welcome and Keynote Session I	
Co-Moderators: Brian J Meacham, Charles Clifton						
08:45	-	09:00	Conference Welcome		Professor Ali Nadjai	
09:00	-	09:20	Fire Safety Design of Building Envelopes.		KS001	2
09:20	-	09:40	Cost-Benefit of Performance-Based Design for Structures in Fire		KS002	3
09:40	-	10:00	The new fire models recently incorporated into the 2nd Generation of Eurocodes.		KS003	4
10:00	-	10:20	Anyone for a cocktail? Understanding the impact of toxic chemicals on exposure of firemen to post-fire condensate		KS004, 106	5, 496
10:20	-	10:30	Questions and Answers			
10:30		-	11:00			
Coffee Break (BC-03-115, BC-03-115A)						
11:00		-	12:30		Paper ID	Proceeding Page
Conference Theme						
11:00		-	11:15		Large-scale thermomechanical fire tests on hybrid components made of steel and timber	
11:15		-	11:30		Numerical Modelling of Charring in Engineered Timber	
11:30		-	11:45		Thermal-structural behavior of wood truss floor assemblies under standard fire conditions	
11:45		-	12:00		Fire simulation and fire hazard analysis of historic timber buildings	
12:00		-	12:15		Building a framework for the fire resilience of mass timber structures	
12:15		-	12:30		Performance of modular timber assembly in fire conditions	
11:00		-	12:30		Paper ID	Proceeding Pages
Conference Theme						
11:00		-	11:15		The influence of adding polymeric materials on the spalling behaviour of some cubical concrete test specimens	
		-			Paul Joseph, Thathsarani Kannangara, Maurice Gurrieri and Sam Fragomeni	

11:15	-	11:30	Thermal resistance and life cycle assessment of rubberised geopolymer concrete with recycled aggregates.	Tawzia Manzoor, Asif Hussain Shah and Javed Bhat	011	398	Concrete and Fire
11:30	-	11:45	Numerical analysis on the load influence for the crack opening on flat slabs exposed to fire	Andreia Fanton, Luiz Carlos de Almeida and Leandro Trautwein	015	410	Concrete and Fire
11:45	-	12:00	Structural behaviour of fiber reinforced concrete tunnels exposed to fire	Nunzia Gragiulo, Donatella de Silva and Emidio Nigro	036	432	Concrete and Fire
12:00	-	12:15	Parent concrete resistance effects on the high-temperature resistance of recycled aggregate concrete	Viktor Hlavička	028	422	Concrete and Fire
12:15	-	12:30	Thermal Degradation of Mechanical Properties in Reinforced Concrete with Diverse Reinforcement Types	Ahmed Farhan Ahnaf Siddique and Katherine A. Cashell	037	442	Concrete and Fire
12:30	-	13:45	Lunch (BC-03-115, BC-03-115A)				
13:45	-	15:15	Session 1-C.1: Compartment Fires I and Computational Modelling (Conference Theatre 1) Co-Moderators: Grunde Jomaas, Xu Dai		Paper ID	Proceeding Pages	Conference Theme
13:45	-	14:00	Modelling challenges of peculiar compartment fire dynamics	Tarek Beji	006	146	Compartment Fires
14:00	-	14:15	Evaluating the effects of travelling fires on entire compartment spaces	Naveed Alam and Ali Nadjai	008	154	Compartment Fires
14:30	-	14:45	Simulation of compartment fires utilizing heat release histories received from scaled- down models of experiments	Zhongcheng Ma, Wei Lu and Jari Puttonen	016	162	Compartment Fires
14:45	-	15:00	A comparison of species yields in ventilation-controlled and fuel-controlled fires using a medium scale compartment with measured global equivalence ratios	Robert Bray, Weixuan Gong, Svetlana Tretsiakova-Mcnally and Jianping Zhang	017	174	Compartment Fires
15:00	-	15:15	Fire resistance alternative solution design of automated vertical warehouses (AVW)	Chiara Crosti, Andrea Marino and Piergiacomo Cancelliere	019	186	Compartment Fires
14:15	-	14:30	Performance-Based Fire Engineering Approach for Protecting a Bespoke Steel Flooring Assembly	Shixiong Guo and Ahmed Allam	009	199	Computational Modelling
13:45	-	15:15	Session 1-C.2: Case Studies in Fire (Conference Theatre 2) Co-Moderators: Paul Joseph, Ahmed Allam		Paper ID	Proceeding Pages	Conference Theme
13:45	-	14:00	The potential contribution of tensile membrane behaviour in the collapse of world trade centre 7	G Charles Clifton, Fan-Qin Meng, Steven Hale and Sioeli Kavinga	024	82	Case Studies in Fire
14:00	-	14:15	Analysis on the impact of fire safety regulations on residential housing designs and trends: A Singapore case study	Christopher Tan and Kok Hwa Lim	027	94	Case Studies in Fire
14:15	-	14:30	Fire Investigation of Escalator used in Different Categories of Buildings.	Nazareth Arasan Thatheus, Ali Nadjai, Manu Rajan and Ahmed Allam	012	70	Case Studies in Fire
14:30	-	14:45	Framework for quantified risk assessment of bridge fire safety	Yavor Panev, Anna Benoit, Eoin O'Loughlin and Graeme Flint	071	123	Case Studies in Fire
14:45	-	15:00	Rehabilitation of the historical Brazilian national museum after fire	Luana Ercan, João Paulo Rodrigues and Cynara Bremer	067	111	Case Studies in Fire
15:00	-	15:15	Analysis of fire risk patterns in naturally ventilated road tunnels	Imad Obadi and George Hadjisophocleous	097	135	Case Studies in Fire
15:15	-	15:45	Coffee Break (BC-03-115, BC-03-115A)				

15:45	-	16:45	Session 1-D.1: Computational Modelling (Conference Theatre 1) Co-Moderators: Tarek Beji, Jianping Zhang		Paper ID	Proceeding Pages	Conference Theme
15:45	-	16:00	A method to calculate heat transfer of cable systems in suspension bridges exposed to tanker fire	Huseyin Saglik, Airong Chen and Rujin Ma	026	248	Computational Modelling

16:00	-	16:15	Comparison of natural fire simulations with cellulosic, plastic or liquid combustible fuel stored in a large industrial building	Bruno Dal Lago, Mattia Bianchi, Alessandro Lucà, Andrea Nicora and Paride Tucci	075	353	Computational Modelling
16:15	-	16:30	A Novel Single-Shaft Smoke Ventilation Strategy for Protected Stairwells in High-Rise Residential Buildings	Jianqiang Mai, Maulik Katkoria and Dharmit Nakroni	020	219	Computational Modelling
15:45	-	17:00	Session 1-D.2: Steel and Fire (Conference Theatre 2) Co-Moderators: Donatella de Silva, Mostafa Jafarian		Paper ID	Proceeding Pages	Conference Theme
15:45	-	16:00	Behaviour of restrained steel beam at elevated temperature – Part II	Ahmed Allam and Ali Nadjai	004	648	Steel and Fire
16:00	-	16:15	Fire resistance of simple steel beam for differentiated safety requirements – Probability-based approach to evaluation	Mariusz Maslak and Michal Pazdanowski	010	677	Steel and Fire
16:15	-	16:30	Performance of steel frames with friction joints under fire	Ana Francisca Santos, Aldina Santiago, Iolanda Vaz Moreno	072	725	Steel and Fire
16:30	-	16:45	Behaviour of unprotected and protected long span cellular beams exposed to elevated temperatures	Klelia Petrou and Ali Nadjai	005	657	Steel and Fire
Thursday June 26, 2025							
08:00	-	09:00	Registration (Lower Ground Floor & Ground Level, BC-LG-207)				
09:00	-	10:30	Session 2-A.1: Wildfires (Conference Theatre 1) Co-Moderators: Tom Molkens, Nicola Tondini		Paper ID	Proceeding Page	Conference Theme
09:00	-	09:15	Using artificial intelligence for wildfire prevention in Cyprus	Pericles Cheng, Alexandros Papatheodoulou, Georgios Boustras, Andreas Pamboris, Nicolas Kyriakou, Giorgos Tsapparellas and Andreas Constantinides	031	830	Wildfires
09:15	-	09:30	Simulation-Based Development of Evacuation Protocols for Small Urban Areas Under Wildfire Threats	Shahab Mohammad Beyki, Aldina Santiago, António Gameiro	112	879	Wildfires
09:30	-	09:45	Basic fire management suite for Cyprus & the region-setting the requirements under SEMEDFIRE project	Klelia Petrou, George Boustras, Pierantonios Papazoglou and Cleo Varianou Mikellidou	047	837	Wildfires
09:45	-	10:00	Education in Wildfire Behaviour as a driver for interagency collaboration to solve a growing wildfire problem: The case in the Southeastern Mediterranean.	Carlos Walker-Ravena, Klelia Petrou, Nikolaos Kalogeropoulos, Pierantonios Papazoglou, George Boustras and Guillermo Rein	063	849	Wildfires
10:00	-	10:15	Evaluating Impacts of Visibility in Smoke on Driving Behaviour in Wildfire Evacuations	Hannah Carton, Timothy Young, John Gales and Eric B. Kennedy	085	861	Wildfires
10:15	-	10:30	Wildfire spread modelling using distributed information through autonomous agents	Fabio Alaimo Ponziani and Alberto Tinaburri	105	870	Wildfires
Session 2-A.2: Steel and Fire (Conference Theatre 2) Co-Moderators: Farid Wajdi Akashah, Klelia Petrou					Paper ID	Proceeding Page	Conference Theme
09:00	-	09:15	Structural response of restrained columns under non-uniform heating during traveling fire scenarios	Rabinder Kumar, Naveed Alam and Ali Nadjai	007	669	Steel and Fire
09:15	-	09:30	Fire resistance tests and analysis of plasterboard-encased steel columns under standard conditions	Octavian Lалу, Tom Lennon and Thomas Gernay	034	687	Steel and Fire
09:30	-	09:45	Performance of CFT columns in fire: A comparative study of different steel cores	Shaghayegh Ameri, Martin Mensinger and Jochen Zehfuß	041	698	Steel and Fire
09:45	-	10:00	Design of Bi-linear Steel Connectors For Fire Loading	Chloe Jeanneret, Kathryn Chin, Matthew Smith, Panagiotis Kotsovinos and John Gales	054	709	Steel and Fire

10:00	-	10:15	Fire design of bolted braced steel connections using component-based finite element method	<i>Ouissam Yessad, Abdelhak Kada, Belkacem Lamri and Frantisek Wald</i>	062	717	Steel and Fire
10:15	-	10:30	Fire vulnerability assessment through fragility curves of protected steel industrial buildings	<i>Antonio Cibelli, Donatella de Silva, Andrea Miano and Emidio Nigro</i>	078	734	Steel and Fire
10:30	-	11:00	Coffee (BC-LG-207)				
11:00	-	12:30	Session 2-B.1: Battery and Jet Fires (Conference Theatre 1) Co-Moderators: Amer Magrabi, Volodymyr Shentsov		Paper ID	Proceeding Pages	Conference Theme
11:00	-	11:15	Risk Management of Lithium Batteries in the Built Environment.	<i>Kevin Howlett</i>	GS001	12	Battery and Jet Fires
11:15	-	11:30	Assessing the Efficiency of Fire Extinguishers in Lithium-Ion Battery Fire Scenarios	<i>Edwin Bin Leong Ong, Sheik Anees, Dean Seah, Clarice Lee, Chiew Yung Yang, Justin Tan, Sze Sien Ho, Joyce Ng, Eugene Phng, Hong Haey Tong and Chin Chin Lim</i>	113	60	Battery and Jet Fires
11:30	-	11:45	Evaluating toxic and flammable gas generation during AMD-Fires via Full-Scale Fire Tests	<i>Sheik Anees, Dean Seah, Edwin Ong, Clarice Lee, Yang Chiew Yung, Justin Tan, Ho Sze Sien, Tong Hong Haey, Eugene Phng and Chin Chin Lim</i>	111	49	Battery and Jet Fires
11:45	-	12:00	Fire performance of a steel pipe-rack under jet fire scenarios	<i>Patrick Covi and Nicola Tondini</i>	065	27	Battery and Jet Fires
12:00	-	12:15	Predicting and Measuring Thermal Runaway Effects on CF-PEEK for Future Composite Battery Enclosures	<i>Margarita Etchegaray-Bello, Leo Heidemann, Klaus Drechsler</i>	002	15	Battery and Jet Fires
12:15	-	12:30	Thermal load on structural elements subjected to jet fires	<i>Giulia Mignemi, Mattia Bianchi, Marco Barozzi, Sabrina Copelli and Bruno Dal Lago</i>	088	39	Battery and Jet Fires
11:00	-	12:30	Session 2-B.2: Human Behaviour and Computational Studies (Conference Theatre 2) Co-Moderators: Nigel McConnell, Svetlana Tretsiakova-McNally		Paper ID	Proceeding Pages	Conference Theme
11:00	-	11:15	Using Systems-Theoretic Process Analysis (STPA) Hazard Analysis to Identify Unsafe Control Actions and Causal Scenarios in Pre-Evacuation	<i>Alvaro Gomes Ferreira, Brian J. Meacham, João Paulo C. Rodrigues and Aline Lopes Camargo</i>	100	624	Human Behaviour
11:15	-	11:30	Evacuation behaviours of children and adolescents during fire drills in school settings	<i>Javad Hashempour and Babak Bahrani</i>	094	606	Human Behaviour
11:30	-	11:45	Egress of spectators with alcohol consumption in stadia	<i>Giuseppina Alfarano and John Gales</i>	099	615	Human Behaviour
11:45	-	12:00	Residential Fires, Fatalities and Injuries in Ghana: The need for targeted Interventions	<i>Yahaya Abdulai, Nigel McConnell and Karen Boyce</i>	110	637	Human Behaviour
12:00	-	12:15	Thermo-mechanical Modelling of RC and Steel Elements: SAFIR and OPENSEAS Comparison.	<i>"Sara Minieri, Antonio Cibelli, Donatella de Silva and Emidio Nigro"</i>	115	387	Computational Studies
12:15	-	12:30	Numerical study of the influence of steel purlins on fire resistance of protected warehouse structures under standard fire conditions	<i>Pegah Aghabozorgi, Luís Laím and Aldina Santiago</i>	030	270	Computational Studies
12:30	-	13:45	Lunch (BC-03-115, BC-03-115A)				
13:45	-	15:15	Session 2-C.1: Computational Modelling (Conference Theatre 1) Co-Moderators: Viktor Hlavicka, Lim Kon Hwa		Paper ID	Proceeding Pages	Conference Theme
13:45	-	14:00	Analysis of fire resistance performance of fire doors using thermo-mechanical model	<i>Bohyuk Lim, Seokwoo Hong, Donghwan Cho, Joowon Lee, Haeyeal Lee and Minkoo Kim</i>	013	211	Computational Modelling
14:00	-	14:15	Structural Fire Performance of seismically-compatible fin plate joints under fire conditions in a fully composite floor	<i>Fanqin Meng, G. Charles Clifton and Kaijie Zhu</i>	022	226	Computational Modelling
14:15	-	14:30	Study of the behaviour of RC shear wall subjected to fire	<i>Dravesh Yadav, Vimal Panara and Gaurav Srivastava</i>	032	282	Computational Modelling

14:30	-	14:45	Fire resistance of externally or near-surface mounted shear-reinforced concrete beam-like elements	Tom Molkens, Muhammad Arslan Yaqub and Stijn Matthijs	055	308	Computational Modelling
14:45	-	15:00	Effect of local instabilities on the fire performance of high-strength concrete-filled double-skin steel tubular columns	Svetha Venkatachari and Shahzada Junaid	058	320	Computational Modelling
15:00	-	15:15	Fire performance of thermal-break precast panels	Francesco Daniele and Bruno Dal Lago	070	330	Computational Modelling
13:45 - 15:15				Session 2-C.2: Experimental Investigations (Conference Theatre 2) Co-Moderators: Marcelo Franco Porto, Javad Hashempour	Paper ID	Proceeding Pages	Conference Theme
13:45	-	14:00	Effectiveness of low carbon repair techniques for restoring the flexural and dynamic performance of fire-damaged reinforced concrete T-beams	Muhammad Noman, Muhammad Yaqub, Naveed Alam, Muhammad Fahad	039	516	Experimental Investigations
14:00	-	14:15	Experimental investigation on the combustion properties of PE blends incorporating different mineral fire retardant powders	Linda Vitaloni, Diego Tirelli, Lucia Campanelli, Marcello Canavese and Bruno Dal Lago	040	525	Experimental Investigations
14:15	-	14:30	Energy distribution in a large-scale structural fire test	Xu Dai and Stephen Welch	069	537	Experimental Investigations
14:30	-	14:45	Mechanical Properties of Gypsum Board Exposed to Thermal Loading	Rafael Castillo, Alan Zhang and Richard Emberley	073	546	Experimental Investigations
14:45	-	15:00	Experimental investigation of fiber-reinforced concrete exposed to high-temperature	Tejaswini Sudhakar Junghare, Eleni Toumpanaki and Adam Crewe	101	563	Experimental Investigations
15:00	-	15:15	Multi-scale analysis of damage mechanisms in limestone masonry subjected to high temperatures	Victor Tadie, Eleni Tsangouri, Javad Eslami, Anne Lise Beaucour and Albert Noumowe	104	573	Experimental Investigations
15:15 - 15:45 Coffee Break (BC-LG-207)							
15:45 - 17:00				Session 2-D.1: Computational Modelling (Conference Theatre 1) Co-Moderators: Muhammad Noman, Patrick Covi	Paper ID	Proceeding Pages	Conference Theme
15:45	-	16:00	Validation of tensile membrane models against experimental fire tests	Kaijie Zhu, G Charles Clifton and Fanqin Meng	023	236	Computational Modelling
16:00	-	16:15	3D beam-column element for nonlinear dynamic analysis of Steel and composite steel - concrete frame structures in fire	Piseth Heng and Bin Zhao	029	258	Computational Modelling
16:15	-	16:30	Influence of Horizontal Storage Spacing on Fire Dynamics in Rack Configurations	Syed Hasnain, Seng-Kwan Choi and Jianping Zhang	049	294	Computational studies
16:30	-	16:45	Predictive Framework for Fire Safety Assessment of Composite Bridges Using CFD, FE Simulations and ANN Modelling	Mustesin Khan, Aatif Khan, Zhuojun Nan, Katherine Cashell and Asif Usmani	090	377	Computational Modelling
15:45 - 16:45				Session 2-D.2: Emerging Topics in Fire Safety (Conference Theatre 2) Co-Moderators: Adam Thomitzek, Petr Kucera	Paper ID	Proceeding Pages	Conference Theme
15:45	-	16:00	Assessing Fire Safety Awareness and Training Gaps in Malaysian Semiconductor Facilities	Muhammad Firdaus Anuar, Farid Wajdi Akashah	130	507	Emerging Topics in Fire Safety
16:00	-	16:15	Evolving Fire Loads: Implications for Ignition Times and Safety in Residential Settings Post-COVID-19	Mostafa Jafarian and Simon Santamaria	033	467	Emerging Topics in Fire Safety
16:15	-	16:30	Comparative performance analysis of YOLOV3, YOLOV5, YOLOV8, and YOLOV11 for fire sign detection to optimize safety project modelling with “BIMSCIP”	Marcelo Franco Porto, João Paulo Correia Rodrigues, Renata Baracho and Rafael Augusto de Souza	042	473	Emerging Topics in Fire Safety
16:30	-	16:45	Forecasting structural components failures in a fire using Machine learning tools	Amelia Parker, Annika Matherson, Aatif Khan, Mustesin Khan and Zhoujun Nan	053	485	Emerging Topics in Fire Safety
19:00 - 22:00 Conference Dinner, International Convention & Exhibition Centre (ICC), Belfast.							
Friday, June 27, 2025							

08:00 - 09:00		Registration (Lower Ground Floor & Ground Level, BC-LG-207)					
09:00 - 10:30		Session 3-A.1: Experimental Work, Computational Modelling (Conference Theatre 1) Co-Moderators: Aatif Khan, Francesco Daniele			Paper ID	Proceeding Pages	Conference Theme
09:00	- 09:15	Thermal Response and Char Formation of Intumescent Coatings: An Experimental Study	Emily Bond, Adrian Murphy and Scott Millen		095	555	Experimental Work
09:15	- 09:30	Façade fire performance outdoor tests in different environmental conditions. open issues and proposals	Antonio Bonati, Giovanni Cavanna, Riccardo Di Ruzza, Gabriele Pisano, Fabio Alaimo Ponziani and Alberto Tinaburri		108	584	Experimental Work
09:30	- 09:45	A proposal for the optimization of the weighing system in the new European method for façade fire reaction testing	Antonio Bonati, Nicola Caterino, Riccardo Di Ruzza, Gabriele Pisano, Carlo Rainieri and Marta Ziccardi		109	593	Experimental Work
09:45	- 10:00	Thermo Mechanical Analysis of Walling Systems Using Advanced Finite Element Method	Ali Nadjai, Naveed Alam, Michael Gillespie		079	368	Computational Modelling
10:00	- 10:15	Thermal and mechanical modelling of loadbearing LSF walls for fire resistance design under two-sided fire exposure	Iziengbe Inerhunwa, Danny Hopkin and Ian Fu		074	342	Computational Modelling
10:15	- 10:30	Case study: feasibility study 3-d numerical modelling of mixed use multistorey buildings	Donatella De Silva, Ali Nadjai and Ahmed Allam		077	361	Computational Modelling
10:30 - 11:00		Coffee Break (BC-LG-207)					
11:00 - 12:30		Session 3-B.1: Mix Session (Conference Theatre 1) Co-Moderators: Abdel Bouchair, Panagiotis Kotsovinos			Paper ID	Proceeding Pages	Conference Theme
11:00	- 11:15	When Evacuation Itself Becomes the Hazard	Bachar Kabalan		GS002	13	Human Behaviour in Fire
11:15	- 11:30	Mechanical behaviour of Glulam samples subjected to thermal and moisture gradients	Hussein Daher, Sabine Caré, Gilles Forêt and Loïc Payet		087	812	Timber and Fire
11:30	- 11:45	Lessons learnt from fire performance of historic timber structures	Panagiotis Kotsovinos and Catherine Papanicolaou		096	822	Timber and Fire
11:45	- 12:00	Firefighting systems in buildings: Integrating LIDAR and BIM in the optimization of safety projects with ‘BIMSCIP’	Marcelo Franco Porto, João Paulo Correia Rodrigues, Renata Maria Abrantes Baracho Porto and Gabrielle Fernanda Alves da Rocha		046	103	Case Studies in Fire
12:00 - 14:00		Lunch (BC-03-115, BC-03-115A)					
14:00 - 15:20		Session 3-C: Closing and Keynote Session II (Conference Theatre 1) Co-Moderators: Emidio Nigro, Thomas Gernay			Paper ID	Proceeding Pages	Conference Theme
14:00	- 14:20	Timber Towers? Enhancing Fire Safety and Sustainability in Modern High-Rise Buildings	Professor Guillermo Rein		KS005	6	Timber and Fire
14:20	- 14:40	Burning and Learning – ensuring a fire-safe sustainable built environment through research	Professor Grunde Jomaas		KS006	7	Fire Safety Engineering
14:40	- 15:00	Behaviour of steel-timber elements and connections in fire and normal situations	Professor Abdel Bouchair		KS007	8	Fire Safety Engineering
15:00	- 15:20	Assessment and mitigation of hydrogen fuelled transport fire hazards in confined spaces	Professor Dmitriy Makarov		KS008	9	Hydrogen and Fire
15:30 - 16:00		Closing Ceremony and Awards					

* A prize will be awarded to the best student presentation (£120 sponsored by FireSERT)
** A prize will be awarded to the best student scientific paper (£120 sponsored by FireSERT)