



Conference Program

10th International Conference on Structures in Fire

Ulster University, FireSERT, June 5 - 8, 2018

Tuesday, June 5, 2018						
18:00 - 20:00	Registration and Opening Reception (Belfast Centre Campus)	Sponsored by the Faculty of Engineering, Built Environment and Innovation Office, Ulster University				
Wednesday, June 6, 2018						
07:00 - 08:00	Registration and Continental Breakfast (The Bridge, Floor 6, Titanic Belfast)					
08:00 - 08:30	Opening (Titanic Suite Floor 5, Main Conference)					
08:30 - 09:30	Session 1-A: Experimental Research and any Other & Numerical Modelling (Titanic Suite) Co-Moderators: To be announced			Paper ID	Proceeding Page	Conference Theme
8:30 - 8:45	EFFECT OF COMBINED POLYPROPYLENE AND STEEL FIBRES ON PORE-PRESSURE DEVELOPMENT IN ULTRA-HIGH-PERFORMANCE CONCRETE IN FIRE	Ye Li, Pierre Pimienta, Nicolas Pinoteau, Kang Hai Tan		36	869	Experimental Research and any Other
8:45 - 9:00	DISCUSSION ON A SYSTEMATIC APPROACH TO VALIDATION OF SOFTWARE FOR STRUCTURES IN FIRE	Joao Ferreira, Thomas Gernay, Jean-Marc Franssen		61	317	Numerical Modelling
9:00 - 9:15	SEISMIC PERFORMANCE OF REINFORCED CONCRETE FRAMES AFTER FIRE	Ling-zhi Li , Xin Liu, Zhou-dao Lu, Kai Wei		90	909	Experimental Research and any Other
9:15 - 9:30	VIRTUAL TEST OF FIRE-RESISTANCE OF A TIMBER BEAM	Kamila Cabova , Filip Zeman, Martin Benýšek, Stanislav Šulc, Vít Šmilauer, František Wald		154	391	Numerical Modelling
9:30 - 10:00	Coffee Break / Poster Session (Gallery Outside: Britannia floor 5 & The Bridge floor 6)					
10:00 - 11:45	Session 1-B.1: Experimental Research and any Other (Titanic Suite) Co-Moderators: To be announced			Paper ID	Proceeding Page	Conference Theme
10:00 - 10:15	PERFORMANCE ASSESSMENT OF A STRUCTURE THROUGH HYBRID (NUMERICAL- EXPERIMENTAL) SIMULATION	<i>Xuguang Wang, Robin Kim, Oh-Sung Kwon, In-Hwan Yeo, Jae-Kwon Ahn</i>		4	853	Experimental Research and any Other
10:15 - 10:30	A PI-CONTROLLER FOR HYBRID FIRE TESTING IN A NON-LINEAR ENVIRONMENT	<i>Elke Mergny, Guillaume Drion, Thomas Gernay, Jean-Marc Franssen</i>		6	861	Experimental Research and any Other
10:30 - 10:45	RADIATIVE FLUX AFFECTING VERTICAL STEEL ELEMENT AWAY FROM THE FIRE – SIMPLIFIED METHOD LOCAFI	<i>Camille Sautot, François Hanus, Christophe Thauvoye, Giacomo Erez, Aurélien Thiry</i>		71	885	Experimental Research and any Other
10:45 - 11:00	EVALUATING UNCERTAINTY IN STEEL-COMPOSITE STRUCTURE RESPONSE UNDER FIRE – APPLICATION OF THE ME-MDRM	<i>Ruben Van Coile, Thomas Gernay, Negar Elhami Khorasani, Danny Hopkin</i>		74	893	Experimental Research and any Other
11:00 - 11:15	EXPERIMENTAL INVESTIGATION OF LIQUID POOL BURNING BEHAVIOUR AND FAÇADE FIRES IN CORRIDOR-LIKE ENCLOSURES	<i>Kostantinos Chotzoglou, Eleni Asimakopoulou, Jianping Zhang, Michael Delichatsios</i>		82	901	Experimental Research and any Other
11:15 - 11:30	MONITORING SPALLING OF HEATED CONCRETE USING LASER DISTANCE METRE	<i>Jin-Cheng Liu, Kang Hai Tan</i>		92	917	Experimental Research and any Other
11:30 - 11:45	EXPERIMENTAL STUDIES ON EARLY WARNING APPROACHES OF THE COLLAPSE OF STEEL PORTAL FRAME STRUCTURES IN FIRE	<i>Ya-Qiang Jiang, Bo Zhong, Guo-Biao Lou, Jun-Jun Liu, Jian-Zhong Rong</i>		108	925	Experimental Research and any Other
10:00 - 11:45	Session 1-B.2: Numerical Modelling (Olympic Suite) Co-Moderators: To be announced			Paper ID	Proceeding Pages	Conference Theme
10:00 - 10:15	A STOREY-BASED STABILITY ANALYSIS APPROACH FOR PREDICTING OF THE WORST-CASE FIRE SCENARIO OF UNBRACED STEEL FRAMES	<i>Terence Ma, Lei Xu</i>		43	309	Numerical Modelling
10:15 - 10:30	BRANCH-SWITCHING PROCEDURE FOR BUCKLING PROBLEMS OF SLENDER STEEL ELEMENTS IN FIRE	<i>Luca Possidente, Nicola Tondini, Jean-Marc Battini</i>		64	325	Numerical Modelling
10:30 - 10:45	TWO-DIMENSIONAL MODELLING OF THERMAL RESPONSES OF GFRP PROFILES EXPOSED TO ISO-834 FIRE	<i>Lu Wang, Lingfeng Zhang, Weiqing Liu</i>		93	333	Numerical Modelling

10:45	-	11:00	CFD ANALYSES USED TO EVALUATE THE INFLUENCE OF COMPARTMENT GEOMETRY ON THE POSSIBILITY OF DEVELOPMENT OF A TRAVELLING FIRE	<i>Marion Charlier, Antonio Gamba, Xu Dai, Stephen Welch, Olivier Vassart, Jean-Marc Franssen</i>	114	341	Numerical Modelling
11:00	-	11:15	NUMERICAL MODELLING OF THE FIRE BEHAVIOUR OF RESTRAINED CELLULAR BEAMS USING A HYBRID SIMULATION APPROACH	<i>Mustesin Ali Khan, Dr. Liming Jiang, Dr. Katherine A. Cashell, Prof. Asif Usmani</i>	115	349	Numerical Modelling
11:15	-	11:30	FRACTURE SIMULATION FOR STEEL SHEAR TAB CONNECTIONS AT ELEVATED TEMPERATURE	<i>Wenyu Cai, Mohammed A. Morovat, Michael D. Engelhardt</i>	121	359	Numerical Modelling
11:30	-	11:45	CONTRIBUTION TO THE NUMERICAL Modelling OF THE THERMOMECHANICAL BEHAVIOR OF STEEL-REINFORCED CONCRETE BEAMS EXTERNALLY REINFORCED WITH TEXTILE REINFORCED CONCRETE (TRC)	<i>Najib Douk, Amir Si Larbi, Xuan Hong Vu, Maxime Audebert</i>	123	375	Numerical Modelling
11:45 - 13:00 Lunch (The Bridge Floor 6 & Britannia Room Floor 5)							
13:00 - 14:45 Session 1-C.1: Experimental Research and any Other (Titanic Suite)							
Co-Moderators: To be announced							
					Paper ID	Proceeding Pages	Conference Theme
13:00	-	13:15	INSTANTANEOUS STIFFNESS CORRECTION FOR HYBRID FIRE TESTING	<i>Ramla Qureshi, Negar Elhami-Khorasani</i>	116	933	Experimental Research and any Other
13:15	-	13:30	EXPERIMENTAL INVESTIGATION OF THERMOMECHANICAL BEHAVIOR OF THE CARBON TEXTILE REINFORCED CONCRETE: EFFICIENCY COEFFICIENT OF CARBON TEXTILE AT ELEVATED TEMPERATURES	<i>Manh Tien Tran, Xuan Hong Vu, Emmanuel Ferrier</i>	124	941	Experimental Research and any Other
13:30	-	13:45	AN EXPERIMENTAL APPROACH FOR EVALUATING RESIDUAL CAPACITY OF FIRE DAMAGED CONCRETE MEMBERS	<i>Ankit Agrawal, Venkatesh Kodur</i>	126	949	Experimental Research and any Other
13:45	-	14:00	EVALUATION METHOD OF THERMAL ELONGATION OF STEEL BEAMS DURING FIRE BASED ON ACTUAL SCALE TESTS	<i>Tomohito Okazaki, Mamoru Kohno</i>	129	959	Experimental Research and any Other
14:00	-	14:15	EXPERIMENTAL STUDY ON THERMAL AND STRUCTURAL RESPONSES OF A FULL-SCALE STEEL STRUCTURE UNDER NATURAL FIRE	<i>Bo Zhong, Ya-Qiang Jiang, Guo-Biao Lou</i>	153	975	Experimental Research and any Other
14:15	-	14:30	FIRE RESISTANT GFRP FAÇADE SYSTEMS	<i>Kate Nguyen, Priyan Mendis, Tuan Ngo</i>	160	981	Experimental Research and any Other
14:30	-	14:45	HYBRID FIRE TESTING OF A SINGLE DEGREE-OF-FREEDOM LINEAR SYSTEM	<i>Ana Sauca, Chao Zhang, Artur Chernovsky, Mina Seif</i>	192	997	Experimental Research and any Other
13:00 - 14:45 Session 1-C.2: Numerical Modelling (Olympic Suite)							
Co-Moderators: To be announced							
					Paper ID	Proceeding Pages	Conference Theme
13:00	-	13:15	A NUMERICAL METHODOLOGY TO PREDICT THE GAS/SOLID INTERACTION IN FIRE RESISTANCE TESTS	<i>Rene Prieler, Markus Mayrhofer, Markus Eichhorn-Gruber, Günther Schwabegger, Christoph Hochenauer</i>	151	383	Numerical Modelling
13:15	-	13:30	REDUCED-ORDER THERMAL ANALYSIS OF FIRE EFFECTS ON COMPOSITE SLABS	<i>Jian Jiang, Joseph Main, Jonathan Weigand, Fahim Sadek</i>	161	399	Numerical Modelling
13:30	-	13:45	NUMERICAL INVESTIGATION OF FIRE AND POST-FIRE PERFORMANCE OF CFT COLUMNS IN AN OPEN CAR PARK FIRE	<i>Wojciech Szymkuć, Adam Glema, Michał Malendowski, Aleksandra Mielcarek, Piotr Smardz, Adrian Poteralski</i>	168	407	Numerical Modelling
13:45	-	14:00	ANALYSIS OF THE INFLUENCE OF VENTILATION IN THE STRUCTURAL RESPONSE OF A CUT-AND-COVER TUNNEL UNDER FIRE.	<i>Juan Pagan-Martinez, Ignacio Paya-Zaforteza, Antonio Hospitaler, Toni Hospitaler</i>	194	415	Numerical Modelling
14:00	-	14:15	REVERSE ENGINEERING OF STANDARD TEMPERATURE CURVES TO OBTAIN THE HRR OF THE FIRE IN VARIOUS ENCLOSURE CONFIGURATIONS - WHAT CAN WE LEARN FROM THAT ?	<i>Piotr Tofilo, Wojciech Wegrzynski, Michał Malendowski</i>	195	423	Numerical Modelling
14:15	-	14:30	FRAGILITY OF REINFORCED CONCRETE STRUCTURE SUBJECTED TO ELEVATED TEMPERATURE	<i>Ranjit Chaudhary, Tathagata Roy, Vasant Matsagar</i>	200	431	Numerical Modelling
14:30	-	14:45	ADVANCE HEAT TRANSFER ANALYSIS AND CAPACITY CURVES ACCOUNTING FOR THE EFFECT OF SPALLING	<i>Hitesh Lakhani, Jan Hofmann</i>	211	439	Numerical Modelling
14:45 - 15:15 Coffee Break / Poster Session (Gallery Outside: Britannia floor 5 & The Bridge floor 6)							

15:15 - 16:45	Session 1-D.1: Experimental Research and any Other, Numerical Modelling & Composite Structures (Titanic Suite) Co-Moderators: To be announced			Paper ID	Proceeding Pages	Conference Theme
15:15 - 15:30	EXPERIMENTAL TESTS AND SUBSEQUENT ANALYSIS OF LOCALIZED POOL FIRES IMPACTING STEEL COLUMNS AND BEAMS WITH WEB OPENINGS IN A COMPARTMENT.	<i>Ali Nadjai, Francois Hanus, Olivier Vassart, Sanghoon Han</i>	193	1005	Experimental Research and any Other	
15:30 - 15:45	FIRE RESISTANCE OF CONCRETE SLABS ACTING IN COMPRESSIVE MEMBRANE ACTION WITH VARIOUS BOUNDARY CONDITIONS	<i>Tom Molken</i>	218	447	Numerical Modelling	
15:45 - 16:00	STRUCTURAL IMPLICATIONS DUE TO AN EXTENDED TRAVELLING FIRE METHODOLOGY (ETFM) FRAMEWORK USING SIFBUILDER	<i>Xu Dai, Stephen Welch, Asif Usmani</i>	220	455	Numerical Modelling	
16:00 - 16:15	ELEVATED-TEMPERATURE TENSION STIFFENING MODEL FOR REINFORCED CONCRETE STRUCTURES UNDER FIRE	<i>Jason Martinez, Ann Jeffers</i>	221	463	Numerical Modelling	
16:15 - 16:30	LOAD-BEARING FIRE TESTS OF UNPROTECTED COMPOSITE BEAMS PINNED WITH STEEL GIRDERS	<i>Robert Dwiputra, Naoya Yotsumoto, Takeo Hirashima, Fuminobu Ozaki, Yukio Murakami, Kei Kimura</i>	137	561	Composite Structures	
16:30 - 16:45	METHODS TO ASSESS THE BEARING CAPACITY OF CONCRETE-FILLED HOLLOW SECTION COLUMNS IN FIRE	<i>Alberto Compagnone, Antonio Bilotta, Emidio Nigro</i>	199	593	Composite Structures	
15:15 - 16:45	Session 1-D.2: Concrete Structures & Timber Structures and Fire Protection Materials (Olympic Suite) Co-Moderators: To be announced			Paper ID	Proceeding Pages	Conference Theme
15:15 - 15:30	STRUCTURAL BEHAVIOUR OF R/C BEAMS EXPOSED TO NATURAL FIRES	<i>Nataša Kalaba, Venkatesh Kodur, Ankit Agrawal, Patrick Bamonte</i>	175	139	Concrete Structures	
15:30 - 15:45	RESIDUAL STRENGTH OF ULTRA-HIGH PERFORMANCE FIBRE REINFORCED CONCRETE	<i>Charles Kahanji, Faris Ali, Ali Nadjai</i>	177	147	Concrete Structures	
15:45 - 16:00	STUDY OF FIRE RESISTANCE OF RC COLUMNS WITH VARYING SHEAR REINFORCEMENT	<i>Hemanth Kumar Chinthapalli, Anil Agarwal</i>	178	157	Concrete Structures	
16:00 - 16:15	ON THE PULL-OUT CAPACITY OF POST-INSTALLED BONDED ANCHORS AND REBARS DURING FIRE	<i>Hitesh Lakhani, Jan Hofmann</i>	182	165	Concrete Structures	
16:15 - 16:30	DESIGN OF POST TENSIONED CONCRETE STRUCTURES EXPOSED TO TRAVELLING FIRES	<i>Chloe Jeanneret, John Gales, Panagiotis Kotsovinos, Guillermo Rein</i>	189	173	Concrete Structures	
16:30 - 16:45	PARAMETRIC STUDIES ON BEAM-TO-COLUM STEEL-O-TIMBER DOWELLED CONNECTIONS EXPOSED TO FIRE	<i>Pedro Palma, Andrea Frangi</i>	2	183	Timber Structures and Fire Protection Materials	
17:30 - 19:00 Participants are offered 50% discount to visit the Titanic Galleries						
Thursday June 7, 2018						
07:00 - 08:00 Registration and Continental Breakfast (The Bridge, Floor 6, Titanic Belfast)						
08:00 - 09:30	Session 2-A: Short Presentations (Titanic Suite) Co-Moderators: To be announced			Paper ID	Proceeding Pages	Conference Theme
08:00 - 08:06	SCALING APPROACH FOR STUDYING FIRE RESPONSE OF STEEL BEAMS	<i>Mahmood Yahyai, Abbas Rezaiean, Peter Chang</i>	42	877	Experimental Research and any Other	
08:06 - 08:12	EXPERIMENTAL INVESTIGATION OF STAINLESS STEEL BOLTS A2-70 DURING AND AFTER FIRE	<i>Ying Hu, ShengLin Tang, George Adomako Kumi</i>	142	967	Experimental Research and any Other	
08:12 - 08:18	TIMBER AND THE FIRE RESISTANCE FURNACE – A COMPARATIVE STUDY OF THE CONDITIONS IN A FIRE RESISTANCE FURNACE WHEN TESTING COMBUSTIBLE AND NON-COMBUSTIBLE CONSTRUCTION	<i>David Lange, Johan Sjöström, Joachim Schmid, Daniel Brandon</i>	170	989	Experimental Research and any Other	
08:18 - 08:24	NUMERICAL Modelling OF THERMAL BEHAVIOUR OF CFRP REINFORCED CONCRETE STRUCTURE EXPOSED TO ELEVATED TEMPERATURE	<i>Phi Long Nguyen, Xuan Hong Vu, Emmanuel Ferrier</i>	122	367	Numerical Modelling	
08:24 - 08:30	BEHAVIOUR OF STEEL FRAME STRUCTURES UNDER LOCALISED FIRE INCLUDING PROGRESSIVE COLLAPSE DURING COOLING	<i>Thomas Gernay, Antonio Gamba</i>	31	633	Steel Structures	
08:30 - 08:36	FIRE TESTS OF LOAD BEARING DOUBLE STUD LSF WALLS	<i>Harikrishnan Magarabooshanam, Anthony Ariyanayagam, Mahen Mahendran</i>	32	641	Steel Structures	
08:36 - 08:42	STUDY ON TEMPERATURE DISTRIBUTION OF WELDED TUBULAR SQUARE JOINTS	<i>Jolanta Bączkiewicz, Mikko Malaska, Sami Pajunen, Markku Heinisuo</i>	49	679	Steel Structures	

08:42	08:48	RESEARCH ON POST-FIRE LOAD-BEARING CAPACITY ASSESSMENT OF AXIAL RESTRAINED HIGH-STRENGTH STEEL COLUMNS	<i>Guo-Qiang Li, Jia-Rong Miao</i>	100	741	Steel Structures	
08:48	08:54	FIBRE REINFORCED SHOTCRETE – PRESENCE OF SYNTHETIC MACRO FIBRES AFTER FIRE	<i>Cristian Maluk, Todd Clarke, Andrew Ridout</i>	155	117	Concrete Structures	
08:54	09:00	RELATIONSHIPS BETWEEN DESTRUCTIVE AND NON-DESTRUCTIVE METHODS FOR NORMAL STRENGTH LIMESTONE CONCRETE AFTER EXPOSURE TO HIGH TEMPERATURES	<i>Urška Dolinar, Gregor Trtnik, Tomaž Hozjan</i>	172	133	Concrete Structures	
09:00	09:06	MODELLING NON-METALLIC TIMBER CONNECTIONS IN FIRE	<i>Ranim Dahli, Martin Gillie, John Gales</i>	134	275	Timber Structures and Fire Protection Materials	
09:06	09:12	INFLUENCE OF GAS TEMPERATURE DURING COOLING PHASE ON LOAD-BEARING PERIOD OF STRUCTURAL GLUED LAMINATED TIMBER BEAMS EXPOSED TO FIRE	<i>Takeo Hirashima, Yusuke Katakura, Moto Ichikawa, Shungo Ishii</i>	207	291	Timber Structures and Fire Protection Materials	
09:12	09:18	FIRE BEHAVIOUR OF SLENDER CONCRETE-FILLED STEEL TUBULAR COLUMNS UNDER BIAXIAL BENDING	<i>Ana Espinós, Vicente Albero, Manuel L. Romero, Maximilian Mund, Patrick Meyer, Peter Schaumann, Inka Kleiboemer</i>	138	569	Composite Structures	
09:18	09:24	NUMERICAL ANALYSIS OF THE THERMAL BEHAVIOUR OF STEEL-TIMBER HYBRID BEAMS IN FIRE SITUATION	<i>Antoine Bereysia, Maxime Audebert, Sébastien Durif, Abdelhamid Bouchair</i>	171	577	Composite Structures	
09:24	09:30	Interaction					
09:30 - 10:00		Coffee Break/Poster Session (Gallery Outside: Britannia room floor 5 & The Bridge floor 6)					
10:00 - 11:45		Session 2-B.1: Steel Structures (Titanic Suite)			Paper ID	Proceeding Pages	Conference Theme
		Co-Moderators: To be announced					
10:00	10:15	PERFORMANCE OF BEAM-COLUMN SUBASSEMBLAGES OF MULTI-STORY STEEL STRUCTURES WITH CONTINUOUS COLUMNS IN SEVERE FIRES	<i>Chia Mohammadjani, Charles Clifton, Anthony Abu</i>	10	611	Steel Structures	
10:15	10:30	FAILURE MECHANISM OF STEEL FRAMES SUBJECTED TO POST-EARTHQUAKE FIRES	<i>Gabriel-Victor Risco, Luisa Giuliani, Varvara Zania</i>	173	803	Steel Structures	
10:30	10:45	INFLUENCE OF FIRE ON THE SHEAR CAPACITY OF STEEL-SHEATHED COLD-FORMED STEEL FRAMED SHEAR WALLS	<i>Matthew Hoehler, Blanca Andres</i>	19	625	Steel Structures	
10:45	11:00	PRELIMINARY STUDY ON QUANTITATIVE DETERMINATION OF COLLAPSE PROCESS OF STEEL PORTAL FRAMES IN FIRE	<i>Guobiao Lou, Chenghao Wang, Jian Jiang, Guo-Qiang Li</i>	39	655	Steel Structures	
11:00	11:15	STEADY-STATE AND TRANSIENT-STATE TESTS ON S355 TO S500 STEEL GRADES	<i>François Hanus, Nicolas Caillet, Sylvain Gaillard, Olivier Vassart</i>	40	663	Steel Structures	
11:15	11:30	ESTIMATION OF CHARPY IMPACT VALUES FOR STEEL WELDED CONNECTIONS AT HIGH TEMPERATURE AND AFTER HEATING AND COOLING PROCESSES	<i>Ye Kai, Fuminobu Ozaki</i>	46	671	Steel Structures	
11:30	11:45	NUMERICAL PARAMETRIC STUDY OF COLD-FORMED STEEL C-SHAPED COLUMNS EXPOSED TO FIRE	<i>Luís Laím, João Paulo C. Rodrigues, Leroy Gardner</i>	60	695	Steel Structures	
10:00 - 11:45		Session 2-B.2: Concrete Structures (Olympic Suite)			Paper ID	Proceeding Pages	Conference Theme
		Co-Moderators: To be announced					
10:00	10:15	EXPERIMENTAL STUDIES ON SHEAR BEHAVIOUR OF DEEP PRESTRESSED CONCRETE HOLLOW CORE SLABS UNDER FIRE CONDITIONS	<i>Hang T. N. Nguyen, Kang Hai Tan</i>	24	51	Concrete Structures	
10:15	10:30	EXPERIMENTAL STUDY AND NUMERICAL SIMULATION OF FIRE RESISTANCE OF TWO-WAY RESTRAINED PRECAST CONCRETE COMPOSITE SLABS	<i>Qingfeng Xu, Lingzhu Chen, Xiangmin Li, Chongqing Han, Yang Zhang, Yongchang Wang, Weichen Xue</i>	29	61	Concrete Structures	
10:30	10:45	THE EFFECT OF EXPLOSIVE SPALLING ON PUNCHING SHEAR RESISTANCE OF CONCRETE SLABS EXPOSED TO FIRE	<i>Fangxia Lu, Roland Baertschi, Safak Arslantürkoglu, Johann van der Merwe, Mario Fontana</i>	53	77	Concrete Structures	
10:45	11:00	ROLE OF POLYMER FIBERS IN THE PREVENTION OF EXPLOSIVE SPALLING IN ULTRA-HIGH PERFORMANCE CONCRETE	<i>Dong Zhang, Kanghai Tan, Aravind Dasari</i>	58	85	Concrete Structures	
11:00	11:15	ROLE OF LOAD ECCENTRICITY AND TRANSVERSE REINFORCEMENT IN FIRE RESISTANCE OF REINFORCED CONCRETE COLUMNS	<i>Shujaat Buch, Umesh Sharma</i>	73	93	Concrete Structures	
11:15	11:30	VERIFICATION OF A TABULATED METHOD OF EUROCODE FOR CONCRETE COLUMNS USING A RESPONSE SURFACE AND ADVANCED METHODS	<i>Marcus Achenbach, Thomas Gernay, Guido Morgenthal</i>	107	101	Concrete Structures	
11:30	11:45	FIRE PERFORMANCE OF CONCRETE FLAT SLABS	<i>Pasindu Weerasinghe, Priyan Mendis, Kate Nguyen, Tuan Ngo</i>	157	125	Concrete Structures	

11:45 - 13:00		Lunch (The Bridge Floor 6 & Britannia Room Floor 5)			
13:00 - 14:45		Session 2-C.1: Steel Structures (Titanic Suite) Co-Moderators: To be announced	Paper ID	Proceeding Pages	Conference Theme
13:00 - 13:15	AN EQUIVALENT STRESS METHOD FOR CONSIDERING LOCAL BUCKLING IN BEAM FINITE ELEMENTS IN THE FIRE SITUATION	<i>Chrysanthos Maraveas, Thomas Gernay, Jean-Marc Franssen</i>	67	703	Steel Structures
13:15 - 13:30	BEHAVIOUR OF BOLTED CONNECTIONS COMPONENT UNDER ELEVATED TEMPERATURES	<i>Ioan Both, Ioan Marginean, Florea Dinu, Calin Neagu, Raul Zaharia</i>	77	711	Steel Structures
13:30 - 13:45	BEHAVIOUR OF FULL HIGH STRENGTH STEEL EXTENDED ENDPLATE CONNECTIONS AFTER FIRE	<i>Xuhong Qiang, Xu Jiang, Frans Bijlaard</i>	87	717	Steel Structures
13:45 - 14:00	DIRECT METHOD FOR CRITICAL TEMPERATURE OF A STEEL MEMBER SUSCEPTIBLE TO STABILITY LOSS	<i>Teemu Tiainen, Timo Jokinen, Jolanta Baczkiewicz, Mikko Salminen</i>	95	725	Steel Structures
14:00 - 14:15	ANALYTICAL DETERMINATION OF TEMPERATURE DISTRIBUTION IN STEEL CABLES CONSIDERING CAVITY RADIATION EFFECT	<i>Yong Du, Liang Li, Jian Jiang, Guo-Qiang Li</i>	98	733	Steel Structures
14:15 - 14:30	DEVELOPMENT OF AN ANALYTICAL METHOD FOR THE FIRE RESISTANCE CALCULATION OF ANGELINA BEAMS	<i>Olivier Vassart, François Hanus, Jérôme Randaxhe</i>	104	755	Steel Structures
14:30 - 14:45	TESTS ON CREEP BUCKLING OF HIGH STRENGTH STEEL COLUMNS AT ELEVATED TEMPERATURES	<i>Weiyong Wang, Linbo Zhang, Hongyang Zhou, Venkatesh Kodur</i>	110	763	Steel Structures
13:00 - 14:45		Session 2-C.2: Applications of Structural Fire Safety Engineering Timber Structures and Fire Protection Materials (Olympic Suite) Co-Moderators: To be announced	Paper ID	Proceeding Pages	Conference Theme
13:00 - 13:15	CALCULATING FIRE-INDUCED HEAT FLUX CONTOURS ON CONCRETE TUNNEL LINERS TO EVALUATE STRUCTURAL CONSEQUENCES	<i>Kyle Root, Qi Guo, Spencer Quiel, Clay Naito</i>	190	17	Applications of Structural Fire Safety Engineering
13:15 - 13:30	PROGRESSIVE COLLAPSE MECHANISMS OF STEEL-FRAME BUILDINGS DUE TO MOVING FIRES	<i>Erica Fischer, Amit Varma</i>	191	25	Applications of Structural Fire Safety Engineering
13:30 - 13:45	FIRE-INDUCED PROGRESSIVE COLLAPSE OF PLASCO BUILDING IN TEHRAN	<i>Amir Saedi Daryan, Hesam Ketabdari, Mahmood Yahyai, Mohammed Ali Morovat, Michael Engelhardt</i>	197	33	Applications of Structural Fire Safety Engineering
13:45 - 14:00	COLLAPSE ANALYSIS OF THE PLASCO TOWER USING OPENSEES	<i>Hamzeh Hajiloo, Liming Jiang, Asif Usmani, Mark Green</i>	214	41	Applications of Structural Fire Safety Engineering
14:00 - 14:15	DESIGN FIRES FOR PERFORMANCE-BASED FIRE ENGINEERING OF BRIDGES	<i>Jiayu Hu, Xu Dai, Asif Usmani, Ricky Carvel</i>	83	3	Applications of Structural Fire Safety Engineering
14:15 - 14:30	STRUCTURAL DESIGN OF TALL BUILDINGS UNDER MULTI-STOREY FIRES	<i>Graeme Flint, Panagiotis Kotsovinos, Yavor Panev, Peter Woodburn</i>	181	11	Applications of Structural Fire Safety Engineering
14:30 - 14:45	EXPERIMENTAL FIRE-SIMULATORFOR POST-FLASHOVER COMPARTMENT FIRES	<i>Daniel Brandon, Joachim Schmid, Joseph Su, Matthew Hoehler, Birgit Östman, Amanda Kimball</i>	217	299	Timber Structures and Fire Protection Materials
14:45 - 15:15		Coffee Break/Poster Session (Gallery Outside: Britannia room floor 5 & The Bridge floor 6)			
15:15 - 17:00		Session 2-D.1: Steel Structures (Titanic Suite) Co-Moderators: To be announced	Paper ID	Proceeding Pages	Conference Theme
15:15 - 15:30	DEVELOPING FRAGILITY CURVES & ESTIMATING FAILURE PROBABILITIES FOR PROTECTED STEEL STRUCTURAL ELEMENTS SUBJECT TO FULLY DEVELOPED FIRES	<i>Danny Hopkin, Ruben Van Coile, Ian Fu</i>	135	771	Steel Structures
15:30 - 15:45	STABILITY CHECK OF TAPERED STEEL BEAMS IN FIRE	<i>Carlos Couto, Élio Maia, Paulo Vila Real, Nuno Lopes</i>	149	779	Steel Structures
15:45 - 16:00	EFFECTIVENESS OF STIFFENERS ON THE SHEAR CAPACITY OF STEEL WEB PLATES AT AMBIENT AND ELEVATED TEMPERATURES	<i>Veronica Boyce, Jonathan Glassman, Maria Garlock</i>	166	796	Steel Structures
16:00 - 16:15	EXPERIMENTAL ANALYSIS OF THE INFLUENCE OF CREEP ON FIRE-EXPOSED STEEL AND ALUMINIUM COLUMNS	<i>Neno Torić, Ivica Boko, Vladimir Divić, Ian W. Burgess, Marko Goreta</i>	18	619	Steel Structures
16:15 - 16:30	THERMO-MECHANICAL BEHAVIOUR OF STRUCTURAL STAINLESS STEEL FRAMES IN FIRE	<i>MIAN ZHOU, Rui Cardoso, Hamid Bahai, Asif Usmani</i>	225	843	Steel Structures
16:30 - 16:45	CROSS-SECTION RESISTANCE OF SLENDER STAINLESS STEEL I PROFILES IN CASE OF FIRE	<i>Nuno Lopes, Carlos Couto, Jorge Azevedo, Paulo Vila Real</i>	186	819	Steel Structures

16:45 - 17:00	IMPLICATION OF THE END CONNECTION TYPE OF STEEL BEAMS ON THE CRITICAL/LIMITING TEMPERATURE EQUATIONS	<i>Jashnav Pancheti, Arul S Jayachandran</i>	196	827	Steel Structures
15:15 - 17:00	Session 2-D.2: Steel Structures & Composite Structures (Olympic Suite) Co-Moderators: To be announced		Paper ID	Proceeding Pages	Conference Theme
15:15 - 15:30	DIRECT STRENGTH METHOD FOR CALCULATING DISTORTIONAL BUCKLING RESISTANCE OF COLD-FORMED THIN-WALLED STEEL BEAMS WITH NON-UNIFORM ELEVATED TEMPERATURES	<i>Mutiu Alabi-Bello, Yong Wang</i>	204	835	Steel Structures
15:30 - 15:45	CHARACTERISING THE THERMOMECHANICAL RESPONSE OF COLUMNS SUBJECT TO LOCALISED FIRES	<i>Yavor Panev, Teodor Sofroniev, Luke Bisby, Panagiotis Kotsovinos, Graeme Flint</i>	184	811	Steel Structures
15:45 - 16:00	PROGRESSIVE COLLAPSE OF BRACED STEEL FRAMED STRUCTURES EXPOSED TO FIRE	<i>Jian Jiang, Guo-Qiang Li</i>	52	687	Steel Structures
16:00 - 16:15	SHEAR ANALYSIS OF CLIPPED STEEL WEBS IN FIRE AND AMBIENT CONDITIONS	<i>Veronica Boyce, Maria Garlock</i>	164	787	Steel Structures
16:15 - 16:30	EFFECTS OF TOPCOAT ON INSULATION OF INTUMESCENT COATING FOR FIRE PROTECTION OF STEEL STRUCTURES	<i>Qing Xu, Guo-Qiang Li, Xiao Zhao, Xing-Yuan Zhao</i>	103	747	Steel Structures
16:30 - 16:45	PERFORMANCE OF INTUMESCENT FIRE PROTECTION COATINGS ON STEEL TENSION ROD SYSTEMS	<i>Mai Häßler, Dustin Häßler, Sascha Hothan, Simone Krüger</i>	38	649	Steel Structures
16:45 - 17:00	FIRE PERFORMANCE OF LONG-SPAN COMPOSITE BEAMS WITH GRAVITY CONNECTIONS	<i>Lisa Choe, Selvarajah Ramesh, Mina Seif, Matthew Hoehler, William Grosshandler, John Gross, Matthew Bundy</i>	206	601	Composite Structures
19:00 - 22:00	Dinner (City Hall Belfast)				
Friday, June 8, 2018					
07:00 - 08:00	Continental Breakfast (The Bridge, Floor 6, Titanic Belfast)				
08:00 - 09:15	Session 3-A: Timber Structures and Fire Protection Materials, Concrete Structures & Composite Structures (Titanic Suite) Co-Moderators: To be announced		Paper ID	Proceeding Pages	Conference Theme
08:00 - 08:15	BEHAVIOR OF CIRCULAR CONCRETE-FILLED DOUBLE-SKIN, DOUBLE-TUBE AND INNER RING TUBULAR COLUMNS SUBJECTED TO FIRE	<i>Aline Camargo, João Paulo Rodrigues, Ricardo Fakury, Tiago Pires</i>	48	521	Composite Structures
08:15 - 08:30	NUMERICAL MODEL FOR FIRE RESISTANCE EVALUATION OF STEEL REINFORCED POLYMER STRENGTHENED CONCRETE BEAMS	<i>Pratik Bhatt, Venkatesh Kodur, Rami Haweeleh, Nasser Al-Nuaimi, Jamal Abdalla</i>	127	107	Concrete Structures
08:30 - 08:45	FIRE TESTS TO ASTM E119 ON FULL-SIZE GLULAM BEAM TO COLUMN CONNECTIONS	<i>David Barber</i>	56	209	Timber Structures and Fire Protection Materials
08:45 - 09:00	PERFORMANCE OF INTUMESCENT FIRE PROTECTION COATINGS ON STEEL TENSION ROD SYSTEMS	<i>Mai Häßler, Dustin Häßler, Sascha Hothan, Simone Krüger</i>	38	649	Steel Structures
09:00 - 09:15	FIRE SAFETY CHALLENGES OF TALL WOOD BUILDINGS: LARGE-SCALE CROSS LAMINATED TIMBER COMPARTMENT FIRE TESTS	<i>Matthew Hoehler, Joseph Su, Pier-Simon Lafrance, Matthew Bundy, Amanda Kimball, Daniel Brandon, Birgit Östman</i>	84	249	Timber Structures and Fire Protection Materials
9:15 - 9:45	Coffee Break (Gallery Outside: Britannia room floor 5 & The Bridge floor 6)				
9:45 - 11:00	Session 3-B.1: Timber Structures and Fire Protection Materials (Titanic Suite) Co-Moderators: To be announced		Paper ID	Proceeding Pages	Conference Theme
9:45 - 10:00	THERMAL CHARACTERISATION AND FIRE PERFORMANCE OF PCM-PLASTERBOARDS	<i>Sayilacksha Gnanachelvam, Mahen Mahendran, Anthony Ariyanayagam, Poologanathan Keerthan</i>	33	193	Timber Structures and Fire Protection Materials
10:00 - 10:15	FIRE-RETARDANT COATINGS FOR CONCRETE SUBSTRATE: A COMPARISON BETWEEN ONE-DIMENSIONAL AND TWO-DIMENSIONAL HEAT TRANSFER	<i>Yan Hao Ng, Aravind Dasari, Kang Hai Tan</i>	50	201	Timber Structures and Fire Protection Materials
10:15 - 10:30	A METHODOLOGY FOR QUANTIFYING FIRE RESISTANCE OF EXPOSED STRUCTURAL MASS TIMBER ELEMENTS	<i>David Barber, Lizzie Sieverts, Robert Dixon, Jarrod Alston</i>	57	217	Timber Structures and Fire Protection Materials
10:30 - 10:45	NUMERICAL MODEL FOR THE FIRE PROTECTION PERFORMANCE OF INTUMESCENT COATINGS EXPOSED TO NATURAL FIRES	<i>Waldemar Weisheim, Peter Schaumann, Lisa Sander, Jochen Zehfuß</i>	65	225	Timber Structures and Fire Protection Materials
10:45 - 11:00	FIRE RESISTANCE OF TIMBER FRAME ASSEMBLIES WITH CAVITIES PARTIALLY FILLED BY INSULATION MATERIALS	<i>Mattia Tiso, Alar Just</i>	76	233	Timber Structures and Fire Protection Materials

9:45 - 11:00		Session 3-B.2: Composite Structures (Olympic Suite) Co-Moderators: To be announced		Paper ID	Proceeding Pages	Conference Theme
9:45 - 10:00	EXPERIMENTAL AND NUMERICAL INVESTIGATIONS ON THE LOAD BEARING BEHAVIOUR OF AN INNOVATIVE PRESTRESSED COMPOSITE FLOOR SYSTEM UNDER A NATURAL FIRE SCENARIO	<i>Peter Schaumann, Patrick Meyer, Martin Mensinger, Suet Kwan Koh</i>		136	553	Composite Structures
10:00 - 10:15	FIRE PERFORMANCE OF STEEL REINFORCED ULTRA HIGH TOUGHNESS CEMENTITIOUS COMPOSITES BEAM	<i>Chaojie Sun, Qinghua Li, Junfeng Lu, Shilang Xu</i>		21	481	Composite Structures
10:15 - 10:30	NUMERICAL AND EXPERIMENTAL INVESTIGATION OF THE STRUCTURAL BEHAVIOR OF PERFORATED BEAMS EXPOSED TO HYDROCARBON FIRES IN OFFSHORE PLATFORMS	<i>Hooman Atefi, Ali Nadjai, Faris Ali</i>		25	489	Composite Structures
10:30 - 10:45	EXPERIMENTAL STUDY OF A STEEL-CONCRETE COMPOSITE BRIDGE UNDER FIRE	<i>José Alós-Moya, Ignacio Paya-Zaforteza, Antonio Hospitaler</i>		26	497	Composite Structures
10:45 - 11:00	EXPERIMENTAL INVESTIGATION OF POST-TENSIONED CONCRETE BRIDGE BEAMS EXPOSED TO HYDROCARBON FIRE	<i>Xi Qiang Wu, Francis Tat Kwong Au, Jing Li</i>		27	505	Composite Structures
11:00 - 11:30 Coffee Break (Gallery Outside: Britannia room floor 5 & The Bridge floor 6)						
11:30 - 12:30		Session 3-B.3: Timber Structures and Fire Protection Materials (Titanic Suite) Co-Moderators: To be announced		Paper ID	Proceeding Pages	Conference Theme
11:30 - 11:45	THE USE OF FURNACE TESTS TO DESCRIBE REAL FIRES FOR TIMBER STRUCTURES	<i>Joachim Schmid, David Lange, Johan Sjöström, Daniel Brandon, Michael Klippel, Andrea Frangi</i>		81	241	Timber Structures and Fire Protection Materials
11:45 - 12:00	INVESTIGATION OF DIFFERENT TEMPERATURE MEASUREMENT DESIGNS AND INSTALLATIONS IN TIMBER MEMBERS AS LOW CONDUCTIVE MATERIAL	<i>Reto Fahrni, Joachim Schmid, Michael Klippel, Andrea Frangi</i>		99	254	Timber Structures and Fire Protection Materials
12:00 - 12:15	COMPARISON OF FIRE RESISTANCE OF DAMAGED FIRE PROOFED STEEL BEAMS UNDER HYDROCARBON POOL FIRE AND ASTM E119 FIRE EXPOSURE	<i>Mustafa Mahamid, Ataollah Taghipour Anvari, Ines Torra-Bilal</i>		131	265	Timber Structures and Fire Protection Materials
12:15 - 12:30	IMPROVEMENTS TO THE COMPONENT ADDITIVE METHOD	<i>Katrin Nele Mäger, Alar Just, Andrea Frangi</i>		156	283	Timber Structures and Fire Protection Materials
11:30 - 12:30		Session 3-B.4: Composite Structures & Concrete Structures (Olympic Suite) Co-Moderators: To be announced		Paper ID	Proceeding Pages	Conference Theme
11:30 - 11:45	FIRE BEHAVIOUR OF STEEL REINFORCED CONCRETE FILLED STAINLESS STEEL TUBULAR (SRCFSST) COLUMNS WITH SQUARE HOLLOW SECTION	<i>Qinghua Tan, Leroy Gardner, Bin Chen, Linhai Han, Yaoyuan Zhang</i>		44	513	Composite Structures
11:45 - 12:00	BEHAVIOR OF CFRP-CONCRETE BOND SYSTEM AT ELEVATED TEMPERATURES	<i>Thiago Brazeiro, João Paulo Rodrigues</i>		47	69	Concrete Structures
12:00 - 12:15	NUMERICAL AND EXPERIMENTAL TESTS ON CONCRETE FILLED SQUARE AND RECTANGULAR HOLLOW COLUMNS SUBJECTED TO FIRE	<i>Luís Laím, João Paulo C. Rodrigues, Venkatesh K.R. Kodur</i>		62	529	Composite Structures
12:15 - 12:30	INVESTIGATION OF PARTIAL CONNECTION THEORY ON COMPOSITE BEAMS UNDER FIRE EXPOSURE	<i>Sven Brunkhorst, Jochen Zehfuß, Samuel Pfenning, Martin Mensinger</i>		113	537	Composite Structures
12:30 - 13:45 Lunch (The Bridge Floor 6 & Britannia Room Floor 5)						
13:45 - 15:15		Session 3-C: Timber Structures and Fire Protection Materials & Composite Structures (Titanic Suite) Co-Moderators: To be announced		Paper ID	Proceeding Pages	Conference Theme
13:45 - 14:00	KEY GOVERNING FACTORS THAT DEFINE THE FIRE PERFORMANCE OF STRUCTURAL INSULATED PANELS USED IN FLOOR SYSTEMS	<i>Aaron Bolanos, Jose L. Torero, Cristian Maluk</i>		130	545	Composite Structures
14:00 - 14:15	STUDY ON THE USE OF CENOSPHERE-BASED ULTRA-LIGHTWEIGHT CEMENT COMPOSITE FOR ENHANCING FIRE PERFORMANCE OF CONCRETE-FILLED TUBULAR COLUMNS	<i>Wojciech Szymkuć, Piotr Tokłowicz, Adam Glema, Hélder Craveiro</i>		174	585	Composite Structures
14:15 - 14:30	EXPERIMENTAL AND ANALYTICAL INVESTIGATION ON THERMAL PERFORMANCE OF SLIM FLOOR BEAMS WITH WEB OPENINGS IN FIRE	<i>Naveed Alam, Ali Nadjai, Faris Ali, Olivier Vassart, Francois Hanus</i>		12	473	Composite Structures
14:30 - 16:00		Closing Ceremony (Titanic Suite)				

	POSTERS		Paper ID	Proceeding Pages	Conference Theme
1	SCALING APPROACH FOR STUDYING FIRE RESPONSE OF STEEL BEAMS	<i>Mahmood Yahyai, Abbas Rezaiean, Peter Chang</i>	42	877	Experimental Research and any Other
2	EXPERIMENTAL INVESTIGATION ON THE POST-FIRE MECHANICAL PROPERTIES OF STAINLESS STEEL BOLTS A2-70 AND A4-80	<i>Ying Hu, ShengLin Tang, George Adomako Kumi</i>	142	967	Experimental Research and any Other
3	TIMBER AND THE FIRE RESISTANCE FURNACE – A COMPARATIVE STUDY OF THE CONDITIONS IN A FIRE RESISTANCE FURNACE WHEN TESTING COMBUSTIBLE AND NON-COMBUSTIBLE CONSTRUCTION	<i>David Lange, Johan Sjöström, Joachim Schmid, Daniel Brandon</i>	170	989	Experimental Research and any Other
4	NUMERICAL Modelling OF THERMAL BEHAVIOUR OF CFRP REINFORCED CONCRETE STRUCTURE EXPOSED TO ELEVATED TEMPERATURE	<i>Phi Long Nguyen, Xuan Hong Vu, Emmanuel Ferrier</i>	122	367	Numerical Modelling
5	BEHAVIOUR OF STEEL FRAME STRUCTURES UNDER LOCALISED FIRE INCLUDING PROGRESSIVE COLLAPSE DURING COOLING	<i>Thomas Gernay, Antonio Gamba</i>	31	633	Steel Structures
6	FIRE TESTS OF LOAD BEARING DOUBLE STUD LSF WALLS	<i>Harikrishnan Magarabooshanam, Anthony Ariyanayagam, Mahen Mahendran</i>	32	641	Steel Structures
7	STUDY ON TEMPERATURE DISTRIBUTION OF WELDED TUBULAR SQUARE JOINTS	<i>Jolanta Bączkiewicz, Mikko Malaska, Sami Pajunen, Markku Heinisuo</i>	49	679	Steel Structures
8	RESEARCH ON POST-FIRE LOAD-BEARING CAPACITY ASSESSMENT OF AXIAL RESTRAINED HIGH-STRENGTH STEEL COLUMNS	<i>Guo-Qiang Li, Jia-Rong Miao</i>	100	741	Steel Structures
9	FIBRE REINFORCED SHOTCRETE – PRESENCE OF SYNTHETIC MACRO FIBRES AFTER FIRE	<i>Cristian Maluk, Todd Clarke, Andrew Ridout</i>	155	117	Concrete Structures
10	DETERMINATION OF RESIDUAL STRENGTH OF NORMAL STRENGTH CONCRETE AFTER THE FIRE	<i>Urška Dolinar, Gregor Trtnik, Tomaž Hozjan</i>	172	133	Concrete Structures
11	MODELLING NON-METALLIC TIMBER CONNECTIONS IN FIRE	<i>Ranim Dahli, Martin Gillie, John Gales</i>	134	275	Timber Structures and Fire Protection Materials
12	INFLUENCE OF GAS TEMPERATURE DURING COOLING PHASE ON LOAD-BEARING PERIOD OF STRUCTURAL GLUED LAMINATED TIMBER BEAMS EXPOSED TO FIRE	<i>Takeo Hirashima, Yusuke Katakura, Moto Ichikawa, Shungo Ishii</i>	207	291	Timber Structures and Fire Protection Materials
13	FIRE BEHAVIOUR OF SLENDER CONCRETE-FILLED STEEL TUBULAR COLUMNS UNDER BIAXIAL BENDING	<i>Ana Espinós, Vicente Albero, Manuel L. Romero, Maximilian Mund, Patrick Meyer, Peter Schaumann, Inka Kleiboemer</i>	138	569	Composite Structures
14	NUMERICAL ANALYSIS OF THE THERMAL BEHAVIOUR OF STEEL-TIMBER HYBRID BEAMS IN FIRE SITUATION	<i>Antoine Bereysia, Maxime Audebert, Sébastien Durif, Abdelhamid Bouchaïr</i>	171	577	Composite Structures

* A prize will be awarded to the best poster (£100 sponsored by FireSERT)

** A prize will be awarded to the best short presentation (£100 sponsored by FireSERT)