

## MaCFP WORKSHOP - Saturday, 10 June 2017

	08:00	<b>Registration - Entrance V-building</b>
Workshop Session 1 8:30 - 11:50		<b>1st Workshop of the IAFSS Working Group on "Measurement and Computation of Fire Phenomena" (the MaCFP Working Group) - Gas Phase Subgroup</b>
		<i>Room V:A</i>
	8:30 - 11:50	<i>Workshop Panelists:</i> A. Brown (Sandia National Laboratories), M. Gollner (University of Maryland), J. Hewson (Sandia National Laboratories), A. Marshall (University of Maryland), B. Merci (Ghent University), R. McDermott (National Institute of Standards and Technology), J. Torero (University of Queensland), A. Trouvé (University of Maryland), Y. Wang (FM Global), B. Weckman (University of Waterloo)
	11:50 - 13:10	<b>Lunch - Entrance V-building</b>
Workshop Session 2 13:10 - 17:00		<b>1st Workshop of the IAFSS Working Group on "Measurement and Computation of Fire Phenomena" (the MaCFP Working Group) - Gas Phase Subgroup</b>
		<i>Room V:A</i>
	13:10 - 17:00	<i>Workshop Panelists:</i> A. Brown (Sandia National Laboratories), M. Gollner (University of Maryland), J. Hewson (Sandia National Laboratories), A. Marshall (University of Maryland), B. Merci (Ghent University), R. McDermott (National Institute of Standards and Technology), J. Torero (University of Queensland), A. Trouvé (University of Maryland), Y. Wang (FM Global), B. Weckman (University of Waterloo)

**WORKSHOPS - Sunday, 11 June 2017**

	08:00	<b>Registration - Entrance V-building</b>		
Workshop Session 1 9:00 - 12:00		<b>1st Workshop of the IAFSS Working Group on "Measurement and Computation of Fire Phenomena" (the MaCFP Working Group) - Condensed Phase Subgroup</b>	<b>New Approaches to Evacuation Modelling</b>	<b>Global Perspectives of Timber in High-Rise Buildings</b>
		<i>Room V:A</i>	<i>Room V:R2</i>	<i>Room V:D</i>
	8:00 - 12:25: MaCFP or 9:00 - 12:00: other workshops	<i>Workshop Panelists:</i> M. Bruns (National Institute of Standards and Technology), E. Guillaume (Efectis), S. Hostikka (Aalto University), Lautenberger (Reax Engineering), I. Leventon (National Institute of Standards and Technology), G. Rein (Imperial College), F. Richard (Poitiers University), T. Rogaume (Poitiers University), S. Stoliarov (University of Maryland), Y. Wang (FM Global)	<i>Workshop Panelists:</i> A. Corbetta (Eindhoven University of Technology), E. Galea (University of Greenwich), M. Kinader (Dartmouth College), E. Kuligowski (National Institute of Standards and Technology), A. Pel (Delft University of Technology), E. Ronchi (Lund University), P. Thompson (Autodesk)	<i>Workshop Panelists:</i> D. Barber (Arup), K. Friquin (SINTEF Building and Infrastructure), A. Jeffers (University of Michigan), B. Magnusson (Rambøll), J. Su (National Research Council Canada)
	12:00 - 13:00	<b>Lunch - Entrance V-building</b>		
Workshop Session 2 13:00 - 16:00		<b>Quantification of Fire Effluent Toxicity</b>	<b>Better Linking Fire Safety Science and Fire Safety Engineering: Research Priorities for Fire Safety Engineering</b>	<b>Large Outdoor Fires and the Built Environment</b>
		<i>Room V:S2</i>	<i>Room V:R2</i>	<i>Room V:D</i>
	13:00 - 16:00	<i>Workshop Panelists:</i> P. Blomqvist (RISE), T.R. Hull (University of Central Lancashire), A. Stec (University of Central Lancashire), P. Woodburn (Arup)	<i>Workshop Panelists:</i> M. Försth (RISE), K. Harada (Kyoto University), C. Jelenewicz (SFPE), J. Jonsson (JVVA / SFPE Europe), N. Liu (State Key Laboratory of Fire Science), B. Meacham (Worcester Polytechnic Institute), B. Merci (Ghent University), D. Pau (University of Canterbury), M. Runefors (Lund University), B. Weckman (University of Waterloo)	<i>Workshop Panelists:</i> R. Bianchi (CSIRO), M. Gollner (University of Maryland), S. Manzello (National Institute of Standards and Technology), S. McAllister (US Forest Service), E. Planas (Politécnica de Catalunya-Barcelona Tech.), G. Rein (Imperial College London), P. Reszka (Universidad Adolfo Ibañez), S. Suzuki (NRIFD)
Evening Events	17:00 - 19:00	<b>IAFSS Management Committee Meeting (Meeting Room Kårhuset: Hollywood Kårhuset)</b>		
	17:00- 21:00	<b>Registration (Kårhuset)</b>		
	17:30 - 21:00	<b>Welcome Reception (Room Kårhuset:Gasquesalen)</b>		

## SYMPOSIUM DAY 1 - Monday, 12 June 2017

	08:00	<b>Registration Open (Room MA:9)</b>		
	8:30 - 9:00	<b>Opening Ceremony (Room Kårhuset:Aula)</b> Session Chair: Daniel Nilsson		
	9:05 - 9:55	<b>Howard W. Emmons Invited Plenary Lecture: Wildland Fire Spotting by Sparks and Firebrands</b> <b>Carlos Fernandez-Pello</b> , University of California at Berkeley, USA Session Chair: Arnaud Trouvé		
	10:00 - 10:40	<b>Invited Lecture # 1: Fire Safety Engineering in Timber Buildings</b> <b>Birgit Östman</b> , Building technology, Linneaus University Session Chair: Arnaud Trouvé		
	10:40 - 11:25	Coffee Break - Room MA:10		
Morning Session 1 11:25 - 12:40		<b>MATERIAL BEHAVIOR IN FIRES - Room MA:7</b> Session Chairs: Guillermo Rein and Thomas Rogaume	<b>FIRE SUPPRESSION - Room MA:4</b> Session Chairs: Vasily Novozhilov and Alexander Snegirev	<b>FIRE SAFETY ENGINEERING - Room MA:6</b> Session Chairs: Margaret Simonson McNamee and Brian Meacham
	11:25 - 11:50	<b>Guylène Proulx Invited Lecture: The Effect Of Flow And Geometry On Concurrent Flame Spread</b> , Michael Gollner, Wei Tang, Colin Miller and Ajay Singh, University of Maryland, USA	<b>An Experimental Study Of Complex Fuel Burning Behavior With Water Application</b> , Xiangyang Zhou, FM Global, USA	<b>The Theoretical Framework Of Fire Safety Design: Reflections And Alternatives</b> , Jonatan Gehandler, Research Institutes of Sweden, Sweden
	11:50 - 12:15	<b>Effect Of Oxygen Concentration On The Combustion Of Horizontally-Oriented Slabs Of PMMA</b> David Alibert, Mickaël Coutin, Maxime Mense, Yannick Pizzo and Bernard Porterie, University of Aix-Marseille, France	<b>Measuring Fuel Transport Through Fluorocarbon And Fluorine-Free Firefighting Foams</b> , Katherine Hinnant, Michael Conroy and Ramagopal Ananth, US Naval Research Laboratory, USA	<b>Response Surface Modelling In Quantitative Risk Analysis For Life Safety In Case Of Fire</b> , Bart Van Weyenberge, Pieterjan Criel, Xavier Deckers, Robby Caspeepe and Bart Merci, Ghent University, Belgium
	12:15 - 12:40	<b>Two-Dimensional Model Of Smouldering Combustion Using Multi-Layer Cellular Automata: Role Of Ignition Location And Direction Of Airflow</b> , Nieves Fernandez, Kim Christensen and Guillermo Rein, Imperial College London, UK	<b>Large-Scale Fire Suppression Modeling Of Corrugated Cardboard Boxes On Wood Pallets In Rack-Storage Configurations</b> , Ning Ren, Jaap de Vries, Xiangyang Zhou, Marcos Chaos, Karl Meredith and Yi Wang, FM Global, USA	<b>Assessing Fire Safety Using Complex Numerical Models With A Bayesian Multi-Fidelity Approach</b> , Rémi Stroh, Julien Bect, Séverine Demeyer, Nicolas Fischer, Damien Marquis and Emmanuel Vazquez, Laboratoire National de métrologie et d'Essais (LNE) and Laboratoire des Signaux et Systèmes (L2S), France
	12:40 - 13:45	Lunch - Room MA:10		
Afternoon Session 1 13:40 - 15:00		<b>MATERIAL BEHAVIOR IN FIRES - Room MA:7</b> Session Chairs: Stanislav Stoliarov and Juan Hidalgo	<b>FIRE SUPPRESSION - Room MA:4</b> Session Chairs: Yi Wang and Bjarne Husted	<b>FIRE SAFETY ENGINEERING - Room MA:6</b> Session Chairs: Anne Steen-Hansen and Håkan Frantzich
	13:45 - 14:10	<b>Measurement Of Instantaneous Flame Spread Rate Over Solid Fuels Using Image Analysis</b> , Subrata Bhattacharjee, Luca Carmignani, Greg Celniker and Blake Rhoades, San Diego State University and University of California San Diego, USA	<b>Influence Of The Particle Injection Rate, Droplet Size Distribution And Volume Flux Angular Distribution On The Results And Computational Time Of Water Spray CFD Simulations</b> , Tarek Beji, Setareh Ebrahim Zadeh, Georgios Maragkos and Bart Merci, Ghent University, Belgium	<b>Advanced Active Imaging System In A Fire Environment By Using Terahertz Electromagnetic Waves</b> , Ken Matsuyama, Naofumi Shimizu and Seiji Okinaga, Tokyo University of Science, Japan
	14:10 - 14:35	<b>Pyrolysis Kinetics And Inverse Modelling Of Cellulose At The Microscale</b> , Franz Richter and Guillermo Rein, Imperial College London, UK	<b>Spatially-Resolved Spray Measurements And Their Implications</b> , Stephen Jordan, Juraj Repcik, Noah Ryder and Andre Marshall, University of Maryland, USA	<b>Fireground Location Understanding By Semantic Linking Of Visual Objects And Building Information Models</b> , Florian Vandecasteele, Steven Verstockt and Bart Merci, Ghent University, Belgium
	14:35 - 15:00	<b>Fully Coupled CFD Simulation Of The Pyrolysis Of Non-Charring Polymers: A Predictive Approach</b> , Germain Boyer, Institut de Radioprotection et de Sûreté Nucléaire (IRSN), France	<b>Measuring Modified Glass Bulb Sprinkler Thermal Response In Plunge And Compartment Fire Experiments</b> , Kevin Frank, Michael Spearpoint, Greg Baker, Colleen Wade, Peter Collier and Charles Fleischmann, BRANZ, New Zealand	<b>The Effectiveness Of Specific Fire Prevention Measures For Different Population Groups</b> , Marcus Runefors, Nils Johansson and Patrick van Hees, Lund University, Sweden
	15:00 - 15:30	Coffee Break - Room MA:10		
Afternoon Session 2 15:30 - 16:45		<b>MATERIAL BEHAVIOR IN FIRES - Room MA:7</b> Session Chairs: Stanislav Stoliarov and Juan Hidalgo	<b>FIRE SUPPRESSION - Room MA:4</b> Session Chairs: Yi Wang and Alexander Snegirev	<b>FIRE SAFETY ENGINEERING - Room MA:6</b> Session Chairs: Anne Steen-Hansen and Håkan Frantzich
	15:30 - 15:55	<b>Critical Heat Flux For Extinction Of Flaming Combustion Of Timber</b> , Richard Emberley, Tam Do, Jessica Yim and Jose L. Torero, University of Queensland, Australia	<b>Physical Scaling Of Water Mist Fire Extinguishment In Industrial Machinery Enclosures</b> , Hong-Zeng Yu, Xiangyang Zhou and Jonathan Carpenter, FM Global, USA	<b>The Impact Of User Decision-Making In The Application Of Computational Compartment Fire Models</b> , Greg Baker, Michael Spearpoint, Kevin Frank, Colleen Wade and Shahriar Sazegara, BRANZ, University of Canterbury and Beca Ltd., New Zealand
	15:55 - 16:20	<b>Critical Parameters In The Crossing-Point Temperature (CPT) Method For Spontaneous Combustion Of Coal</b> , Yong-Liang Xu, Lan-Yun Wang, Ning Tian, Jian-Ping Zhang, Ming-Gao Yu and Michael Delichatsios, Ulster University, UK	<b>Water Mist Suppression Of A Turbulent Line Fire</b> , James White, Salman Verma, Elizabeth Keller, Ailing Hao, Arnaud Trouve and Andre Marshall, University of Maryland, USA	<b>Frequency Of Ignition Of Non-Residential Buildings In Japan</b> , Yutaka Kobayashi, Taisei Corporation, Japan
	16:20 - 16:45	<b>Simultaneous Improvements In Flammability And Mechanical Toughening Of Epoxy Resins Through Nano-Silica Addition</b> , Nils Roenner, Kevall Hutheesing, Alexander Ferguson and Guillermo Rein, Imperial College London, UK	<b>Extinguishing Characteristics Of A Diffusion Flame With Water Vapor Produced From A Water Droplet Impacting Onto A Heated Plate</b> , Hiroyuki Torikai and Akihiko Ito, Hirotsaki University, Japan	<b>Informal Settlement Fires In South Africa: Fire Engineering Overview And Full-Scale Tests On "Shacks"</b> , Richard Walls, Gerhard Olivier and Rodney Eksteen, Stellenbosch University, South Africa
Evening Events	17:30	Swedish midsummer celebration (separate ticket required - see start time on ticket)		

## SYMPOSIUM DAY 2 - Tuesday, 13 June 2017

	08:00	<b>Registration Open (Room MA:9)</b>		
Morning Session 1 9:00 - 10:50	9:00 - 9:40	<b>Invited Lecture # 2: A Review of Pool Fire Behaviors in Wind and Challenges (Room Kårhuset:Aula)</b> Longhua Hu, University of Science and Technology of China, China Session Chair: Elisabeth Weckman		
		<b>MATERIAL BEHAVIOR IN FIRES - Room MA:7</b> Session Chairs: Isaac Leventon and Chris Lautenberger	<b>FIRE SUPPRESSION - Room MA:4</b> Session Chairs: Andre Marshall and Simo Hostikka	<b>TUNNEL FIRES - Room MA:6</b> Session Chairs: Haukur Ingason and Ying Zhen Li
	10:00 - 10:25	<b>Controlled Atmosphere Pyrolysis Apparatus II (Capa II): A New Tool For Analysis Of Pyrolysis Of Charring And Intumescent Polymers</b> , Joshua Swann, Yan Ding, Mark Mckinnon and Stanislav Stoliarov, University of Maryland, USA	<b>An Experimental Study Of Fire Growth And Suppression Of Roll Paper</b> , Yibing Xin, Dong Zeng, Xiangyang Zhou, Kristin Jamison and Karl Meredith, FM Global, USA	<b>Effect Of Cross Section On Critical Velocity In Longitudinally Ventilated Tunnel Fires</b> , Ying Zhen Li and Haukur Ingason, Research Institutes of Sweden, Sweden
	10:25 - 10:50	<b>Pyrolysis And Non-Piloted Ignition Of Wood Under Transient Irradiation: Experiments And A-Priori Predictions</b> , Izabella Vermesi, Matthew Didomizio, Franz Richter, Elizabeth Weckman and Guillermo Rein, Imperial College London, UK	<b>Effects Of Storage Height On Critical Delivered Flux Of Representative Fuels</b> , Yibing Xin, FM Global, USA	<b>Experimental Investigation On Transverse Ceiling Flame Length And Temperature Distribution Of Sidewall Confined Tunnel Fire</b> , Zihe Gao, Jie Ji, Huaxian Wan, Jiping Zhu and Jinhua Sun, University of Science and Technology of China, China
	10:50-11:25	Coffee Break - Room MA:10		
Morning Session 2 11:25 - 12:40		<b>MATERIAL BEHAVIOR IN FIRES - Room MA:7</b> Session Chairs: Isaac Leventon and Chris Lautenberger	<b>FIRE SUPPRESSION - Room MA:4</b> Session Chairs: Andre Marshall and Simo Hostikka	<b>TUNNEL FIRES - Room MA:6</b> Session Chairs: Haukur Ingason and Ying Zhen Li
	11:25 - 11:50	<b>Gravimetric Measurement Of Solid And Liquid Fuel Burning Rate Near And At The Low Oxygen Extinction Limit</b> , Michael Johnston and James T'ien, Case Western Reserve University, USA	<b>Experimental Study Of The Effect Of Water Spray On The Spread Of Smoldering In Indonesian Peat Fires</b> , Mohamad Lutfi Ramadhan, Pither Palamba, Fahri Ali Imran, Engkos Achmad Kosasih and Yulianto Sulisty Nugroho, Universitas Indonesia, Indonesia	<b>Spilled Liquid Fires In Tunnels</b> , Haukur Ingason and Ying Zhen Li, Research Institutes of Sweden, Sweden
	11:50 - 12:15	<b>Flame Spread Limits (LOC) Of Fire Resistant Fabrics</b> , Maria Thomsen, Daniel Murphy, Carlos Fernandez-Pello, David Urban and Gary Ruff, University of California Berkeley, USA	<b>Extinguishment And Enhancement Of Propane Cup-Burner Flames By Halon And Alternative Agents</b> , Fumiaki Takahashi, Viswanath Katta, Gregory Linteris and Valeri Babushok, Case Western Reserve University, USA	<b>Modeling For Predicting The Temperature Distribution Of Smoke During A Fire In An Underground Road Tunnel With Vertical Shafts</b> , Shota Takeuchi, Takayuki Aoki, Futoshi Tanaka and Khalid Moinuddin, University of Fukui, Japan
	12:15 - 12:40	<b>Char Cracking Of Medium Density Fibreboard Due To Thermal Shock Effect Induced Pyrolysis Shrinkage</b> , Kaiyuan Li, Mahmoud Mousavi and Simo Hostikka, Aalto University, Finland	<b>Electrically Controlled Dynamic Sprinkler Activation: Computational Assessment Of Potential Efficiency</b> , Alexander Snegirev, Peter the Great Saint-Petersburg Polytechnic University, Russia	<b>Fire Development In A 1/3 Train Carriage Mock-Up</b> , Anders Lönnermark, Haukur Ingason, Ying Zhen Li and Mia Kumm, Research Institutes of Sweden, Sweden
	12:40 - 13:45	Lunch - Room MA:10		
	13:45 - 15:30	Poster Session I (Room MA:9) and Coffee Break (Room MA:10)		
Afternoon Session 15:30 - 16:45		<b>MATERIAL BEHAVIOR IN FIRES - Room MA:7</b> Session Chairs: Tuula Hakkarainen and Hiroyuki Torikai	<b>FIRE SUPPRESSION - Room MA:4</b> Session Chairs: Jennifer Wen and Anthony Hamins	<b>FIRE DYNAMICS - Room MA:6</b> Session Chairs: Grunde Jomaas and Daniel Alvear
	15:30 - 15:55	<b>Enhanced Ignition Of Biomass In Presence Of NOx</b> Ibukun Oluwoye, Bogdan Dlugogorski, Jeff Gore and Mohammednoor Altarawneh, Murdoch University, Australia	<b>Modeling Of Fire Suppression By Fuel Cooling</b> , Alexandre Jenft, Pascal Boulet, Anthony Collin, Nicolas Trévisan, Pierre-Nicolas Mauger and Grégoire Pianet, CNPP, France	<b>Predicting The Heat Release Rates Of Liquid Pool Fires In Mechanically Ventilated Compartments</b> , Topi Sikanen and Simo Hostikka, VTT Technical Research Centre of Finland and Aalto University Finland
	15:55 - 16:20	<b>Flammability Of CS2 And Other Reduced Sulfur Species</b> , Zhe Zeng, Bogdan Dlugogorski and Mohammednoor Altarawneh, Murdoch University, Australia	<b>Model Validation Of Spray-Plume Interaction</b> , Eric Link, Taylor Myers, Arnaud Trouve and Andre Marshall, University of Maryland, USA	<b>Spread And Burning Behavior Of Continuous Spill Fires</b> , Jinlong Zhao, Hong Huang, Grunde Jomaas, Maohua Zhong and Yuntao Li, Tsinghua University, China, and University of Edinburgh, UK
	16:20 - 16:45	<b>Effectiveness Of Vertical Barriers In Preventing Lateral Flame Spread Over Exposed EPS Insulation Wall</b> , Liang Zhou, Aiping Chen, Lei Gao and Zhifeng Pei, Chinese People's Armed Police Academy, China	<b>A Droplet Evaporation Algorithm For Computational Fluid Dynamics</b> , Jason Floyd and Randall McDermott, Jensen Hughes, USA	<b>Motivation, drivers and barriers for a knowledge-based test environment in structural fire safety engineering science</b> , Cristian Maluk, University of Queensland, Australia
Evening Events	17:30	Bus departs for MSB Rescue School visit (separate ticket required)		

## SYMPOSIUM DAY 3 - Wednesday, 14 June 2017

	08:00	<b>Registration Open (Room MA:9)</b>		
Morning Session 1 9:00 - 10:50	9:00 - 9:40	<b>Invited Lecture # 3: <i>Safe Evacuation for All - Fact or Fantasy? Past Experiences, Current Understanding and Future Challenges</i> (Room Kårhuset:Aula)</b> Karen Boyce, University of Ulster, UK Session Chair: Ed Galea		
		<b>FIRE DYNAMICS - Room MA:7</b> Session Chairs: Luke Bisby and Michael Spearpoint	<b>FIRE EMISSIONS AND TOXICITY - Room MA:4</b> Session Chairs: Anna Stec and Bogdan Dlugogorski	<b>MATERIAL BEHAVIOR IN FIRES - Room MA:6</b> Session Chairs: Morgan Bruns and Rory Hadden
	10:00 - 10:25	<b><i>Using Suppression And Detection Devices To Steer CFD Fire Forecast Simulations</i></b> , Wolfram Jahn, Pontificia Universidad Catolica de Chile, Chile	<b>Sven Eric Magnusson Invited Lecture: <i>Fire Toxicity – The Elephant In The Room?</i></b> , Anna A Stec, University of Central Lancashire, UK	<b><i>Opposed Flame Spread Over Horizontal And Vertical Wires: The Role Of Dripping And Core</i></b> , Yoshinari Kobayashi, Xinyan Huang, Shinji Nakaya, Mitsuhiro Tsue and Carlos Fernandez-Pello, University of California Berkeley, USA
	10:25 - 10:50	<b><i>Thermal Characteristics Of Externally Venting Flames And Their Effect On The Exposed Façade Surface</i></b> , Eleni Asimakopoulou, Dionysios Kolaitis and Maria Founti, National Technical University of Athens, Greece	<b><i>Characterization Of Aerosols Emissions From The Combustion Of Dead Shrub Twigs And Leaves Using A Cone Calorimeter</i></b> , Lara Leonelli, Toussaint Barboni, Paul Antoine Santoni, Yann Quilichini and Alexis Coppalle, University of Corsica and CORIA/INSA Rouen, France	<b><i>Heat Release Characteristics Of Ethanol-Water Mixtures: Small Scale Experiments</i></b> , Tuula Hakkarainen, Timo Korhonen and Jukka Vaari, VTT Technical Research Centre of Finland, Finland
	10:50-11:25	Coffee Break - Room MA:10		
Morning Session 2 11:25 - 12:40		<b>FIRE DYNAMICS - Room MA:7</b> Session Chairs: Luke Bisby and Michael Spearpoint	<b>FIRE EMISSIONS AND TOXICITY - Room MA:4</b> Session Chairs: Anna Stec and Bogdan Dlugogorski	<b>EVACUATION AND HUMAN BEHAVIOR - Room MA:6</b> Session Chairs: Daniel Nilsson and Erica Kuligowski
	11:25 - 11:50	<b><i>Effects Of Exposed Engineered Timber On Compartment Fire Dynamics</i></b> , Rory Hadden, Alastair Bartlett, Juan Hidalgo, Simón Santamaria, Felix Wiesner, Luke A. Bisby, Susan Deeny and Barbara Lane, University of Edinburgh and Arup, UK	<b><i>Fire Toxicity Of Common Polymers In Under-Ventilated Fires In The Large Instrumented Fire Enclosure (Life)</i></b> , T Richard Hull, Anna A Stec, Robert J Crewe and Ashleigh G Lyons, University of Central Lancashire, UK	<b><i>Evaluating The Effectiveness Of An Improved Active Dynamic Signage System Using Full Scale Evacuation Trials</i></b> , Edwin Galea, Hui Xie, Steven Deere, David Cooney and Lazaros Filippidis, University of Greenwich, UK
	11:50 - 12:15	<b><i>Auto-Extinction Of Engineered Timber: Application To Compartment Fires With Exposed Timber Surfaces</i></b> , Alastair Bartlett, Rory Hadden, Juan Hidalgo, Simón Santamaria, Felix Wiesner, Luke Bisby, Susan Deeny and Barbara Lane, University of Edinburgh, UK	<b><i>Experimental And Numerical Analysis To Estimate The Influence Of Soot Yield In CFD Analysis</i></b> , Wojciech Węgrzyński and Gabriele Vigne, Building Research Institute, Poland, and JVVA Fire & Risk, Spain	<b><i>Noticeability Of Illuminated Route Signs For Tsunami Evacuation</i></b> , Kensuke Yasufuku, Yuki Akizuki, Akihiko Hokugo, Yoshio Takeuchi, Akira Takashima, Toshinari Matsui, Hirotaka Suzuki and Abel Taiti Konno Pinheiro, Osaka University, Japan
	12:15 - 12:40	<b><i>Description Of Small And Large-Scale CLT Fire Tests</i></b> , Richard Emberley, Carmen Gorska, Aaron Bolanos, Andrea Lucherini, Angela Solarte, Diana Soriguier, Mateo Gutierrez, Kathryn Humphreys, Juan Hidalgo, Cristian Maluk, Angus Law and Jose Torero, University of Queensland, Australia	<b><i>Early Fire Detection: Are Hydrogen Sensors Able To Detect Smouldering Fires?</i></b> , Simone Krüger, Marie-Claire Despinasse, Tina Raspe, Kai Nörthemann and Werner Moritz, Bundesanstalt für Materialforschung und –prüfung (BAM), Germany	<b><i>Real-Time Evacuation Route Selection Method For Complex Buildings</i></b> , Arturo Cuesta, Orlando Abreu, Adriana Balboa and Daniel Alvear, University of Cantabria, Spain
	12:40 – 13:45	Lunch - Room MA:10		
Afternoon Session 1 13:40 - 15:00		<b>FIRE DYNAMICS - Room MA:7</b> Session Chairs: Hugues Prêtre and Nils Johansson	<b>WILDLAND FIRES - Room MA:4</b> Session Chairs: Naian Liu and Elsa Pastor	<b>EVACUATION AND HUMAN BEHAVIOR - Room MA:6</b> Session Chairs: Rita Fahy and Ai Sekizawa
	13:45 - 14:10	<b><i>Predicting The Structural Response Of A Compartment Fire Using Full-Field Heat Transfer Measurements</i></b> , Jonathan Hodges, Christian Rippe, Scott Case and Brian Lattimer, Virginia Tech. and Jensen Hughes, USA	<b><i>Experiments To Provide The Scientific-Basis For Laboratory Standard Test Methods For Firebrand Exposure</i></b> , Sayaka Suzuki and Samuel Manzello, National Institute of Standards and Technology (NIST), USA	<b><i>Transparency Vs Magic Numbers: The Development Of Stair Design Requirements In The Italian Fire Safety Code</i></b> , Emanuele Gissi, Enrico Ronchi and David Anthony Purser, Lund University, Sweden
	14:10 - 14:35	<b><i>The Intermittent Characteristic Of Flame Ejecting From A Compartment With Simultaneous Door And Window Opened Under Ambient Wind Environment</i></b> , Man Li, Zihe Gao, Jie Ji, Kaiyuan Li and Jinhua Sun, University of Science and Technology of China, China	<b><i>Verification Of Lagrangian Particle Model For Short-Range Firebrand Transport</i></b> , Rahul Wadhvani, Duncan Sutherland, Andrew Ooi, Khalid Moinuddin and Graham Thorpe, Victoria University, Australia	<b><i>Perspectives Of Occupants With Mobility Impairments On Elevators For Evacuation During Fire Emergencies</i></b> , Kathryn Butler, Erica Kuligowski, Susanne Furman and Richard Peacock, National Institute of Standards and Technology (NIST), USA
	14:35 - 15:00	<b><i>A Small-World Network Model For The Simulation Of Fire Spread Onboard Naval Vessels</i></b> , Ahmed Kacem, Christine Lallemand, Nathalie Giraud, Maxime Mense, Matthieu De Gennaro, Yannick Pizzo, Jean-Claude Loraud, Pascal Boulet and Bernard Porterie, University of Aix-Marseille, France	<b><i>Mapping Areas At Elevated Risk Of Large-Scale Structure Loss Using Monte Carlo Simulation And Wildland Fire Modeling</i></b> , Chris Lautenberger, Reax Engineering Inc., USA	<b><i>Evacuation Speed In Full-Scale Darkened Tunnel Filled With Smoke</i></b> , Miho Seike, Nobuyoshi Kawabata and Masato Hasegawa, National Science and Technology Center for Disaster Reduction, Taiwan
	15:00- 15:30	Coffee Break - Room MA:10		
	15:30 - 17:00	<b>IAFSS Membership Business Meeting (Room Kårhuset:Aula)</b>		
Evening Events	19:00 - 21:00	<b>IAFSS Management Committee Meeting - Time may change (Meeting Room Kårhuset:Hollywood)</b>		
	17:30 - 20:30	<b>Women in Fire Safety Science (Room MA:7) - everyone is welcome</b>		

## SYMPOSIUM DAY 4 - Thursday, 15 June 2017

	08:00	<b>Registration Open (Room MA:9)</b>		
Morning Session 1 9:00 - 10:50	9:00 - 9:40	<b>Invited Lecture # 4: Structural Response of Cross-Laminated Timber Compression Elements Exposed to Fire (Room Kårhuset:Aula)</b> Luke Bisby, University of Edinburgh, UK Session Chair: Bart Merci		
		<b>FIRE DYNAMICS - Room MA:7</b> Session Chairs: Randall McDermott and Ricky Carvel	<b>WILDLAND FIRES - Room MA:4</b> Session Chairs: Dominique Morvan and Sayaka Suzuki	<b>STRUCTURES IN FIRE - Room MA:6</b> Session Chairs: Cristian Maluk and Brian Lattimer
	10:00 - 10:25	<b>Study Of FDS Simulations Of Buoyant Fire-Induced Smoke Movement In A High-Rise Building Stairwell</b> , Guoxiang Zhao, Tarek Beji and Bart Merci, Ghent University, Belgium	<b>Investigating Coherent Streaks In Wildfires Via Heated Plates In Crosswind</b> , Colin Miller, Mark Finney, Sara McAllister, Evan Sluder and Michael Gollner, University of Maryland, USA	<b>A Critical Review Of "Travelling Fire" Scenarios For Performance-Based Structural Engineering</b> , Xu Dai, Stephen Welch and Asif Usmani, University of Edinburgh, UK
	10:25 - 10:50	<b>Improvement Of Two-Layer Zone Model By Simple Modeling Of Ceiling Jet For Applying To Horizontal Large Building Room In Fire</b> , Tomoaki Nishino, Building Research Institute (BRI), Japan	<b>Intermittent Heating And Flame Extension In Wind-Driven Fires</b> , Wei Tang, Daniel Gorham, Mark Finney, Sara McAllister, Jack Cohen, Jason Forthofer and Michael Gollner, University of Maryland, USA	<b>Experimental Assessment Of The Lateral Load Capacity Of Steel-Sheathed Cold-Formed Steel Shear Walls Subjected To Fire</b> , Matthew Hoehler, Christopher Smith, Tara Hutchinson, Xiang Wang, Brian Meacham and Praveen Kamath, National Institute of Standards and Technology (NIST), USA
	10:50-11:25	Coffee Break - Room MA:10		
Morning Session 2 11:25 - 12:40		<b>FIRE DYNAMICS - Room MA:7</b> Session Chairs: Randall McDermott and Ricky Carvel	<b>WILDLAND FIRES - Room MA:4</b> Session Chairs: Dominique Morvan and Sayaka Suzuki	<b>STRUCTURES IN FIRE - Room MA:6</b> Session Chairs: Cristian Maluk and Brian Lattimer
	11:25 - 11:50	<b>Interactions Between Water Sprays And Smoke Filling In Case Of A Fire Event In A Closed And Mechanically Ventilated Compartment</b> , Hugues Pretrel, Institut de Radioprotection et de Sûreté Nucléaire (IRSN), France	<b>Evaluation Of A Data-Driven Wildland Fire Spread Forecast Model With Spatially-Distributed Parameter Estimation In Simulations Of The Fireflux I Field-Scale Experiment</b> , Cong Zhang, Mélanie Rochoux, Wei Tang, Michael Gollner, Jean-Baptiste Filippi and Arnaud Trouve, University of Maryland, USA	<b>Optimising Design Decision-Making For Steel Structures In Fire Using A Hybrid Analysis Technique</b> , Obinna Akaa, Anthony Abu, Michael Spearpoint and Sonia Giovinnazzi, University of Canterbury, New Zealand
	11:50 - 12:15	<b>Temperature And Velocity Distributions From Numerical Simulations Of Ceiling Jets Under Unconfined, Inclined Ceilings</b> , Prateep Chatterjee, Karl Meredith and Yi Wang, FM Global, USA	<b>An Integral System For Automated Tactical Monitoring And Data-Driven Spread Forecasting Of Wildfires</b> , Mario M. Valero, Oriol Rios, Elsa Pastor and Eulàlia Planas, Universitat Politècnica de Catalunya - BarcelonaTech, Spain	<b>Uncertainty Propagation In Fe Modelling Of A Loaded Steel Beam Exposed To Fire Using Factorial Design And Deterministic Sampling</b> , Kim Olsson, Johan Anderson and David Lange, Research Institutes of Sweden, Sweden
	12:15 - 12:40	<b>Fire-Induced Pressure And Smoke Spreading In Mechanically Ventilated Buildings With Air-Tight Envelopes</b> , Simo Hostikka, Rahul Kallada Janardhan, Umar Riaz and Topi Sikanen, Aalto University, Finland	<b>Real-Time Simulation Of Wildland Fire Spread</b> , Matthieu De Gennaro, Yann Billaud, Yannick Pizzo, Savitri Garivait, Jean-Claude Loraud, Mahmoud El Hajj and Bernard Porterie, University of Aix-Marseille, France	<b>Impacts Of Melting And Burnout Of PP Fiber On Air Permeability And Physical Properties Of High-Strength Concrete</b> , Jaeyoung Lee, Keisuke Terada, Masahiro Yamazaki and Kazunori Harada, Tokyo University of Science and Kyoto University Japan
	12:40 - 13:45	Lunch - Room MA:10		
	13:45 - 15:30	Poster Session II (Room MA:9) and Coffee Break (Room MA:10)		
Afternoon Session 15:30 - 16:45		<b>FIRE DYNAMICS - Room MA:7</b> Session Chairs: Longhua Hu and Andrés Fuentes	<b>WILDLAND FIRES - Room MA:4</b> Session Chairs: Michael Gollner and Mélanie Rochoux	<b>EVACUATION AND HUMAN BEHAVIOR - Room MA:6</b> Session Chairs: Karen Boyce and Weiguo Song
	15:30 - 15:55	<b>Energy Distribution Analysis In Full-Scale Open Floor Plan Enclosure Fires</b> , Cristian Maluk, Benjamin Linnan, Andy Wong, Juan P. Hidalgo, José L. Torero, Cecilia Abecassis-Empis and Adam Cowlard, University of Queensland, Australia	<b>A Study To Investigate Pyrolysis Of Wood Particles Of Various Shapes And Sizes</b> , Yawei Chen, Kumar Aanjaneya and Arvind Atreya, University of Michigan, USA	<b>A Forensic Analysis Of A Fatal Fire In An Indoor Shooting Range Using Coupled Fire And Evacuation Modelling Tools</b> , Zhaozhi Wang, Fuchen Jia, Edwin Galea and Jun-Ho Choi, University of Greenwich, UK
	15:55 - 16:20	<b>Stochastic Modeling of Firebrand Shower Scenarios</b> , Ali Tohidi, Nigel Kaye, University of Maryland, USA	<b>Determination Of Energy Characteristics For The Particles Moving In The Gas Flow Under Laboratory Conditions</b> , Vladimir Fateev, Michail Agafontsev, Sergey Volkov and Alexander Filkov, University of Melbourne, Australia	<b>Pedestrian Merging Behavior Analysis: An Experimental Study</b> , Liping Lian, Xu Mai, Weiguo Song, Kwok Kit Richard Yuen, Rui Ye and Sha Jin, University of Science and Technology of China, China
	16:20 - 16:45		<b>Investigation Of Firebrand Generation From An Experimental Fire: Development Of A Reliable Data Collection Methodology</b> , Jan C Thomas, Eric Mueller, Simon Santamaria, Michael Gallagher, Mohamad El Houssami, Alexander Filkov, Kenneth Clark, Nicholas Skowronski, Rory Hadden, William Mell and Albert Simeoni, University of Edinburgh, UK	<b>Human Behaviour During Evacuation Of Primary Schools: Investigations On Pre-Movement, Movement On Stairways, Movement On The Horizontal Plane And Evacuation Behaviours</b> , Glenn Hamilton, Patrick Lennon and John O'Raw, Letterkenny Institute of Technology, Ireland
Evening Events	18:00-20:00	Symposium Banquet - awards (University Aula)		
	20:00-24:00	Symposium Banquet (Student union castle - AF-borgen)		

## SYMPOSIUM DAY 5 - Friday, 16 June 2017

	08:00	Registration Open (Room MA:9)		
Morning Session 1 9:00 - 10:50	9:00 - 9:40	<b>Invited Lecture # 5: Studies on Accidental Gas and Dust Explosions (Room Kårhuset:Aula)</b> <b>Ritsu Dobashi</b> , University of Tokyo, Japan Session Chair: Naian Liu		
		<b>FIRE DYNAMICS - Room MA:7</b> Session Chairs: Ken Matsuyama and Colleen Wade	<b>WILDLAND FIRES - Room MA:4</b> Session Chairs: Sam Manzello and Sara McAllister	<b>STRUCTURES IN FIRE - Room MA:6</b> Session Chairs: Ann Jeffers and Charles Fleischmann
	10:00 - 10:25	<i>Spectral Radiation Intensities Of A Turbulent Buoyant Ethylene Flame: CFD-Aided Tomographic Inversion</i> , Dong Zeng, Marcos Chaos and Yi Wang, FM Global, USA	<i>Self-Ignition Of Natural Fuels: Can Wildfires Of Carbon-Rich Soil Start By Self-Heating?</i> , Francesco Restuccia, Xinyan Huang and Guillermo Rein, Imperial College London, UK	<i>Modeling Post-Fire Behavior Of Aluminum Structural Components Using A Maximum Temperature Approach</i> , Christian Rippe, Scott Case and Brian Lattimer, Jensen Hughes, USA
	10:25 - 10:50	<i>Grouping Strategies For MPS Soot Transport Model And Its Application In Large-Scale Enclosure Fires</i> , Xiaoqin Hu, Fuchen Jia, Zhaozhi Wang and Edwin R. Galea, Stord/Haugesund University College, Norway	<i>Experimental Investigation Of The Impact Of Oxygen Flux On The Burning Dynamics Of Forest Fuel Beds</i> , Jan C. Thomas, Rory M. Hadden and Albert Simeoni, University of Edinburgh, UK	<i>An Experimental Study On The Temperature And Structural Behavior Of A Concrete Wall Exposed To Fire After A High-Velocity Impact By A Hard Projectile</i> , Takeshi Morita, Masuhiro Beppu and Makoto Suzuki, Shimizu Corporation, Japan
	10:50-11:25	Coffee Break - Room MA:10		
Morning Session 2 11:25 - 12:40		<b>FIRE DYNAMICS - Room MA:7</b> Session Chairs: Ken Matsuyama and Colleen Wade	<b>WILDLAND FIRES - Room MA:4</b> Session Chairs: Sam Manzello and Sara McAllister	<b>STRUCTURES IN FIRE - Room MA:6</b> Session Chairs: Ann Jeffers and Charles Fleischmann
	11:25 - 11:50	<i>An Experimental Study On Backdraught: The Dependence On Temperature</i> , Chia Lung Wu and Ricky Carvel, University of Edinburgh, UK	<i>Fire Behavior In Two Pine Stands: Quantification Of Global Fire Properties</i> , Eric Mueller, Nicholas Skowronski, Kenneth Clark, Michael Gallagher, Robert Kermens, Jan Thomas, Mohamad El Houssami, Alexander Filkov, Rory Hadden, William Mell and Albert Simeoni, University of Edinburgh, UK	<i>Fire Response Of Exterior Reinforced Concrete Beam-Column Subassemblages</i> , Mohammad Mahdi Raouffard, Luis Alberto Bedrinana and Minehiro Nishiyama, Kyoto University, Japan
	11:50 - 12:15	<i>Risk Assessment Of Unburnt Gas Ignition In An Exhaust System Connected To A Confined And Mechanically Ventilated Enclosure Fire</i> , Hui Ying Wang and Jean Pierre Garo, University of Poitiers, France	<i>Investigation Of Thermal Degradation Of Pine Needles Using Multi-Step Reaction Mechanisms</i> , Salah Benkorichi, Talal Fateh, Franck Richard, Jean-Louis Consalvi and Ali Nadjai, Ulster University, UK	<i>Structural Response Of A Steel-Frame Building To Travelling Fires In Multiple Floors</i> , Egle Rackauskaite, Panos Kotsovinos and Guillermo Rein, Imperial College London, UK
	12:15 - 12:40	<i>Mobile Gas Cylinders In Fire: Consequences In Case Of Failure</i> , Rico Tschirschwitz, Daniel Krentel, Martin Kluge, Enis Askar, Karim Habib, Harald Kohlhoff, Patrick P. Neumann, Sven-Uwe Storm, Michael Rudolph, André Schoppa and Mariusz Szczepaniak, Bundesanstalt für Materialforschung und -prüfung (BAM), Germany	<i>A Computational Study Of The Interactions Of Three Adjacent Burning Shrubs Subjected To Wind</i> , Satyajeet Padhi, Babak Shotorban and Shankar Mahalingam, University of Alabama, USA	<i>Determination Of Fire Resistance Ratings For Glulam Connectors Within Us High Rise Timber Buildings</i> , David Barber, Arup, USA
	12:40 - 13:45	Lunch - Room MA:10		