Fire and Materials 2015 Programme
MONDAY, 2nd February 2015

	Delegate conference breakfast Presidio Foyer : 8.00-9.00am	
09.15	**Welcome and Introduction** **Chair: Stephen Grayson, Interscience Communications Ltd, UK**	
	PRESIDIO HALL	**THAYER HALL**
	ELECTRO- TECHNICAL Chair: Patrick van Hees, Lund Univ, Sweden	**BUILDING FIRES** Chair: Sergey Dorofeev, FM Global, USA
09.30	*Emissions from flame retarded and non-flame retarded circuit board laminates* **Alex Morgan**, M Kahandawala, Univ of Dayton and B Gullet, D Tabor, U.S. Environmental Protection Agency, USA	*Regulation of foam plastic insulation by US construction codes* M Hirschler, **Timothy Earl**, GBH International, USA
09.50	*Small scale evaluation and characterization of simulated low voltage cables with and without electrical current* **Serge Bourbigot**, J Sarazin, P Bachelet, Ecole Nationale Supérieure de Chimie de Lille (ENSCL), France	*Challenges for fire safety in ETIC systems with polystyrene insulation* **Anja Hofmann,** S Kaudelka, BAM and A Ruhs, Frankfurt Fire and Rescue Service, Germany
10.10	*Characterization of the thermal exposure in the EN 50399 cable test apparatus* **Michael Försth**, J Sjöström, P Andersson, SP Technical Research Inst of Sweden U Wickström, Luleå University of Technology, Sweden and B Girardin, Ecole Nationale Supérieure de Chimie de Lille, France	*Fire safety of textile membranes in temporary structures* **Per Blomqvist**, A Bergstrand, N Neumann, I Larsson, P Thureson, SP Technical Research Inst of Sweden and S Bengtsson, Brandskyddslaget, Sweden
10.30	Discussion	Discussion
10.45	Refreshments - Presidio Foyer	Refreshments - Presidio Foyer
	ELECTRO-ECHNICAL Chair: Patrick van Hees, Lund Univ, Sweden	**BUILDING FIRES** Chair: Sergey Dorofeev, FM Global, USA
11.15	*Small scale tests and numerical modelling of fire performance for electrical cable* **B. Girardin**, G. Fontaine S. Duquesne S. Bourbigot, ENSCL, France, L. Delineau, Leoni Studer AG, M. Försth, SP Technical Research Inst of Sweden and F. Hewitt, A. Witkowski, A.Stec, T R. Hull, University of Central Lancashire UK	*Polystyrene foam insulation with a sustainable flame retardant: transition update* **Christine Lukas** , Dow Chemical Company UK Ltd, UK, L Ross, Intech. Consulting Inc., USA, I Beulich, H Hollnagel, Dow Europe GmbH, Switzerland, Mark Beach, J Davis, J Hull, B King, S Kram, T Morgan, M Porter, W Stobby, The Dow Chemical Company, USA
11.35	*Studying fire behaviour of photovoltaic panels with a Cone Calorimeter* **CL Chow**, SS Han, City University of Hong Kong.	*A case study on the effect of building construction type, height and area on the building fire risk using the fire risk assessment model CUrisk* ***Xiao Li***, P Rao, X Zhang, G Hadjisophocleous**,** Carleton University, Canada
11.55	Discussion	Discussion
12.10	Lunch **-** Presidio Foyer	Lunch - Presidio Foyer
	ELECTRO-TECHNICAL Chair: Richard Lyon, Federal Aviation Administration, USA	**COMPARTMENT FIRES** Chair: Anne Steen-Hansen, SP Fire Research AS, Norway
13.20	*An investigation of thermally-induced failure of a lithium ion battery* **Xuan Liu**, S Stoliarov, Z Wang, University of Maryland and M Denlinger, A Masias, K Snyder, Ford Motor Company, USA	***Cone Calorimeter and Room Corner Fire Testing of Balsa Wood Core / Phenolic Composites Skin Sandwich Panels*** Elias Toubia, **Alex Morgan**, Univ of Dayton, USA
13.40	*Energy release from lithium ion batteries in the Bomb Calorimeter* **Richard Walters,** R Lyon, Federal Aviation Administration, USA	*Gas and particle effluents released from boundaries of fire compartments: First results and analyses* **Miroslav Smolka**, Rockwool Intl, Denmark, V Mozer, Univ of Zilina, Slovakia and P Tofilo, The Main School of Fire Service, Warsaw, Poland
14.00	*Influence of the state of charge on the heat release rate of Li-ion batteries* **Hubert Biteau,** V Somandepalli, Exponent, USA	*Time until flashover as a function of polyurethane content in a cell or structure* **Kate Grimwood**, Australian Inst of Forensic Fire Investigation / Univ of Technology, Sydney and M Tahtouh, C Roux, Univ of Technology, Sydney,Australia
14.20	Discussion	Discussion
14.35	Refreshments - Presidio Foyer	Refreshments - Presidio Foyer
	FIRE TESTING Chair: Marc Janssens, SwRI, USA	**FIRE RESISTANCE** Chair: Colleen Wade, BRANZ, NZ
15.00	*Practical aspects of microscale combustion calorimetry* **Richard Lyon**, R Walters, Federal Aviation Administration, N Safronava, Tech and Management International and S Stoliarov, University of Maryland, USA	*Optical characterization of high temperature deformation in novel structural materials* **John Gales**, Carleton University and M Green, Queen's University, Canada
15.20	Flammability characteristics of intact forest litter on clay substrate as tested in enhanced Cone Calorimeter and modeled with the Fire Dynamic Simulator **Mark Dietenberger**, M Dickinson, C Boardman, USDA Forest Service	*Performance and design of intumescent coatings on concrete filled hollow steel sections* **David Rush**, L Bisby, Uni of Edinburgh and A Jowsey, International Paint Ltd, UK
15.40	*Comparison of the Heat Release Rate from the Mass Loss Calorimeter to the Cone Calorimeter for Wood-Based Materials* **Laura Hasburgh**, R White, M Dietenberger, C Boardman, USDA Forest Products Laboratory, USA	*Heat transfer in small-scale models of exterior wall designs* C Aire, D Torvi, , University of Saskatchewan , M DiDomizio, **Elizabeth Weckman**, University of Waterloo and R Roos, Roxul Inc, Canada
16.00	*Development of large-format Cone Calorimeter for measuring low levels of heat release – Pertaining to duct flow rates* Koichi Yoshida, Yokohama National University, **H Yoshioka**, National Inst for Land and Infrastructure and Management , T Hayakawa, Tokyo Systems Vac Inc and T Noguchi, University of Tokyo, Japan	*Analysis of cross-laminated timber charring rates upon exposure to non-standard heating conditions* **Alastair Bartlett**, R Hadden, L Bisby, University of Edinburgh and A Law, Arup, UK
16.20	*Obtaining additional smoke characteristics using multi-wavelength light transmission measurements* **Konrad Wilkens**, P van Hees, Lund University, Sweden	*Revisiting normalised heat load and its application in a compartment fire model* **Colleen Wade**, BRANZ and C Fleischmann, M Spearpoint, A Abu, University of Canterbury, New Zealand
16.40	Discussion	Discussion
17.05	Close	Close
17.15	**Conference Reception and Buffet – Presidio Foyer**	

TUESDAY, 3rd February 2015

Delegate conference breakfast Presidio Foyer : 7.50-8.50am

	PRESIDIO HALL	THAYER HALL
	FIRE TESTING Chair: Beth Weckman, University of Waterloo, Canada	**TRANSPORTATION** Chair: Joe Zicherman, Fire Cause Analysis, USA
8.50	*An exercise in obtaining flame radiation fraction from the cone calorimeter* **James Quintiere**, University of Maryland and R Lyon, S Crowley, FAA Technical Center, USA	*Car bumpers reaction to fire* **Célia Rich**, LCPP, France / University of Lausanne, Switzerland, B Vanlerberghe, N Risler, S Pereira-Rodrigues, LCPP, France and O Delémont, University of Lausanne, Switzerland
9.10	*Application of FTIR analyzers to fire gases - progress in apparatus and method validation for quantitative analysis* **Eric Guillaume**, L Saragoza, LNE, France	*Motorcoach tire fire prevention* **Rhoads (Rody) Stephenson**, Friedman Research Corp and J Huczek, SwRI, USA
9.30	*Testing metal wall panel systems* **Cynthia Frank**, M Slocumb, FM Approvals, USA	*Motorcoach engine compartment test procedure development* **Jason Huczek**, SwRI and R Stephenson, Friedman Research Corporation, USA
9.50	*A new fire performance test for cavity wall insulation* **Kristin Jamison**, M Khan, FM Global and D Boardman, FM Approvals, USA	*Aircraft blanket ignition and toxic emission in simulated aircraft cabin fires using the Cone Calorimeter* **Gordon Andrews**, M Bell, L Tang, A Alarifi, H Phylaktou, University of Leeds, UK
10.10	Discussion	Discussion
10.30	Refreshments **-** Presidio Foyer	Refreshments **-** Presidio Foyer
	IGNITION Chair: Mohammed Khan, FM Global, USA	**TRANSPORTATION** Chair: Anja Hofmann, BAM, Germany
11.00	*Challenges in determining critical mass flux for ignition* **Frida Vermina Lundström**, P van Hees, Lund University, Sweden	*Gas temperature and concentration measurements in the vicinity of a burning/ decomposing carbon-epoxy aircraft composite material* **Sean Kearney,** A Dodd, A Bohlin, C Kliewer, Sandia National Laboratories, USA
11.20	*An ignition model for wood under transient radiant exposures* **Matt DiDomizio**, P Mulherin, E Weckman, University of Waterloo, Canada	*Challenges in establishing design fires for passenger rail vehicles* J Zicherman, Fire Cause Analysis and C Lautenberger, **Armin Wolski**, Reax Engineering, USA
11.40	*A study of ignition by rifle bullets* **Sara McAllister**, M Finney, T Maynard, I Grob, USDA Forest Service, USA	*Thermo mechanical behaviour of panels' assembly exposed to an ISO 834 fire test* B Mercier, **Jean-Charles Craveur**, J Bournot, ISMANS and S Lair, MAPAC Panel, France
12.00	Discussion	Discussion
12.15	**Lunch - Presidio Foyer**	**Lunch - Presidio Foyer**
	MODELING Chair: Kathryn Butler , NIST, USA	**VENTILATION-CONTROLLED FIRES** Chair: Eric Guillaume, LNE, France
13.40	*Pyrolysis simulation of fiber reinforced polymer (FRP) composites: challenges of zero-dimensional testing of resin and additive mixtures to measure kinetic parameters* **Nicholas Dembsey,** B Gillespie, M Long, N McMillan, C Walde, WPI and William Kreysler, Kreysler & Associates, USA	*Determination of the fire behaviour of an acrylonitrile butadiene styrene material using a Controlled Atmosphere Cone Calorimeter* **Fabien Hermouet**, LNE / Institut P', É Guillaume, LNE, T Rogaume, F Richard, Institut P' and X Ponticq, Centre d'Etude des TUnnels (CETU), France
14.00	*Challenges in predicting the pyrolysis rate of solid materials* **Marc Janssens**, SwRI, USA	*Experimental investigation of externally venting flames in under-ventilated compartment fires* **Eleni Asimakopoulou**, D Kolaitis, M Founti, National Technical University of Athens, Greece
14.20	*Modeling Flame Spread Over Carpeting in the ASTM E648 Radiant Panel Test* **K. Ranjan Samant,** E.I DuPont de Nemours and Company and K Butler, NIST, USA	*The breakage behaviour of point-fixed glass systems in fires* **Jennifer Wen**, WarwickFIRE, University of Warwick, Y Wang, Q Wang, J Sun, University of Science and Tech of China and K M Liew, City University of Hong Kong
14.40	Discussion	Discussion
14.55	Refreshment Break	Refreshment Break
	MODELING Chair: Nicholas Dembsey , WPI, USA	**WILDLAND/URBAN INTERFACE** Chair: David Shew, Office of State Fire Marshall, CA
15.25	*Experimental and pyrolysis modeling study of delaminating materials* **Dong Zeng**, M Chaos, Y Wang, S Dorofeev, FM Global, USA	*Climate impact on forest fire risk in Sweden* **Francine Amon,** J Sjöström, L Vylund, S Fasth, SP Technical Research Inst of Sweden, Sweden
15.45	*Using the Cone Calorimeter to develop a detailed model of carpet for flammability studies* **Kathryn Butler**, J R Shields, NIST and K Ranjan Samant, E.I. DuPont de Nemours and Co, USA	*A model to evaluate infrastructures vulnerability in case of forest fires in wildland-urban interfaces zones* **Laura Bonora**, National Research Council , F Martelli, National Reseach Council, Italy, N Brachetti Montorselli, DSISTAF, University of Florence and E Tesi, Tuscany Region - Settore programmazione forestale, Italy
16.05	*Pyrolysis of solid materials exposed to high thermal radiative heat flux* **Mathieu Gillet**, Direction Générale de l'Armement - DGA / DT / TA / MT / MTO, G. Rambaud, CEA, DAM, GRAMAT, France	*Firebrand accumulation zones in front of structures in wildland-urban interface (WUI) fires* **Samuel Manzello**, NIST, USA and S Suzuki, NRIFD, Japan
16.25	*Numerical modeling of vertical flame testing of nylon-cotton and flame resistant fabric combat uniforms* **Esther Kim**, T Godfrey, NSRDEC and N Dembsey, WPI, USA	*Effect of siding treatment on firebrand production from building components* **Sayaka Suzuki**, NRIFD, Japan and S Manzello, NIST, USA
16.45	*Firefoam modeling of standard class 2 commodity rack storage fires* **Ning Ren**, J de Vries, K Meredith M Chaos, Y Wang, FM Global, USA	*On the safety of LPG tanks located in the Wildland Urban Interface during a wildfire* F Heymes, L Aprin, **Pierre Lauret** & S Forestier, Ecole des Mines d'Alès, France
17.05	Discussion	Discussion
17.30	Close	Close
19.00	**Evening at Leisure or Informal Dinner at Swiss Louis, Pier 39 (pre-booked tickets)** **Meet in hotel foyer at 6.45pm to walk 7 minutes to venue**	

WEDNESDAY, 4th February 2015

Delegate conference breakfast Presidio Foyer : 7.50-8.50am

	PRESIDIO HALL	THAYER HALL
	FURNITURE & MATTRESSES Chair: Marcelo Hirschler, GBH International, USA	**FIRE INVESTIGATION - Wildland** Chair: Samuel Manzello, NIST, USA
8.50	*Cigarette ignition of cellulosic materials with non-fire standards compliant (non-FSC) cigarettes* **James Lord**, J Geiman, ATF Fire Research Laboratory, USA	*Relative humidity and wildland fire ignition by cigarettes* **Tara Henriksen**, C Warren, K Lewis, CASE Forensics Corp, USA
09.10	*Furniture fire safety solutions: A study on the Open Flame Ignition Resistance of California Technical Bulletin 117-2013 compliant upholstered furniture* **Carl Powell**, R Campbell, M Moore, Great Lakes Solutions, USA	*Influence of moisture and organic content on cigarette ignition of potting soil samples* **Amanda Robbins**, M Bodnar, M Lejeune, P Senez, SERECA, Canada
09.30	*Fire behavior of bed mattress on the viewpoint of flame-spread* **Kye-Won Park**, FILK, South Korea,J-J Jeong, M Mizuno, Y Ohmiya, Tokyo University of Science, Japan	*Spot fire ignition of natural fuel beds by hot aluminum particles* **James Urban**, C D Zak and C Fernandez-Pello, University of California Berkeley, USA
09.50	Discussion	Discussion
10.05	Refreshment Break	Refreshment Break
	FLAME RETARDANTS & COATINGS Chair: Alex Morgan, Univ of Dayton, USA	**FIRE INVESTIGATION** Chair: Vytenis Babrauskas, Fire Science & Technology Inc., USA
10.30	*Milligram-scale Flame Calorimeter: A novel instrument for flammability assessment using mg-sized samples* **Fernando Raffan-Montoya**, X Ding, S Stoliarov, University of Maryland, USA and R Kraemer, BASF-SE, Germany	*Effects of cooking on the thermal ignition behavior of vegetable oil* D Morrison, **Sean Dee**, B Cox, R Hart, R Farina, Exponent Inc, USA
10.50	*Combustion characteristics of flat panel televisions with and without fire retardants in the casing* **Matthew Blais**, K Carpenter, SwRI, USA	*How can a wood pellet stove cause a fire?* **Herve Breulet**, ISSeP, Belgium
11.10	*Fire Properties of borated polyethylene* **Dan Madsen**, Grontmij AB, P van Hees, Lund University, F Jörud, ESS AB, Sweden	*Investigation of the fire hazard of mixed material piles in recycling facilities* **Nicole Nagy,** P Mulherin, M DiDomizio, E Weckman, University of Waterloo, Canada
11.30	*New phosphate epoxy flame retardants for polyurethanes* **Vladimir Benin**, A Morgan, Univ of Dayton, USA	*How PVC-insulated cables exposed to radiant heat fluxes cause short circuits and arc beads* **Tomoyasu Iwashita,** Yamanashi Prefectural Police HQ / Tokyo Univ of Science, Y Hagimoto, Hagimoto Fire Research Lab, O Sugawa, Tokyo Univ of Science, Japan and M Keller, ATF Fire Research Lab, USA
11.50	Discussion	Discussion
12.10	Lunch - Presidio Foyer	Lunch - Presidio Foyer
	FLAME RETARDANTS & COATINGS Chair: Serge Bourbigot, ENSCL, France	**FIRE INVESTIGATION** Chair: Vytenis Babrauskas, Fire Science & Technology Inc., USA
13.20	*Thermanl protection of natural fibre-thermoplastic composites using sol-gel coating* Baljinder Kandola , **Wiwat Pornwannachai** and E Caminade, Univ of Bolton, UK and J Alongi, Politecnico di Torino, Italy	*Fish tank heater fire analysis* **Kevin Lewis,** D Murphy, S Scheiff, T Henriksen, Case Forensics, USA
13.40	*Low emissivity surfaces for improved fire performance* **Robert Svensson**, M Försth, SP Fire Research, Sweden	*A detailed look at the necked vessel flame thrower effect* P Kennedy, **Richard Meier**, G Gorbett, K Smith and P Powell, John A Kennedy Assocs, USA
14.00	*Revealing the inner secrets of intumescent chars by advanced small scale tests combined with μ-CT* **Michael Morys**, B Illerhaus, H Sturm, B Schartel, BAM Germany	*Gas-fired space heaters: Defective products, defective standards, and burned victims* **Vytenis Babrauskas,** Fire Science & Technology Inc., USA
14.20	Discussion -	Discussion
14.35	Refreshments	Refreshments
	FLAME RETARDANTS & COATINGS Chair: Christine Lukas, Dow Chemcial Company, UK	**FIRE INVESTIGATION** Chair: John DeHaan, Fire-Ex Forensics, Inc, USA
15.00	*Effect of flame retardants on polymer heat release rate* **Marcelo Hirschler**, GBH International, USA	*Assessment of damage by fire investigators* **Lee McCarthy**, Crane Engineering, **J Geiman**, Fire & Risk Alliance, USA
15.20	*Experimental and numerical simulations of the gas-phase effectiveness of phosphorus compounds* Gregory Linteris, N Bouvet, V Babushok, NIST, **Fumiaki Takahashi**, Case Western Reserve University, V Katta, Innovative Scientific Solutions, USA and R Krämer, BASF SE, Germany	*Investigation on the Pontine Tower fire* **Cristina D'Angelo**, Department of Firefighters, Department of Environmental Protection and Green-Civil Protection, Rome Municipality, S Di Maria, Fire Brigade of Latina, Ministry of the Interior, Italy
15.40	*Simulations of gas-phase interactions of phosphorus flame retardants with diffusion flame structure* **Fumiaki Takahashi**, Case Western Reserve University, V Katta, Innovative Scientific Solutions and G Linteris, V Babushok, NIST, USA	*Evaluation of fire spread in the large Lærdal fire, January 2014* **Anne Steen-Hansen,** A Gagnat Bøe, K Hox, R Fjellgaard Mikalsen, J Stensaas, K Storesund, SP Fire Research AS, Norway
16.00	Discussion	Discussion
16.15	Close and Refreshments	Close and Refreshments

The programme is correct at time of going to press but the organisers reserve the right to make changes as and when necessary.