

TUESDAY PM	ROOM: 3	WEDNESDAY AM	ROOM: 3	WEDNESDAY PM	ROOM: 3
MATERIALS I - Oil Burners		MATERIALS III: Heat Release		MATERIALS V: Flame Propagation	
1:30-2:00	NexGen Sonic Burner Use in Cargo Liner and Seat Cushion Flammability Test <i>Tim Salter</i> FAA Technical Center - Fire Safety	8:00-8:30	Development of a Revised Test Apparatus for Measuring Heat Release Rate of Cabin Materials <i>Mike Burns</i> FAA Technical Center - Fire Safety	1:30-2:00	Full-Scale Testing of Thermoplastic Paneling Used in Lower Portion of Aircraft Seats <i>Tim Marker</i> FAA Technical Center - Fire Safety
2:00-2:30	Refinement of the Sonic Burner Used for Testing the Burnthrough Resistance of Thermal Acoustic Insulation <i>Robert Ochs, PhD</i> FAA Technical Center - Fire Safety	8:30-9:00	The Use of Fire Simulation as a Tool for Regulation Evolution: Application to Heat Release Rate (OSU) Requirements <i>Serge Le Neve, Camille Riera, Antoine Orth</i> DGA Aeronautical Systems	2:00-2:30	Intermediate Scale Flammability Testing of Wiring and Ducting Using a Vertical Fuselage Section <i>Robert Ochs, PhD</i> FAA Technical Center - Fire Safety
2:30-3:00	Development of a Small Scale Burner for Equivalency to Oil Burner <i>Heinz-Peter Busch</i> Airbus	9:00-9:30	OPEN TBD TBD	2:30-3:00	Interlaboratory Study of Radiant Panel Test for Measuring Flammability of Thermal Acoustic Insulation Materials <i>Steve Rehn</i> C-far Services
3:00-3:30	BREAK	9:30-10:00	BREAK	3:00-3:30	BREAK
3:30-4:00	MATERIALS II: Composite Flammability Development of a Vertical Flame Propagation Test for Composite Structural Materials, Air Ducting, and Wire Insulation <i>Robert Ochs, PhD</i> FAA Technical Center - Fire Safety	10:00-10:30	MATERIALS IV: Regulatory ARAC Materials Flammability Working Group - Continuation of Task <i>Jim Davis</i> Accufleet	3:30-4:00	Flammability of Thermoplastics: The Direct and Indirect Impact of Regulations, Policy Statements, and Other "Regulatory" Activity on Material Development <i>Ralph Buonicotti</i> SABIC
4:00-4:30	Intermediate Scale Flammability Testing of Composite Fuselage Structure <i>Robert Ochs, PhD</i> FAA Technical Center - Fire Safety	10:30-11:00	Approved Materials List Database Development <i>Scott Campbell</i> Zodiac Aerospace	4:00-4:30	RTCA Development of a New Flammability Test for Electronic Black Boxes <i>Steve Rehn</i> C-far Services
4:30-5:00	Study of Temperature and Fire Exposure Effects on Carbon Reinforced Plastic Mechanical Behaviour <i>E. Deletombe et al.</i> ONERA - The French Aerospace Lab	11:00-11:30	Policy Statement on the Flammability Certification Testing of Interior Materials/Advisory Circular Industry Input <i>Michael Jensen</i> Boeing	4:30-5:00	Propagation of a Fire in Electrical Boxes <i>Thomas Krause</i> Airbus

THURSDAY PM

ROOM: 4

MATERIALS VI: Magnesium

Development of Flammability Tests for Magnesium
Alloys Used in Commercial Aircraft

Tim Marker

FAA Technical Center - Fire Safety

1:30-2:00

The History of Discussion About Magnesium in the Cabin
From a Seat Manufacturer's View

Alfons Stachel, Christoph Hennrich

Recaro Aircraft Seating GmbH & Co KG

2:00-2:30

Additive Manufacturing in Aerospace Applications

Rajiv Tandon

Magnesium Elektron

2:30-3:00

BREAK

MATERIALS VII: Cabin Materials

Bunsen Burner Testing of Cabin Materials at Simulated
Altitude & Hydrogen Concentrations

Steve Rehn

C-far Services

3:30-4:00

Revised Test Method for Evacuation Slides

Dung Do

FAA Technical Center - Fire Safety

4:00-4:30

OPEN

TBD

TBD

4:30-5:00

Wednesday PM	Room: 1	Thursday AM	Room: 1	Thursday P PM	Room: 1
Fire Research I: Fire Modeling		Fire Research II: Characterization & Testing		Fire Research III: Advanced Materials	
1:30-2:00	High Order Accurate (Discontinuous Galerkin) Simulation Tool for Fire Modeling <i>Mark Lohny/Luigi Martinelli</i> Princeton University, New Jersey, USA	8:00-8:30	A Buoyancy Controlled Fire Calorimeter for Low Heat Release Rate Materials <i>J. Quintiere, PhD/S. Crowley/R. Lyon, PhD</i> Univ. of Maryland /FAA Technical Center -Fire Research	1:30-2:00	Online Material Flammability Database <i>Carleen Houston/Sean Crowley</i> FAA Technical Center - Fire Research
2:00-2:30	Development of a Complex Geometry Capability in the Fire Dynamics Simulator <i>M. Vanella/G. Forney/R. McDermott/K. McGrattan</i> National Institute of Standards and Technology (NIST)	8:30-9:00	Threat-Based Flammability Requirements for Military Vehicle Interiors <i>J. Quintiere, PhD/C. Houston/L. Speitel/S. Crowley</i> Univ. of Maryland /FAA Technical Center -Fire Research	2:00-2:30	Flammability Determination of Substitute Aircraft Materials Using Microscale Combustion Calorimeter <i>Natalia Safranava/Richard Lyon, PhD/Dan Slaton</i> Technology & Management International, LLC / FAA Technical Center - Fire Research / Boeing
2:30-3:00	Modeling for Understanding and Preventing Cascading Thermal Runaway in Battery Packs <i>John Hewson</i> Sandia National Laboratories	9:00-9:30	Controlled Fuel/Oxygen Ratios in Microscale Calorimeter <i>Richard N. Walters, PhD</i> FAA Technical Center - Fire Research	2:30-3:00	Using Deoxybenzoin Monomers to Generate Low Flammability Polymers for Aircraft <i>Abid Mir/Umesh Choudhary/Todd Emrick</i> University of Massachusetts - Amherst
3:00-3:30	BREAK	9:30-10:00	BREAK	3:00-3:30	BREAK
3:30-4:00	FireFOAM Modeling of Water Mist for Suppression of Compartment Fires <i>Ning Ren et al.</i> FM Global	10:00-10:30	Toxicity Assessment of Polymers Using the Microscale Combustion Calorimeter <i>Louise Speitel</i> FAA Technical Center - Fire Research	3:30-4:00	OPEN TBD TBD
4:00-4:30	Numerical Study of Upward Flame Spread Over Discreet Fuels <i>Ya-Ting Liao</i> Case Western Reserve University	10:30-11:00	A Two-Step Mechanism for Combustion of Polymeric Solids Containing Flame Retardants <i>Haiqiang Guo</i> C-far Services	4:00-4:30	Polyphosphonate Flame Retardants in Aviation Applications <i>Xiudong Sun/Lawino Kagumba/Jan-Pleun Lens</i> FRX Polymers
4:30-5:00	Prediction of Thermal Degradation of a Carbon Epoxy Composite by a Three-Dimensional Numerical Simulation <i>Pauline Tranchard</i> Ecole Nationale Supérieure de Chimie de Lille (ENSCL)	11:00-11:30	Pyrolysis Behavior of a BMS 8-276 Carbon Fiber Composite <i>Mark McKinnon</i> Jensen Hughes Associates	4:30-5:00	Challenges and Unexpected Benefits of Developing an Acoustic Barrier Film <i>Greg Simon</i> 3M

Tuesday PM

ROOM: 4

BATTERY I

1:30-2:00	Battery Gas Analysis <i>Tom Maloney</i> FAA Technical Center - Fire Safety
2:00-2:30	Flammability Limits of Lithium Ion Battery Thermal Runaway Vent Gas in Air and the Inerting Effects of Halon 1301 <i>Matthew Karp</i> Rutgers University
2:30-3:00	Impact of Lithium Battery Vent Gas Ignition on Cargo Compartment Fire Protection <i>Tom Maloney</i> FAA Technical Center - Fire Safety

3:00-3:30

BREAK

3:30-4:00	Development of Safer Modes of Transportation of Lithium Batteries on Large Airplanes <i>Enzo Canari/Lia Calleja-Barcena</i> EASA (European Aviation Safety Agency)
4:00-4:30	Lithium Battery Cargo and Cabin Fire Safety <i>Captain Scott Schwartz</i> ALPA (Air Line Pilots Association)
4:30-5:00	Lithium Battery Hazard Detection, Mitigation, and Safety Certification in the US Navy <i>Daphne Fuentevilla</i> US Navy - Naval Surface Warfare Center Carderock Division

Wednesday AM

ROOM: 4

BATTERY II

8:00-8:30	Nonwoven Battery Separators Change the Safety Paradigm for Lithium Ion Batteries <i>Brian Moran, PhD</i> Dreamweaver International, Inc.
8:30-9:00	Application of Fluid for Increased Safety of Lithium-Ion Battery and Electronic Devices <i>Nicolas Johnson and Paul Rivers</i> 3M Company
9:00-9:30	Argon/Nitrogen - Lithium Metal Batteries <i>Steve Summer/Tom Maloney</i> FAA Technical Center - Fire Safety

9:30-10:00

BREAK

BATTERY III

10:00-10:30	Packaging Standard Considerations <i>Harry Webster</i> FAA Technical Center - Fire Safety
10:30-11:00	Heating Rate Research at FAA Technical Center <i>Tom Maloney</i> FAA Technical Center - Fire Safety
11:00-11:30	Energetics of Lithium Ion Battery Failure <i>Richard Lyon, PhD</i> FAA Technical Center - Fire Safety

Wednesday PM

ROOM: 4

BATTERY IV

1:30-2:00	Battery Packaging R&D <i>Paul Rohrbach</i> Airbus
2:00-2:30	ICAO SAE G27 Packaging Standard Update <i>Doug Ferguson</i> Boeing
2:30-3:00	Tablets Stored in Aircraft <i>Tom Maloney/Jonathan Tan</i> FAATC/CAAS (Civil Aviation Authority of Singapore)

3:00-3:30

BREAK

3:30-4:00	Fedex Battery Packaging <i>Mark Petzinger</i> FedEx Express
4:00-4:30	Battery Packaging.. <i>Chris E.</i> Americase
4:30-5:00	FAA Hazardous Materials Update <i>Janet McLaughlin/Michael Givens</i> FAA Hazardous Materials

TUESDAY AM ROOM: 4 (add Room 3 if needed)

GENERAL FIRE

8:00-8:30	FAA Technical Center Fire Safety Research <i>Constantine Sarkos</i> FAA Technical Center - Fire Safety
8:30-9:00	Halon ARC <i>Steve Happenny</i> FAA Transport Airplane Directorate
9:00-9:30	Update on the Development of Halon Alternatives for Fire Suppression Systems <i>Maimuna Taal-Mdure</i> ICAO (International Civil Aviation Organization)

9:30-10:00 BREAK

10:00-10:30	NTSB Cargo Fire Safety Recommendation <i>Joe Panagiotou</i> NTSB (National Transportation Safety Board)
-------------	--

10:30-11:00	Ethiopian Airlines 787 ELT Fire <i>Lisa Fitzsimons</i> AAIB (UK Air Accidents Investigation Branch)
-------------	--

11:00-11:30	Research Into Fire, Smoke, or Fumes Occurrences on Transport Airplanes <i>Ray Cherry</i> RGW Cherry & Associates
-------------	---

THURSDAY AM

ROOM: 3

CARGO FIRE I

8:00-8:30	SAE Standards Containers/Covers <i>Dave Blake</i> FAA Technical Center - Fire Safety
8:30-9:00	Classification of Class B and Class F Cargo Compartments <i>Steve Happenny</i> FAA Transport Airplane Directorate
9:00-9:30	FCCs and FRCs Subjected to Class-A Fires <i>Dhaval Dadia</i> FAA Technical Center - Fire Safety

9:30-10:00 BREAK

10:00-10:30	FCCs and FRCs Subjected to Battery Fires <i>Dhaval Dadia</i> FAA Technical Center - Fire Safety
-------------	--

10:30-11:00	Component and System Verification in Relevant Environment <i>Karsten Kirbach</i> AOA Apparatebau Gauting GmbH
-------------	--

11:00-11:30	Fire Resistant Containers <i>Keith Stthman/Bob Brown</i> UPS
-------------	---

THURSDAY PM

ROOM: 3

CARGO FIRE II

1:30-2:00	Kevlar® XF for Fire Resistant Air Cargo Containers <i>Ley Richardson</i> Dupont
2:00-2:30	Cargo Fire Suppression <i>J. Torres</i> ARFF
2:30-3:00	Class C Compartment Work at FAATC <i>Dhaval Dadia</i> FAA Technical Center- Fire Safety

3:00-3:30 BREAK

3:30-4:00	Use of Simulation for Halon Concentration Flight Testing <i>Presenter</i> Airbus - Invited
-----------	---

4:00-4:30	
-----------	--

4:30-5:00	
-----------	--

THURSDAY AM

ROOM: 4

FUEL CELLS & AIRCRAFT INSTALLED BATTERIES

The Usage of Oxygen Depleted Air Generated by a Hydrogen Fuel Cell for Cargo Fire Suppression
Steven Summer/Shane Nicholson
FAA Technical Center/Parker Hannifin Corp.

8:00-8:30

Abusive Testing of Proton Exchange Membrane Hydrogen Fuel Cells
Steven Summer
FAA Technical Center - Fire Safety

8:30-9:00

Flammability Limits of Hydrogen at Sub-Atmospheric Pressures and Reduced Oxygen Concentrations
Steve Rehn
C-far Services

9:00-9:30

BREAK

9:30-10:00

Lithium Battery Systems for Aerospace Applications: Benefits, Issues, and Mitigation
Norm Pererira
FAA

10:00-10:30

Hazard Analysis for Various Lithium Battery Chemistries and Sizes
Steven Summer/Tom Maloney
FAA Technical Center - Fire Safety

10:30-11:00

Containment of Fire and Exposions from Failing Lithium Ion Batteries
Thierry Carriere, PhD
ADA Technologies, Inc.

11:00-11:30

TUESDAY PM

ROOM: 2

POWERPLANT FIRE I

Hot Surface Ignition Temperatures of Aircraft Fluids
Dr. N. Albert Moussa
BlazeTechCorporation

1:30-2:00

Next Generation Fire Test Burner for Powerplant Fire Testing
Steven M. Summer
FAA Technical Center - Fire Safety

2:00-2:30

Updated Experimental Investigation of the NexGen Burner
Dr. Samir B. Tambe
University of Cincinnati - Aerospace Engineering

2:30-3:00

BREAK

3:00-3:30

Development of FAA Copper Tube Heat Flux Calorimeter for Parametric Study of Heat Flux Calibration
Dr. Mary Kelly
Resonate Testing Ltd.

3:30-4:00

Advancements in Smart Fire Protection
Dr. Peter J. Disimile
University of Cincinnati, Aerospace Engineering

4:00-4:30

Minimum Performance Testing with a Blended Candidate for Aircraft Powerplant Halon Replacement
Douglas Ingerson
FAA Technical Center - Fire Safety

4:30-5:00

TUESDAY AM	Room: 1	TUESDAY PM	Room: 1	WEDNESDAY AM	Room: 1
CABIN SAFETY I			CABIN SAFETY II		CABIN SAFETY III
8:00-8:30	Cabin Safety Research Introduction <i>Cynthia McLean</i> Prime Strategem, LLC	1:30-2:00	A picture is worth a thousand words: Validation of pictogram-based placards Part 1 <i>Enzo Canari</i> European Aviation Safety Agency	8:00-8:30	Educating passengers about life preserver donning <i>Luca Chittaro</i> University of Udine, Italy
8:30-9:00	The evolution of unique interiors and their effect on cabin safety <i>Michelle Arnold</i> The Boeing Company	2:00-2:30	A picture is worth a thousand words: Validation of pictogram-based placards Part 2 <i>Enzo Canari</i> European Aviation Safety Agency	8:30-9:00	Effectiveness of locator lights on inflatable life preservers <i>Cynthia McLean</i> Prime Strategem, LLC
9:00-9:30	Evacuation Decision Making <i>Emily Gibson</i> US National Transportation Safety Board	2:30-3:00	Pre-flight safety briefings: interactive vs non-interactive solutions <i>Luca Chittaro</i> University of Udine, Italy	9:00-9:30	Aviation distress signals: pyrotechnic alternatives <i>Cynthia L. McLean</i> Prime Strategem, LLC
9:30-10:00	BREAK	3:00-3:30	BREAK	9:30-10:00	BREAK
			OCCUPANT PROTECTION		POWERPLANT FIRE II
10:00-10:30	Prepare for impact: familiarizing passengers with aircraft emergencies through first-person simulation <i>Luca Chittaro</i> University of Udine, Italy	3:30-4:00	Child Restraint System Certification Policy Summary <i>Richard DeWeese</i> FAA CAMI	10:00-10:30	Engine Nacelle Fire Protection with a Fine Novec Mist <i>Dr. Thierry Carriere</i> ADA Technologies, Inc.
10:30-11:00	Crash survivor challenges evacuating a motorcoach with postcrash fire <i>Thomas Barth, PhD</i> US National Transportation Safety Board	4:00-4:30	Child Restraint Performance in Oblique Seats <i>Aditya Belwadi/Amanda Taylor</i> Childrens Hospital of Philadelphia/FAACAMI	10:30-11:00	Reassessing Carbon Dioxide with Minimum Performance Testing for Aircraft Powerplant Halon Replacement <i>Douglas Ingerson</i> FAA Technical Center - Fire Safety
11:00-11:30	Evaluating aircraft escape path markings in immersive virtual reality <i>Stefano Burigat</i> University of Udine, Italy	4:30-5:00	A New Frontier for Small Airplane Crash Safety: The Standards Based Approach <i>Greg Bowles</i> GAMA	11:00-11:30	TITLE <i>Presenter</i> Organization

THURSDAY PM	ROOM: 2
CRASH DYNAMICS IV	
1:30-2:00	Assessment of Head and Neck Injury Potential for Occupants of Typical Aircraft Seats and Interior <i>Richard DeWeese</i> FAA CAMI
2:00-2:30	Comparison of Calculated ATD Head Kinematics from Accelerometer and Angular Rate Sensor Data to Photometric Analysis Data in Dynamic Aircraft Seat <i>Robert Huculak</i> National Institute of Aviation Research
2:30-3:00	Determining Loss of Consciousness in Fighters and Development of Associated Injury Assessment <i>Adam Bartsch</i> Cleveland Clinic
3:00-3:30	BREAK
3:30-4:00	Development of a Lightweight Forged Magnesium Aircraft Seat Component <i>TBD</i> Magnesium Elektron
4:00-4:30	Validation & Verification for Commercial Aircraft Passenger Seat Certification by Analysis <i>Shawn Li</i> Boeing
4:30-5:00	Seat Dynamic Modeling <i>TBD</i> National Institute for Aviation Research