Suppression, Detection and Signaling Research and Applications Conference (SUPDET® 2019)

Program
September 17 – September 20, 2019
Crowne Plaza Denver Downtown, Denver, CO

Last Updated: 9 September 2019

DETECTION PROGRAM
Tuesday, September 17, 2019

9:00 Welcome

Session I: Residential

9:15 Review of Audible Alarm Signal Waking Effectiveness
Joshua B. Dinaburg, Jensen Hughes

9:45 Door Position Messaging Strategies

10:15 Assessment of Wireless Smoke Alarm Interconnect Signal Delay on Safe Egress
Thomas Cleary, Paul Reneke, Richard Peacock, National Institute of Standards and Technology

10:45 Break sponsored by

GENTEX CORPORATION

Session I: Residential (continued)

11:15 Evaluating Sensor Algorithms to Prevent Kitchen Cooktop Ignition and Ignore Normal Cooking
Amy Mensch, Anthony Hamins, John Lu, National Institute of Standards and Technology
Session II: Notification

11:45 Development of a Research-Based Short Message Creation Tool for Wildfire Emergencies
Jessica L. Doermann, University of Maryland
Erica D. Kuligowski, National Institute of Standards and Technology

12:15 Lunch on own

Session III: Detection

1:45 Residential Fuel Gas Detection - Issues Pertaining to Detection, Hazard Identification and Fire Department Response
Stephen J. Jordan, Rodney Bentley, Noah L. Ryder, Fire & Risk Alliance, LLC

2:15 Methods for Characterizing Theatrical and Real Smoke in Varying Ambient Environments for Inflight Certification of Aircraft Cargo Compartment Smoke Detection Systems
Matthew Karp, Robert I. Ochs, Federal Aviation Administration

2:45 Break sponsored by

Session IV: Data and Modeling

3:15 Generating Synthetic Sensor Data to Facilitate Machine Learning and Validate Predictive Analytics of Building Fire Hazard
Thomas Cleary, Wai Cheong (Andy) Tam, National Institute of Standards and Technology

3:45 Evaluation of Empirical Evidence against Zone Models for Smoke Detector Activation Prediction
Thomas Cleary, National Institute of Standards and Technology
Gabriel Taylor, Nuclear Regulatory Commission
Session V: Standards

4:15  Update on UL 2524, Standard for In-Building 2-Way Emergency Radio Communications Enhancement Systems
     Lawrence J. Shudak, Underwriters Laboratories

6:00 – 8:00  Reception at the Denver Firefighter’s Museum
Wednesday, September 18, 2019

Session VI: Life Safety and Emerging Technologies

9:00 The Need for SPEed
   Peter Jones, Cisco
   Bob Voss, Panduit Innovation Center

9:30 POE, IoT and Integrating Emergency Technology with Emerging Technology
   Denise Pappas, Valcom

10:00 Break sponsored by

Session VI: Life Safety and Emerging Technologies (continued)

10:30 Benefits of Using PoE in a Fire Alarm Systems
   Penny Xu, Texas Instruments

11:00 The Regulatory Environment for Emerging Technologies in Fire Safety for North America and Europe
   Lance Rütimann, Maria Marks, Siemens Smart Infrastructure

11:30 Closing Comments, Feedback

1:00 – 5:00 pm – Special Event
Workshop on Automatic and Remote Testing and Remote Monitoring of Fire Protection Systems
(open to all symposium attendees)

Break sponsored by
SUPPRESSION PROGRAM
Thursday, September 19, 2019

9:00 Welcome

Session I: Storage Protection

9:15 Full-Scale Fire Testing for Storage Protection under Sloped Ceilings
Prateep Chatterjee, FM Global
Justin A. Geiman, Noah L. Ryder, Fire & Risk Alliance

9:45 Obstructions and Early Suppression Fast Response Sprinklers-Ph. 4: The Latest Research

10:15 Equivalent Protection Schemes for Fire Sprinkler Systems - Full-Scale Fire Testing for Performance-Based Fire Protection
Ralph E. Bless, Jr., Telgian

10:45 Break sponsored by

Session I: Storage Protection (continued)

11:15 Case Study: Separation of Electronic and ESFR Sprinklers in a Warehouse Facility
Zachary L. Magnone, Johnson Controls

Session II: Experimental Studies

11:45 Measuring Flow Rate in a Fire Hose with Accelerometers
Christopher U. Brown, Gregory W. Vogl, Wai Cheong (Andy) Tam, National Institute of Standards and Technology

12:15 Lunch on own
Session II: Experimental Studies (cont.)

1:45  Sprinkler Water Quality - Advancements in Dissecting Sprinkler Sprays
     Stephen J. Jordan, Justin Geiman, Rodney Bentley, Noah L. Ryder, Fire & Risk Alliance

Session III: Lithium-Ion Batteries

2:15  Fixed Fire Suppression Systems for Electric Vehicles
     Ola Willstrand, R. Bisschop, M. Rosengren, RISE Research Institutes of Sweden

2:45  Coupled Sprinkler Protection and Installation Guidance for Li-Ion Battery Based
     Energy Storage Systems
     Benjamin Ditch, FM Global
     R. Thomas Long, Jr., Exponent

3:15  Break sponsored by

Session IV: Case Studies and Data

3:45  A Case Study in Utilizing an Existing High Rise Building's Fire Protection System
     Infrastructure for Fighting Exterior Façade Fires
     Milosh Puchovsky, Worcester Polytechnic Institute
     Zachary Magnone, Johnson Controls

4:15  A Data Enabled Approach to Prevent Fire Sprinkler Failures
     Pedriant Peña, Lucas Eidenmuller, Chad Goyette, Johnson Controls

5:00 – 6:30  Reception co-sponsored by
Friday, September 20, 2019

Session V: Special Applications

9:00  Antifreeze Solutions for Use in Fire Sprinkler Systems, UL 2901
      Jeff Hebenstreit, Underwriters Laboratories

9:30  Vapor Mitigation Using Fixed Water Spray System
      Murtaza Gandhi, Alex Fergusson, Joseph Kao, Jin Zhao, BakerRisk

10:00 Break sponsored by

Session VI: Foam, Gaseous and Clean Agents

10:30 An Evaluation of the Firefighting Effectiveness of Fluorine Free Foams
       Gerard Back, Brianna Gillespie, Jensen Hughes

11:00 Case Study: Novel, Sustainable Fire Protection Solution to Protect Gas Turbines
       Nick Johnson, 3M Company
       Chris Vanderstokker, ETG Fire

11:30 Fire Protection of at Risk Groups by IG-541 and Water Based Sprinklers: Full Scale Tests
       Arjen Kraaijeveld, Western Norway University of Applied Sciences

12:00 Closing Comments, Feedback