

PROGRAM SCHEDULE



DOUBLETREE

BY HILTON ORLANDO SEAWORLD

10100 INTERNATIONAL DRIVE ORLANDO, FL

**INTERNATIONAL SYMPOSIUM ON FIRE
INVESTIGATION SCIENCE & TECHNOLOGY**

Welcome ISFI 2024 Delegates

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Some wise words from NAFI's Chairman, Kathryn Smith

Friends and Colleagues,

Welcome to the International Symposium on Fire Investigation Science and Technology. We are pleased and honored that by joining us here you have expressed your confidence in what ISFI has been continually striving to achieve these last twenty years.

ISFI's goal is to promote the free expression and exchange of ideas on cutting edge fire investigation topics. To that end, I and my colleagues of the ISFI staff thank you for your interest and confidence in our endeavors.

We're sure you have some expectations of us. Please let the staff know if they can help you in any way. It is our intention to make every ISFI as enjoyable, interesting, educational and ground-breaking as is achievable.

To that end, I have some suggestions for you to increase your enjoyment and gain the most from the programs. We urge that you make the discussions lively, ask questions, and participate. ISFI works best when the delegates are engaged and dynamic, particularly in the new or controversial topics. We encourage you to attend as many of the lectures as possible. You are free to move about between sessions. Questions will be encouraged at the end of each individual presentation session.

In addition, please take advantage of attending the various social events which are an integral part of the ISFI experience. Networking with your fellow delegates and presenters can be the most stimulating and informative parts of the symposium.

Sincerely,

Kathryn Smith
Chairman, NAFI
International Symposium on Fire investigation Science and Technology

Sunday, September 15, 2024

5:00 PM - 6:30 PM

Delegate and Speaker Early Registration

Royal Foyer - Palms Conference Center

7:00 PM

Informal "Meet and Greet - No Host"

Barefoot Bar - Lagoon Pool

ISFI 2024 Admission to Sessions

Due to the public nature of the Hotel, your nametag is required for admission to **ALL** educational sessions, breaks and meals.

ISFI 2024 WiFi Access



Unfortunately WIFI is not available in the ISFI meeting spaces. Hotel guests can still enjoy free WIFI in areas outside of the meeting space. We understand that need to stay connected to family and work but due to the budgetary constraints it just was not feasible. We do sincerely apologize for any inconvenience this may cause.

ISFI Meeting Spaces



Royal Ballrooms
Palms Conference Center

Registration, Plenary Presentations and
Lunch

Nautilus A, B & C
Tower Conference Center 1st Floor

Breakout Lectures & Breaks

Monday, September 16, 2024

8:00 AM	Conference Registration			Royal Foyer
8:00 AM	Coffee and Tea Service Begins			
9:00 AM	PLENARY SESSION - WELCOMING REMARKS			Royal Ballrooms 1 & 2
9:30 AM	"BURNING DOWN THE HOUSE": FIRES FROM SELF-HEATING IGNITION SCENARIOS Elizabeth C. Buc (pg.3)			
10:15 AM	Break and Coffee & Tea Service Ends			
10:45 AM	DEVELOPMENT OF A SYSTEMATIC METHODOLOGY FOR RECONSTRUCTING THE FIRE SCENE BY USING THE ELECTRICAL SYSTEM Dr. Mark J. Svare; Dr. Niamh Nic Daeid (pg. 15)			
12:00 PM	Luncheon Buffet			Royal Ballroom 3
1:15 PM	BREAKOUT LECTURE SESSIONS			
Start Time	Room A - Nautilus A	Room B - Nautilus B	Room C - Nautilus C	
1:15 PM	DECISION MAKING IN FIRE INVESTIGATIONS: DETERMINATION RATE, ACCURACY, AND CONFIDENCE IN FIRE PATTERN ANALYSIS Tuomas Pälviä (pg.77)	THE CAUSES OF HIGH VOLTAGE (HV) FAILURES OF SWITCHGEAR AND SUBSEQUENT FIRES WITHIN SOLAR FARMS Dr. Nicholas (Nick) John Carey (pg. 123)	CASE STUDY: FIRE INVESTIGATION INVOLVING POLYMERIC MATERIALS AND THE POTENTIAL OF SELF HEATING AS A POSSIBLE IGNITION SOURCE Michael L. Hanks (pg. 165)	
1:55 PM	Break			
2:10 PM	SLIPPING THROUGH THE CRACKS – HOW UNDERGROUND GAS LEAKS CAN PREFERENTIALLY MIGRATE AND CAUSE EXPLOSIONS Tom DeBold; John Pagliaro; Scott Davis (pg. 89)	INVESTIGATION METHOD BASED ON ELECTRIC VEHICLE FIRE CASE Seung-Woo Woo; Sun-Jae Kim; Tae-Hun Kim (pg. 135)	CONSISTENT CLASSIFICATION OF FIRE PATTERNS WITH QUANTITATIVE SHAPE AND SPATIAL RELATIONSHIP ANALYSES WITHIN IMAGES Shuna Ni; Pengkun Liu; Jinxin Chen; Stanislav I. Stoliarov; Pingbo Tang (pg. 177)	
2:50 PM	Break			Afternoon Snack - Nautilus Foyer
3:05 PM	IGNITION OF FUEL GAS JETS FROM LEAKS IN RESIDENTIAL GAS PIPING Timothy L. Morse; Malima Wolf; Harri Kytomaa (pg. 101)	IS THE FIRE AN ARSON OR ACCIDENTAL ELECTRICAL: YOU BE THE JUDGE/JURY! Robert J. Trenkle (pg. 141)	GLASS ANALYSIS IN A METAL HALIDE LAMP WAREHOUSE FIRE INVESTIGATION Paul Verghese; Peter Lindahl; Harri Kytomaa; Matthew Little (pg. 191)	
3:45 PM	Break			
4:00 PM	METHODS FOR THE ANALYSIS OF GAS EXPLOSIONS May Yen; Alfonso Ibarreta; Khaled Hashad; Timothy Myers (pg. 111)	MAKING SENSE OF VOLTAGE MEASUREMENTS FROM BATTERY-POWERED SMOKE ALARMS IN FIRE INVESTIGATION Thomas M. Sing; Derek H. Geer (pg. 151)	O.S.H.A AND THE FIRE INVESTIGATOR (SAFETY) Jeffrey J. Washinger Sr.; Dr. Mark J. Svare (pg. 203)	
4:40 PM	Adjourn			

Tuesday, September 17, 2024

8:00 AM	Conference Registration			Royal Foyer
8:00 AM	Coffee and Tea Service Begins			
9:00 AM	PLENARY SESSION			Royal Ballrooms 1 & 2
9:00 AM	SMOKE ALARMS – PERFORMANCE AND FORENSIC CONSIDERATIONS Daniel T. Gottuk (pg. 29)			
10:15 AM	Break and Coffee & Tea Service Ends			
10:45 AM	ARTIFICIAL INTELLIGENCE IN FIRE AND EXPLOSION INVESTIGATION – A CAUTIONARY TALE Joseph M. Ellington (pg. 39)			
12:00 PM	Luncheon Buffet			Royal Ballroom 3
1:15 PM	BREAKOUT LECTURE SESSIONS			
Start Time	Room A - Nautilus A	Room B - Nautilus B	Room C - Nautilus C	
1:15 PM	REACTIVE PARTICULATE SOLIDS AND DUSTS Elizabeth C. Buc (pg. 213)	ODOR FADE: WHEN PROPANE TANKS NEED EXTRA CONDITIONING Scott Davis; John Pagliaro; Tom DeBold (pg. 263)	THE USE OF MATERIAL PROPERTIES, EXPERIMENTAL DATA, AND MODELING IN THE ANALYSIS OF FIRE INCIDENTS Daniel Madrzykowski; Jason Floyd (pg. 305)	
1:55 PM	Break			
2:10 PM	PROPOSED DIMENSIONLESS PARAMETERS FOR CORRELATING LONG-TERM, LOW-TEMPERATURE IGNITION OF WOOD Michael L. Hanks (pg. 225)	WRONGFUL CONVICTIONS RIGHTED: THE YEARS LONG JOURNEY Robert J. Trenkle (pg. 275)	PROPAGATING CIRCUIT BOARD FAILURES AND PRODUCT FIRES Jan Swart; Ruben Gameros-Ramos; Jeremiah Stepan (pg. 317)	
2:50 PM	Break			Afternoon Snack - Nautilus Foyer
3:05 PM	IMPACT OF ARCHITECTURAL FINISHES ON FIRE PATTERNS Shuna Ni; Nicolas Zefeng Lei Jinxin Chen; Stanislav I. Stoliarov (pg. 237)	DETERMINATION OF THE SOURCE OF FUEL GASES INVOLVED IN EXPLOSIONS Timothy J. Myers; Harry A. J. Watson; Tarek Saba (pg. 283)	INVESTIGATING SPONTANEOUS COMBUSTION AND FIRE PROTECTION AT AN INSULATING PANEL MANUFACTURING FACILITY Trevor M. Lardinois; Joshua Swan; Delmar "Trey" Morrison (pg. 331)	
3:45 PM	Break			
4:00 PM	REVIEW OF EXPERIMENTAL STUDIES INTO OXYGEN AVAILABILITY IN POST-FLASHOVER COMPARTMENT FIRES Nicholas W. Dow; Elizabeth Weckman; Charles Fleischmann (pg.249)	LESSONS LEARNED WHEN LOW-PRESSURE NATURAL GAS COMPONENTS ARE OVERPRESSURIZED Scott Davis; John Pagliaro; Tom DeBold (pg. 295)	THE ENERGY TRANSITION – HOW WILL IT IMPACT FIRE INVESTIGATION Achim Wechsung; Michael Orella; Kyle Kersey; Timothy J. Myers (pg. 341)	
4:40 PM	Adjourn			

Wednesday, September 18, 2024

8:00 AM	Conference Registration		Royal Foyer
8:00 AM	Coffee & Tea Service Begins		
9:00 AM	PLENARY SESSION		Royal Ballrooms 1 & 2
9:00 AM	PART 1 – 2012 FLAMINIA EXPLOSION AND FIRE HOW TO ACCURATELY PREDICT THERMAL RUNAWAY: EXPERIMENTAL STUDY INVOLVING LAB-SCALE AND FULL-SCALE TESTS (pg. 51)		
	PART 2 – 2012 FLAMINIA EXPLOSION AND FIRE INVESTIGATION FINDINGS AND LESSONS LEARNED FROM THE 2012 FLAMINIA INCIDENT (pg. 63) Scott Davis; John Pagliaro; Tom DeBold		
10:15 AM	Break and Coffee & Tea Service Ends		
11:00 AM	BREAKOUT LECTURE SESSIONS		
11:00 AM	Break		Afternoon Snack - Nautilus Foyer
Start Time	Room A - Nautilus A	Room B - Nautilus B	
11:15 AM	ELECTRONIC COMPONENT FLAME RETARDANTS AS FIRE CAUSES Richard J. Vicars; Kevin M. Hecksher (pg. 351)	POST-FIRE EVALUATION OF SPRINKLER SYSTEM PERFORMANCE – SOME METHODOLOGIES AND CASE STUDIES Kim R. Mniszewski (pg. 377)	
11:55 AM	Break		Afternoon Snack - Nautilus Foyer
12:10 PM	LITHIUM-ION BATTERY FIRE INVESTIGATION FUNDAMENTALS Achim Wechsung; Michael Barry; Georgios Dimitrakopoulos; Ryan Spray; Francesco Colella; Timothy J. Myers (pg. 365)	WHEN INVESTIGATORS RESIST THE SCIENTIFIC METHOD: A CASE STUDY SHOWING INCREASED BURNING HAZARDS CAUSED BY FLAME JETTING Scott Davis; Tom DeBold; John Pagliaro (pg. 389)	

ISFI 2024 Proceedings Book



ISFI Books are available for pre-order at www.NAFI.org/store until October 14, 2024. Books should be available for shipping in mid-October. Quantities will be limited.



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Talk to NAFI's Insurance Pro

Paulette Braga, CPCU CIC AAM CPII

NAFI office: 941-242-2323

Pbraga@nafi.org National Producer # 16388943

Over the last two decades the ISFI conference has emerged as the pre-eminent venue for technology transfer in the field of Fire Investigation.



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