

4th International Smoke Symposium (ISS4)
Leigh Perkins Conservation Education Center - Tallahassee, FL
March 23-27, 2026



Presented by International Association of Wildland Fire

Monday, March 23	
8:00 - 9:00	Shuttle provided from Tallahassee (Springhill Suites, Hampton Inn, Hilton Garden Inn)
8:00 - 5:00	Registration desk hours
	WORKSHOPS
9:00 - 11:00	Room B - FireSat for Smoke: Practical Tools, Early Insights, and Research Opportunities <i>(remote participation available)</i> Ann Kapusta and Dr. Michael Falkowski, Earth Fire Alliance
9:00 - 1:00	Room C - Prescribed Fire and Wildfire Exceptional Events Resources and Tools <i>(remote participation available)</i> James Boylan, Georgia Department of Natural Resources; Rick Gillam, U.S. EPA Region 4, Mary Uhl, Western States Air Resources Council (WESTAR), Cory Mocka, Supervisory Physical Scientist, U.S. EPA
1:00 - 2:00	Lunch (provided)
1:00 - 2:00	Shuttle provided to and from Tallahassee (Springhill Suites, Hampton Inn, Hilton Garden Inn)
	WORKSHOPS
2:00 - 6:00	Room A - Southeast Prescribed Fire and Air Quality Summit Meeting (invite only)
2:00 - 6:00	Room B - NASA Satellite Observations and Tools for Fire and Smoke Monitoring Aaron Naeger, NASA Marshall Space Flight Center; Carl Malings (MSU, NASA GSFC) Kristina Pistone (BAERI, NASA ARC) Caterina Mogno (UMBC, NASA GSFC)
2:00 - 6:00	Room C - Wildland Fire Smoke Modeling using BlueSky Playground Marlin E Martínez, University of Washington, Susan M. O'Neill, Sim Larkin, USDA Forest Service
6:00	Shuttle provided to Tallahassee (Springhill Suites, Hampton Inn, Hilton Garden Inn)

Tuesday, March 24	
7:30 - 8:30	Shuttle provided from Tallahassee (Springhill Suites, Hampton Inn, Hilton Garden Inn)
7:30 - 5:00	Registration desk hours
8:30 - 8:45	Opening Remarks: Trevor Howard, IAWF President and Peter Lahm, ISS4 Chair
8:45 - 9:30	Keynote Presentation: Aaron Naeger, Physical Research Scientist, NASA Marshall Space Flight Center
9:30 - 10:00	<i>Networking Break with exhibitors and sponsors</i>

	Room A	Room B	Room C
	Smoke Modeling & Observations	Smoke Management and Communication	Special Session
	Moderator: Nathan Pavlovic	Moderator: Mary Uhl	Moderator: Holly Nowell
10:10 - 10:30	Mass and Elemental Composition of Wildfire Emissions Deposition Across a 40 km Downwind Transect* - Facundo Scordo	Smoke Science Resources for Extension and Outreach to Support Local Communities David Godwin	The Albany Pilot Project: A Model for Fire, Air Quality, and Multi-Level Collaboration Clay Sisson, Holly Nowell, James Boylan, Thomas Barrett
10:30 - 10:50	Population Exposure and Health Impacts of Prescribed Burns in California* Rashmi Rajput	Understanding Communication Preferences Among Susceptible Populations During Smoke Events: A Case Study from Eastern Oregon* William Toombs	
10:50 - 11:10	PAHs in Smoke from Various WUI Fire Fuels: Cars, Trees, And Construction Materials - Aika Davis	Comparative Evaluation of MERV 13 Air Filter Performance for Salt Aerosols and Simulated Wildfire Smoke* Nour Elsagan	
11:10 - 11:30	Addressing Non-Negligible Uncertainties in Non-Methane Organic Compound Emission Factors is Needed for Improving Smoke Impact Assessments Kelley Barsanti	Prescribed Burn Associations John McGuire	
11:30 - 11:50	Satellite-Informed Machine Learning Bias Correction of Wildfire Plume Injection Heights Mohammad Astaneh	Communicating Wildfire Risk Alex Griffith	Applying Research to Address Peat Fires in Malaysia Moderator: Adam Watts Dayang Nur Sakinah Musa, Ahmad Faiz Tharima, Azfarizal bin Mukhtar, Emadeldeen Hamdan and Enis Cetin

11:50 - 12:10			
12:10 - 1:40	Poster Session and Lunch (provided) - 12:45 pm live poster presentations in Room B		
POSTER PRESENTATIONS	Employing Historical Wildfire Growth Data for Characterizing Diurnal Fire Behavior and Smoke Emissions - Michael Billmire	Integrated Research Management Team Supporting Coproduction of Wildland Fire Science James Furman	Field Testing of Air Scrubbers at a Wildfire Incident Command Post Paul Corrigan
	Assessment of national meteorological dispersion forecasts and methods Tim Brown	Development of a unified prescribed fire database and accompanying dashboard for the U.S Amy Marsha	Evaluation of EBAM Performance in Low PM2.5 Concentrations and Higher Relative Humidity Environment – Expectations, Data Utility, Recommendations - Susan O'Neill
	The Latest Annual Prescribed Fire Use Surveys for 2022 and 2023 Peter Lahm	Calculating daily average PM2.5 emissions using burn authorizations across Florida given vegetation and crop type Hannah Schley	Challenges of Carbon Monoxide Monitoring using Low Cost Sensors in Wildland Fire Smoke Situations Josh Hall
	Assessing impacts of climate change and human population growth on forest fire potential in the tropics: Case of the Tain II Forest Reserve in Ghana* Eric Osei-Kwarteng	PM2.5 emissions from laboratory burning of southeastern forest fuels Yongqiang Liu	
	Smoke Modeling & Observations	Public and Occupational Health Impacts	Remote Sensing: Tools, Insights, Visions
	Moderator: Hannah Schley	Moderator: Marlin Martinez	Moderator: Amber Soja
1:50 - 2:10	Trans-Atlantic smoke transport and air quality impacts of Canadian wildfires in summer 2025* Mark Parrington	Air Pollution Emissions and Public Health Impacts from 2022 Mosquito Wildfire* Bruce Springsteen	Linking Fire Behavior and Smoke Impacts: FireSat's Role in Supporting Air Quality and Health Research Ann Kapusta
2:10 - 2:30	Coupled fire and smoke modeling for prescribed fire applications Sara Brambilla	How Long Can Gaseous Contamination Persist Indoors from Wildland-Urban Interface (WUI) Fire Smoke? Michael Link	Idealized Numerical Simulations of Prescribed Fires and the Application of a Multistatic Radar Emulator - Emma Miller
2:30 - 2:50	Application of a simplified smoke emissions and dispersion model for tracking smoke plumes on a regional scale Mark Schaaf	Smoke Emissions Tradeoffs in California with Increased Prescribed Fire Activity Kelley Barsanti	Satellite-constrained Evaluation of RRFS-Smoke predicted Wildfire Smoke Vertical Placement and Column Loading for Summer of 2025* Ravan Ahmadov / Sudheer Bhimireddy
2:50 - 3:10	Uncovering Key Drivers of Prescribed Burn Smoke Impacts Using Air Quality Modeling and Machine Learning Amirhossein Ghajari		Announcing INFLAMES: the Interdisciplinary Network for Fire research from Low Earth Orbit Atmospheric Measurements* Gerbrand Koren
3:10 - 3:40	<i>Networking Break with exhibitors and sponsors</i>		
3:45 - 5:00	General Session Panel: Personnel Smoke Impacts Moderator: Peter Lahm, USDA Forest Service Kathleen Navarro DuBose, PhD, MPH, Program Director, Environmental and Occupational Health, U.S. DOI Mike Wilson, Ph.D, MPH, CIH, Senior Industrial Hygienist, Research and Standards, Cal/OSHA Alex Mayer, Health Scientist, National Institute for Occupational Safety and Health (NIOSH)		
5:00 - 5:10	IAWF International Wildland Fire Safety Award Presentation		
5:10 - 7:00	Social reception with exhibitors and sponsors		
7:00	Shuttle provided to Tallahassee		
Wednesday, March 25			
7:30 - 8:30	Shuttle provided from Tallahassee		
7:30 - 5:00	Registration desk open		
8:30 - 9:30	Keynote Presentation - Michael Boren, Under Secretary of Agriculture for Natural Resources and Environment		
9:30 - 10:00	<i>Networking Break with exhibitors and sponsors</i>		
	Room A	Room B	Room C
	Smoke Modeling & Observations	Emerging Technologies and Tools	Special Session
	Moderator: Nancy French	Moderator: Mary Uhl	Moderator: Jennifer Fawcett

10:10 - 10:30	Towards understanding emission characteristics during wildland-urban interface (WUI) fires* - Sayaka Suzuki	Quantifying Emissions from Fuels Commonly found within Wildland Urban Interface Structures Bryce Bathras	How to best communicate about smoke and fires Patrick Merle, Jess Downey; Heidi Huber-Stearns, Olivia Bullock, Hollie Smith
10:30 - 10:50	Composition of gases in a longleaf pine diffusion flame Shawn Urbanski	Advancements of smoke asphyxiant modeling in QUIC-Fire Alexander Josephson	
10:50 - 11:10	Understanding Wildfire and Prescribed-Burning Smoke over California using MUSICAVO Wenfu Tang	Parcel-Scale House Fuel Load and Fire Damage Risk Assessment in Wildland Urban Interface Yifei Ding	
11:10 - 11:30	Vegetation Fires and Smoke Pollution Warning and Advisory System, global and European perspective - Mikhail Sofiev	Learning Smoke Plume and Fire Spread Dynamics Using Machine Learning-Based Techniques Jhamieka Greenwood	
11:30 - 11:50	Wildfire Smoke Modelling at Regional and Local Scales: Insights from Sweden and Italy* Ana Isabel Miranda	High spatiotemporal resolution estimates of wildfire smoke exposure with machine learning, low cost sensors, and satellite data Nathan Pavlovic	
11:50 - 1:20	Lunch (provided)		
	Smoke Modeling & Observations	Public and Occupational Health Impacts	Special Session
	Moderator:	Moderator: Kelley Barsanti	Moderator: Erika Sasser
1:30-1:50	From Satellite to Machine Learning: Predicting Wildfire Plume Injection Heights across the Western United States - Xu Feng	The changing landscape of wildfire smoke exposure in Canada: Analyzing the impact of wildfire smoke on air quality between 2010 – 2023 using CanOSEM* - Naman Paul	Building Smoke-Ready Communities: Strategies for Health, Equity, and Resilience* Heidi Huber-Stearns, Jess Downey, Liz Walker and Laurel Kays
1:50 - 2:10	Comparison of Radar-Observed and Simulated Wildland Fire Plume and Ember Transport Jie Sun	The Multiyear Wildfire Smoke Exposure (MultiWiSE) Metrics: Characterizing Episodic PM2.5 Exposure for Studies on Long-Term Health Effects* - Stephanie Cleland	
2:10- 2:30	A Multi-Scale Measurement of Fire and Plume Transport Through a Forest Canopy - Weixuan Gong	Burning Questions: How Wildfire Smoke Impacts the Brain* Anthony White	
2:30 - 2:50	Fuel Moisture–Driven Variations in Smoke Plume Dynamics Neda Yaghoobian	Bushfire Emissions: Evaluating the Impact on Air Quality and Human Health in the Northern Territory - Hafsa Yousuf Nipa	Roundtable on Recent Experiences with Prescribed Fires and Air Quality Data Corey Mocka
2:50 - 3:10	A 2-D, nonhydrostatic, compressible model for fire plume dynamics Branson Starr	Community Preferences for Wildfire Smoke Mitigation and Adaptation Strategies in British Columbia's Wildland–Urban Interface* Dilshani Ranasinghe	
3:10 - 3:40	Networking Break with exhibitors and sponsors		
3:45 - 5:00	General Session Panel: Smoke Modeling: Needs, Capabilities, Gaps, and Moving the Science Forward Two part panel representing smoke operational user needs and the modelers who work to meet those needs. The discussion will cover existing capabilities, where are the gaps, and how to do we come together to make progress. Moderator: Sim Larkin, USDA Forest Service Users: - Kevin Hiers, Department of Defense SERDP/ESTCP - Pete Lahm, USDA Forest Service - Josh Hall, USDA Forest Service -Modelers: - Ravan Ahmadov, National Oceanic and Atmospheric Administration (NOAA) - Fabienne Reisen, Commonwealth Scientific and Industrial Research Organization (CSIRO), Australia - Susan O'Neill, USDA Forest Service - Adam Kochanski, San Jose State University		
5:00 - 5:10	IAWF Early Career Award in Fire Science Presentation		
5:00 - 6:30	Happy Hour with Exhibitors and Sponsors Wagon Ride around Tall Timbers		
6:30	Shuttle provided to Tallahassee		
Thursday, March 26			
7:30 - 8:30	Shuttle provided from Tallahassee		
7:30 - 5:00	Registration desk open		
8:30 - 9:30	Keynote Presentation: Reading Smoke Signals: Landowner Experience - Heather Brasell, Landowner		
9:30 - 10:00	Networking Break with exhibitors and sponsors		
	Room A	Room B	Room C

	Emerging technologies and tools	Smoke Management and Communication	Special Session
	Moderator: Holly Nowell	Moderator: Jeremy Green	Moderator: Paul Catlett
10:00 - 10:20	Guiding Air Quality Monitoring: Field Evaluation of Air Quality Sensors in Southeastern U.S. Tanvir Khan	With Fire Comes Smoke: Aligning Forest Management and Public Health Communications for Air Quality Rachel McIntosh-Kastrinsky/Kayla McCauley	Operational Approaches to Reducing Exposure Hazards on the Fireline* Susan Kidnie, Drew Lichty, Kelcey Stricker
10:20 - 10:40	Incentivizing Decentralized IoT Networks to Enhance Smoke Detector Coverage in the Wildland-Urban Interface* Jyun-Fan Tsai	Event-based insights into resident perceptions of smoke following two prescribed fires in Flagstaff, Arizona* Sarah Devenport	
10:40 - 11:00	Performance Testing of Seven Commercially Available and Research Grade Carbon Monoxide Sensors for Use in Wildland Fire Smoke Situations - Josh Hall	The Global Forest Fire Emissions Prediction System (GFFEPS)* Kerry Anderson	
11:00 - 11:20	SMesh: Real-Time Radio Sensor Networks for Prescribed Fire Smoke Management* Jessica Yu	Actionable Evidence from a Comparative Project on Resilience and Responses to Smoke Events Nicholas Perry	
11:20 - 11:40	Ground-based wildfire detection cameras - how well do they work?* Gavin Hough	Wildfire Smoke's Role in PM-2.5 and Ozone Concentrations in The Great Lakes Region* Alec Kownacki	Regulatory Improving Fuels and Consumption for Fire Emissions Inventory Nancy French
11:40 - 12:00	Integrated Research Management Team Supporting Coproduction of Wildland Fire Science James Furman	Understanding Lightning Driven Fires and Community Smoke Risk Along Zimbabwes Great Dyke Corridor* Willson Chimwedzi	Effect of season of fire on fuel consumption and estimated PM2.5 emissions in a southeastern U.S. pine savanna - Kevin Robertson
12:00 - 12:20	Smoke research and tools at the U. S. Forest Service Sim Larkin	Fire and Air at the Same Table: Lessons from a Decade of Collaboration Jennifer Fawcett	Changes in Wildland Fire Emissions Estimation Methods and Trends in the US EPA National Emissions Inventory James Beidler
12:20 - 1:20	Lunch (provided)		
	Mitigation and Science: Reaching a balance moving forward	Smoke Management and Communication	Smoke Modeling & Observations
	Moderator: Amber Soja	Moderator: Mary Uhl	Moderator: Rick Gillam
1:30 - 1:50	The Challenge of BIG Prescribed Fires Peter Lahm	Evaluating Indoor Air Cleaning Effectiveness during Wildland-Urban Interface Fire Events: Insights from a Controlled Residential Study Nathan Lima	Evaluating and improving modeled smoke vertical distribution and surface concentrations for the 2020 western US wildfires* - Mackenzie Arnold
1:50 - 2:10	Computing monthly average PM _{2.5} for ecounits in California to assess the direct health benefits of future potential limiting of wildfire smoke impacts - Tim Brown	Can mechanical fuel treatments and prescribed fires provide long-term air quality benefits by reducing future smoke emissions? Shawn Urbanski	Pathogenic fungi from wildfire smoke common across regions and positive for infectious disease in animal models* Leda Kobziar
2:10 - 2:30	Development of Weather Scenarios That May Result in Smoke-Induced Fog - Matthew Pace	Integrating Public Health into Upstream Wildfire Management* Savannah D'Evelyn/Maya Puggarana	Weather Tools for Smoke Forecasting* Joseph Charney
2:30 - 2:50	Preventing Catastrophic Wildfires: Annual Grid Inspection and Maintenance Plan* Abolfazl Taghavi	Hot Spots and Hot Moments in Prescribed Fire across the Southeastern US: Using Permit Data for Advocacy and Policy Change Karen Cummins	Fire Dynamic Vision: A Tool for Tracking and Characterizing Smoke Plumes in Prescribed and Wildland Fires Bryan Quaife
2:50 - 3:10	Field Testing of Air Scrubbers at a Wildfire Incident Command Post Paul Corrigan	Assessing Consistency in Fuel Consumed between Activity-based Wildfire Emission Estimates* - Pablo Saide	
3:10 - 3:30		Enhancing Fuels in Large-scale Models by Connecting Ground-based Fuels (FCCS) Amber Soja	Evaluating FirePixels: A multi-layered framework for smoke emission estimation using recent Australian bushfire case studies* - Fabienne Reisen
3:30 - 3:45	Networking break		

3:45 - 5:00	<p>General session panel: Wildland Fire Smoke and Health and Future Research Jason Sacks and Erika Sasser, Environmental Protection Agency (facilitators) Dr. Colleen Reid, Director of the Public Health Program, Associate Professor in Geography, Faculty Fellow of the Institute of Behavioral Science, University of Colorado Boulder Dr. Fernando Garcia-Menendez, Associate Professor, Department of Civil, Construction, and Environmental Engineering, NC State University Dr. Stephanie Cleland, Assistant Professor, Simon Fraser University / Vancouver Coastal Health Research Institute</p>
5:00	Shuttle provided to Tallahassee
Friday, March 27	
8:00 - 9:00	Shuttle provided from Tallahassee
9:00 - 4:00	Field Trip One: Fire on the Ground, Smoke in the Air: Science and Collaboration in Prescribed Burning
9:00 - 4:00	Field Trip Two: Fire on the Edge: Burning Next to Communities
4:00	Shuttle provided to Tallahassee