Tentative Program Schedule - UC DAVIS CALIFORNIA

UC Davis Activities Recreation Center (ARC) Conference Center

All sessions will be either presented or live streamed at both locations simultaneously, which the exception of a few who will video taped and repeated. Sessions presented in Raleigh will be live streamed to UC Davis, and sessions presented in Davis will be live streamed to Raleigh.

Tuesday, April 21, 2020

Pacific Time		UC Davis			
7:00-5:00		Registration Desk Open			
		Ballroom A/B			
8:00-9:30		**Welcome and Introductions** **Keynote Panel - Federal Leadership on Wildland Fire Smoke** *(Live Streaming from Raleigh)* ➢ James Hubbard, USDA Under Secretary for Natural Resources and the Environment ➢ Erik Svendson, Division Director, Centers for Disease Control and Prevention ➢ Susan Combs, Assistant Secretary of Policy, Management and Budget at the U.S. Department of the Interior ➢ Representative from Enviromental Protection Agency			
9:30-10:15		Networking Break			
		Ballroom A/B *(Live)*	**Room 1** *(Live Streaming from Raleigh)*	**Room 2** *(Live Streaming from Raleigh)*	**Room 3** *(Live Streaming from Raleigh)*
		Special Session: How Smoke Impacts on Air Quality Affect Decisions on Prescribed Fires in Forests: Current Approaches and Research Needs	**Emissions**	**Observations**	**Smoke Management**
		Moderator: Meredith Kurpius	Moderator:	Moderator:	Moderator:
10:15-10:30		Prescribed Fires and Prescriptions for Health: Short-Term Exposures, Research Gaps and Community Engagement (Goldfarb, Trenga)	Emissions from a Tropical Peatland Wildfire Experiment: from Ignition to Spread to Suppression (Hu)	Nitrogen in wildfire smoke: how much is there and what happens to it? (Lindaas)	Insights From Smoke Management Collaboration in the Eastern Sierra Nevada (Mueller)
10:30-10:45		AQ Management Tools to Support Prescribed Burning Increases (Vlasek)	Emissions of volatile organic compounds from Western U.S. wildfires measured during WE-CAN (Permar)	Smoke tracking with SensorMap: Combining regulatory and Purple Air data to fill in gaps in the PM2.5 network (Creswell)	Practitioner Smoke Management Ignition Techniques to Mitigate Emissions (Croft)
10:45-11:00		Rx Fire Decision Making in WA State (Kelly)	Global Biomass Burning Emissions Product from MODIS and VIIRS Active Fire Detections (Zhang)	Validating wildfire smoke transport within a coupled fire-atmosphere model using a novel high-density instrumentation network (Mallia)	Assigning Fire Size Based on Satellite Fire Detections (Marsha)
11:00-11:15		The Colorado Approach to Smoke Permitting for Prescribed Fire (Lebeda)	The effect of fire emission factor uncertainty on global chemistry simulations (Buchholz)	An Open Source R package for Purple Air Data Analysis (Callahan)	Campaign support forecasting facilitates information based deployment decisions (Lee)
11:15-11:30		Montana/Idaho Smoke: Coordinating Interstate Smoke from Prescribed Burning (Morphis *in Raleigh*)	A new way to predict emission factors – a compositional data approach (Weise)	An overview of small fire sampling during FIREX-AQ (Crawford)	Canadian Health Portfolio Wildfire Emergency Response (Beaulac)
11:30-11:45			Emission Factors from Rangeland Prescribed Burns in the Kansas Flint Hills (Aurell)	Building the Right Solution for Real-Time Smoke Monitoring Deployments (Fyfe)	Challenges of Smoke Forecasting on Mendocino Complex Fire (Anderson)

11:45-12:00		Panel Discussion	Emission Factors of Gaseous and Particulate Air Pollutants from the Simulated African Biomass Burning (Pokhrel)	Characteristics and evolution of particles and gases in a Canadian boreal forest wild fire plume (Hayden)	Model Performance and Sensitivity Analysis of 2016 Western North Carolina Wildfire Events (Afrin)
12:00-12:45		**Lunch - provided**			
		Ballroom A/B *(Live)*	**Room 1** *(Live Streaming from Raleigh)*	**Room 2** *(Live Streaming from Raleigh)*	**Room 3** *(Live Streaming from Raleigh)*
		Climate Change and Emissions	**Health Impacts**	**Observations**	**Smoke Modeling**
		Moderator:	Moderator:	Moderator:	Moderator:
12:45 -1:00		**IGNITE TALKS (5 minutes each)** 1. The JFSP Fire Science Exchange Network (Frederick) 2. Advantages to Prescribed Burnings from a Smoke Generation Perspective (Josephson) 3. Calculating the Existing Debt and Annual Smoke Deficit in Sierra Nevada Forests (Tarnay)	Association between sub-daily exposure to fine particulate matter and ambulance dispatches during wildfire seasons (Henderson)	Combining global observations and models to monitor wildfires, smoke and their impact on air quality (Parrington)	The role of the fire-atmosphere coupling in high smoke concentration episodes in complex terrain (Kochanski)
1:00-1:15		Impact of Anthropogenic Climate Change on the Diablo Winds Associated with Wildfires in California (Liu)	Better Science Through Co-Production (Eyamie)	Comparison of Ozone Measurement Methods in Biomass Burning Plumes (R. Long)	A comparative study of fire emissions and smoke transport in two major wildfire regions of China (Zhao)
1:15-1:30		Comparing Smoke Impacts from Future Wildland Fires under Alternative Forest Management Regimes (Long)	Communication Interventions for Public Health Protection from Wildland Fire Smoke: A Scoping Review (Michael)	Connecting Crop Productivity, Residue Fires, and Air Quality over Northern India: A Long-term Inference from NASA A-train Satellites (Jethva)	A Numerical Modeling Study of Smoke Dispersion and the Ventilation Index in Southwestern Colorado (Kiefer)
1:30-1:45		A Framework for Assessment and Mitigation of Wildfire-induced Air Pollution Considering Climate Change (Barbato)	Effect modification of the association between wildfire smoke and respiratory health by area-level measures of socio-economic status and race/ethnicity (Reid)	Ecosystem impacts in the atmosphere: How much fuel goes up in smoke? (Volkamer)	Air quality and aerosol predictions at NOAA/National Weather Service and their applications (Stajner)
1:45-2:00		The impact of smoke exposure on grape and wine composition and the development of smoke taint. (Oberholster)	Evaluating the Acute Health Impact of PM2.5 Exposure During the October 2017 California Wildfires (Cleland)	Environmental Controls on the Physical and Optical Properties of Biomass Burning Aerosols Measured during FIREX-AQ (Wiggins)	An updated wildfire emissions system in the National Air Quality Forecasting Capability: Application and evaluation for wildfire events in August 2019 (Campbell)
2:00-2:15		Break			
2:15-2:30		Effect of Moisture Content and Fuel Type on Emissions (Garg)	Exploring the role of volatile organic compounds (VOCs) in the respiratory risk associated with wildland fire smoke (Henderson)	In-Situ Trace Gas Ratios Measured During the 2019 FIREX-AQ Airborne Field Campaign (Halliday)	Ensemble Approach to Modeling and Identifying Smoke Impacts to WUI in Arizona (Pace)
2:30-2:45		Smoke Management: The Risk Factor (Hobbs)	Hazardous Air Pollutants (HAPs) in Fresh and Aged Western US Wildfire Smoke (O'Dell)	Molecular characterization and effect of combustion efficiency on organic aerosol emitted in smoke during controlled laboratory combustion of ponderosa pine needles and fine woody debris (Jaoui)	Environment and Climate Change Canada's wildland fire smoke modelling applications and forecast services: informing the public, delivering critical information for decision making and supporting international initiatives (Davignon)
2:45-3:00		Experiments to Measure Smoldering Behavior in Simulated Wildland Fuels (Cobian-Iñiguez)	Health Impact Analysis of Wildfire Smoke in Canada (Matz)	PurpleAir PM2.5 U.S. Correction and Performance During Smoke Events (Johnson Barkjohn)	Evaluation of biomass burning smoke forecasts over the Western U.S. during the FIREX-AQ 2019 field campaign (Saide)
3:00-3:15			Integrating Data from Sensors with Regulatory Monitors during Wildfire Smoke Events (Stone)	Smoke Observations by LIDAR and Sun Photometer Mobile Measurements during FIREX-AQ Campaign in summer 2019 (Popovici)	Evaluation of smoke modeling tools used for estimating prescribed burning air quality impacts (Johnson)

3:15-3:30			Knowing Your Audience: A Typology of Smoke Sense Participants to Inform Wildland Fire Smoke Health Risk Communication (Hano)	Smoke Particle Size Distributions and Their Downwind Evolution Observed During FIREX-AQ (Moore)	Using climate models to schedule future prescribed fires: A case study from Central Washington, USA (Podschwit*)*
3:30-4:30		Poster Session (Students and Early Career)			
4:30-6:30		Evening Networking			
Wednesday, April 22, 2020					
Pacific Time		**UC Davis**			
7:00-5:00		Registration Desk Open			
		Ballroom A/B			
8:00-9:00		**Building Coalitions and Enhancing Communication Among Stakeholder Communities Panel** *(Live streaming from Raleigh)* ➢ Beverly Bannister, Program Manager, EPA, Faciliator ➢ Douglas Watson, Chief, Air Monitoring and Planning Section Meteorologist, KDHE-BOA ➢ Darryl Jones, Forest Protection Chief for South Carolina Forestry Commission Other TBD			
9:00-9:45		Networking Break			
		Ballroom A/B *(Live)*		**Room 1** *(Live Streaming from Raleigh)*	**Room 2** *(Live Streaming from Raleigh)*
		UC Davis Wildfire & Smoke Health Summit Sponsored by the UC Davis School of Medicine and the UC Davis Office of Research		**Special Session: FASMEE**	**Special Session: Smoke Management in the Southeast: Highlights of Highly Effective Collaboration between State Fire/Forestry, State Air Quality Agencies, and Non-Governmental Organizations (NGOs) across the Southeast**
		Moderator: Angela Haczku & Bryn Wilson		Moderator: Roger Ottmar	Moderator:
9:45-10:25	UC Davis Health Summit	Kenneth W Kizer (Atlas Research)	9:45-10:00	Fire And Smoke Model Evaluation Experiment (FASMEE)--Overview of the Project (Ottmar)	Prescribed Fire and Air Quality in the Southeast: EPA Perspectives on Successful Collaboration for Prescribed Fire Smoke Management (Gillam)
10:25-10:45		Irva Hertz-Picciotto (UCD SOM)	10:00-10:15	The Fire And Smoke Model Evaluation Experiment (FASMEE) Western Wildfire and Southwest Campaign: characterizing the source for fuels, fuel consumption, and total smoke (Ottmar)	Confronting the Issues Air Quality and Wildland Smoke In South Carolina (Jones)
10:45-11:05		Kent Pinkerton (UCD SOM)	10:15-10:30	FASMEE Western Wildfire Campaign: Fuel consumption maps to reduce uncertainties in emissions (Hudak)	Southeast Prescribed Fire and Air Quality Workgroup: Addressing Tomorrow's Challenges Today (Davis)
11:05-11:25		Tina Palmieri (UCD SOM)	10:30-10:45	Direct Measurement of Flame Energy Release from Ground Based Sensors in FASMEE Manning Creek Rx Burn (Jimenez)	Development and Implementation of a Smoke Management Program in North Carolina (Speary)
11:25-11:35		Edgar Olineka (Penryn Fire Protection District)	10:45-11:00	Wildland fire emissions and atmospheric measurements from unmanned aircraft systems to support FASMEE (Watts)	Collaboration Between Agencies for Protection of Air Quality in North Carolina (Strait)
			11:00-11:15	Microbial Emissions affect Biodiversity and Ice Nucleation Potential in FASMEE Smoke Plumes (Kobziar)	Special Session (Still coming)

11:35-11:45		Bryn Wilson (OBGYN resident, UCD SOM)	11:15-11:30	Fire Radiative Energy for Quantifying Wildland Fire Effects using FASMEE and FIREX-AQ Data of the 2019 Williams Flats Fire (French - *from Davis)*	Discussion
			11:30-11:45	Modeling support for FASMEE western campaign (Kochanski)	Discussion
11:45-12:30		**Lunch - provided**			
		Ballroom A/B		**Room 1 (Live Streaming from Raleigh)**	**Room 2 (Live Streaming from Raleigh)**
		UC Davis Health Summit		**Observations**	**Special Session: Emerging Plume Rise Characterization Approaches**
		Moderator: Tony Wexler & Tina Palmieri		Moderator:	Moderator:
12:30-1:10	UC Davis Health Summit	Camille Raynes-Greenow (University of Sydney, Australia)	12:30-12:45	IGNITE TALK Field data? FIELD DATA! – Learning more about smoke from small fires during the NOAA/NASA FIREX-AQ campaign (McCarty)	A review of approaches to estimate wildfire plume injection height within large-scale atmospheric chemical transport models (Frietas)
			12:45-1:00	The Mother of all PyroCbs: How did the Pacific Northwest PyroCb Event in 2017 Stand Out? (Fromm)	Plume Rise Models: An Evaluation of Implementation and Performance (Urbanski)
1:10-1:30		Rebecca Schmidt (UCD SOM)	1:00-1:15	Use of Lightning Data as a Supplementary Tool for Smoke Monitoring (Vagasky)	Parameterization of fire plume rise in HRRR-Smoke (Ahmadov)
			1:15-1:30	Using column measurements to evaluate the impacts of wildfires: Emission fluxes and enhancement ratios (Zarzana)	How Well Can We Estimate Fire Emissions Using Satellites? Assessing Five Bottom-up and Top-down Fire Products during the 2018 Camp Fires in California (Tong)
1:30-1:50		Lisa A Miller (UCD SVM)	1:30-1:45	Using lower cost sensors to establish citizen-based monitoring networks in smoke-impacted regions (Ford)	CALIOP-based Biomass Burning Smoke Plume Height (Soja)
1:50-2:10		Angela Haczku (UCD SOM)	1:45-2:00	Western wildfire observation during Fire Influence on Regional to Global Environments and Air Quality (FIREX-AQ) (Warneke)	Quantifying the Impact of Intense Pyroconvection on Stratospheric Aerosol Loading (Peterson)
2:10-2:30		Nick Kenyon (UCD SOM)	2:00-2:15	Wildfire aerosol and gas-phase measurements from a NOAA Twin Otter during the 2019 Fire Influence on Regional to Global Environments and Air Quality (FIREX-AQ) Study (Middlebrook)	Improving Daily Surface Particulate Matter Estimates during Extreme Fire Events using a Novel NASA Satellite Plume Injection Height Algorithm (Loria-Salazar)
			2:15-2:30	Ceilometers and other tools for determining vertical distributions of smoke (Creswell)	Detecting Nighttime Fire Combustion Efficiency and Characterizing Plume Rise from Space (Wang)
2:30-2:45		Break			
		Ballroom A/B *(Live)*	**Room 1** *(Pre-recorded streaming from from Raleigh)*	**Room 2** *(Pre-recorded streaming from from Raleigh)*	
		Special Session: Keys to Successful Prescribed and Managed Burns	**Special Session: FASMEE**	**Special Session: Emerging Plume Rise Characterization Approaches**	
		Moderator: Greg Vlasek	Moderator: Roger Ottmar	Moderator:	
2:45-3:00		Introducing the California Joint Prescribed Fire Monitoring Program (Restaino)	Fire And Smoke Model Evaluation Experiment (FASMEE)--Overview of the Project (Ottmar)	A review of approaches to estimate wildfire plume injection height within large-scale atmospheric chemical transport models (Frietas)	

3:00-3:15		Smoke impacts from Prescribed Burns in NSW Australia (Price)	The Fire And Smoke Model Evaluation Experiment (FASMEE) Western Wildfire and Southwest Campaign: characterizing the source	Plume Rise Models: An Evaluation of Implementation and Performance (Urbanski)
3:15-3:30		Historical requests and occurrence of weather conditions for prescribed fires in Chelan County, Washington State, USA (Miller from Raleigh)	FASMEE Western Wildfire Campaign: Fuel consumption maps to reduce uncertainties in emissions (Hudak)	Parameterization of fire plume rise in HRRR-Smoke (Ahmadov)
3:30-3:45		Collaboration Efforts on Prescribed Fires in the Tahoe Basin (Hunter)	Direct Measurement of Flame Energy Release from Ground Based Sensors in FASMEE Manning Creek Rx Burn (Jimenez)	How Well Can We Estimate Fire Emissions Using Satellites? Assessing Five Bottom-up and Top-down Fire Products during the 2018 Camp Fires in California (Tong)
3:45-4:00		Special Session	Wildland fire emissions and atmospheric measurements from unmanned aircraft systems to support FASMEE (Watts)	CALIOP-based Biomass Burning Smoke Plume Height (Soja)
4:00-4:15		Special Session	Microbial Emissions affect Biodiversity and Ice Nucleation Potential in FASMEE Smoke Plumes (Kobziar)	Quantifying the Impact of Intense Pyroconvection on Stratospheric Aerosol Loading (Peterson)
4:15-4:45		Panel Discussion	Fire Radiative Energy for Quantifying Wildland Fire Effects using FASMEE and FIREX-AQ Data of the 2019 Williams Flats Fire (French - *from Davis)*	Improving Daily Surface Particulate Matter Estimates during Extreme Fire Events using a Novel NASA Satellite Plume Injection Height Algorithm (Loria-Salazar)
			Modeling support for FASMEE western campaign (Kochanski)	Detecting Nighttime Fire Combustion Efficiency and Characterizing Plume Rise from Space (Wang)
4:45-5:30		**Poster Session**		

Thursday - April 23, 2020

Pacific Time		**UC Davis**		
		Ballroom A/B *(Live)*	**Room 1** *(Live streaming from Raleigh)*	**Room 2** *(Live streaming from Raleigh)*
			Smoke Management	**Smoke Modeling**
			Moderator	**Moderator**
6:00-6:15			Current operational products for smoke management, Part 1: Desert Research Institute (Brown)	Impacts of sugarcane fires and sugar mills on PM2.5 air quality in South Florida (Nowell)
6:15-6:30			Current operational products for smoke management, part 2: Interagency Wildland Fire Air Quality Response Program (Larkin)	PB-Piedmont a Decision Support Tool for Wildland Smoke on Roadways (Curcio)
6:30-6:45			Evaluating the Performance of Multi-Pollutant Sensor Pods in Biomass Combustion Smoke (Landis)	Recent Enhancements to Smoke Dispersion Models to Facilitate Meteorological/Fire Behavior/Air Quality Model Integration (Anderson)
6:45-7:00			How are We Addressing and Preparing for the Risks of Smoke? (Lahm)	Emissions, Transport, and Chemistry of Smoke from Western U.S. Wildfires (Bela)
7:00-7:15			Improving Smoke Management through Collaboration (M. Long)	Impact of horizontal resolution on wild fire smoke plume rise (McQueen)
7:15-7:30			Rapid Update Automated Smoke Forecasting (Cope)	Investigation of fire smoke plume injection height sensitivities during the 2017 Northern California wildfires (Wilkins)
7:30-7:45			Wildfire and Prescribed Fire Guidance under the Exceptional Events Program (Scott)	Discussion

8:00-9:00		**Keynote or Panel** *(live Streamed from Raleigh)*		
9:00-9:45		Networking		
		Ballroom A/B *(Live)*	**Room 1** *(Live streaming from Raleigh)*	**Room 2** *(Live streaming from Raleigh)*
		Smoke Management/Smoke Modeling	**Emissions**	**Climate Change/Health**
		Moderator:	Moderator:	Moderator:
9:45-10:00		Smoke Emission Response to Slashpile Forest Management in British Columbia 2017 Fires (Josephson)	IGNITE TALK Field data? FIELD DATA! – Learning more about smoke from small fires during the NOAA/NASA FIREX-AQ campaign (McCarty)	Investigating global fire behavior, variability, trends, and driving factors using an interactive fire module coupled with CESM2 (Tang)
10:00-10:15		Modeled Effects of Fuel Reduction on Rim Fire Daily Smoke Emissions (Tarnay)	Emissions from Fires at the Wildland Urban Interface (Holder)	Accounting for prior wildfires decreases area burned and emissions under projected climate in the Sierra Nevada (Hurteau)
10:15-10:30		Incorporating the newest satellite fire detection information into smoke modeling for public health research (Raffuse)	Improvements to the Estimation of Emissions from Pre-harvest Sugarcane Burning (Pouliot)	Examing Recent Trends in Fires and Air Quality using SNPP VIIRS Data (Kondragunta)
10:30-10:45		Validation of smoke exposure prediction system for NSW Australia (Price)	Performance assessment of Fire Inventory from the National Center for Atmospheric Research (FINNv2) wildfire emissions estimates using satellite aerosol observations (Pavlovic)	Future fire and smoke trends in the western United States under changing climate (Liu)
10:45-11:00		The US Forest Service Scientific Assessment for Wildland Fire Smoke (McCaffrey)	Spatially refined biomass burning emissions inventory in Chile (Oliva)	Suppression of Peat Fire by Rain (Lin)
11:00-11:15		BBOP Shows Rapid Changes in Aerosol Properties in the Near Field (Lewis)	Verification of the Wildfire Emissions and Their Impacts In the NOAA National Air Quality Forecasting Capability for Recent Events (Tang)	Smoke Exposure of an Operational Prescribed Burning Program (Afrin)
11:15-11:30		Zonal-Based Emission Source Term Modeling in FIRETEC (Josephson)	Wildland Fire Emissions Factors in North America and the new Smoke Emissions Reference Application (SERA) (O'Neill)	Wildfire smoke exposure is associated with risk of acute respiratory mortality at home (Henderson)
11:30-11:45		Use of IoT sensing for determining the resilience of buildings to wildfire generated PM2.5 (Pantelic)	Wildfire Smoke Readiness in Canada using the Air Quality Health Index (AQHI) (Audette)	Trends in Wildland Firefighter Exposure to Particulate Matter (Navarro)
11:45-12:00		Improved Fire Activity Time Series by Modeling Fire Energy Distributions (Hyer)		**IGNITE TALKS** 1. Identification of Persistent Fire Sources in High Northern Latitudes (Fain) 2. Does wildfire smoke affect cognitive performance? (Henderson) 3. Use of amateur radio during wildfires to transmit data: A low-tech solution to a high tech problem (Beaulac)
12:00-12:45		Lunch - provided		
12:45-1:45		**Wildfire Smoke and Health Impacts** **Ana Rappold** **Sarah Henderson** **Kathleen Navarro**		
		Ballroom A/B (*Live)*	**Room 1** *(Pre-recorded streaming from Raleigh)*	**Room 2** *(Pre-recorded streaming from Raleigh)*
		Health Impacts	**Smoke Management**	**Smoke Modeling**
		Moderator	**Moderator**	**Moderator**
			These sessions are recorded from earlier in the day in Raleigh.	

2:00-2:15		Increasing Wildfire Smoke Readiness in the Washington State Public Health System (Kelly)	Current operational products for smoke management, Part 1: Desert Research Institute (Brown)	Impacts of sugarcane fires and sugar mills on PM2.5 air quality in South Florida (Nowell)
2:15-2:30		Environmental contaminants in backyard chicken eggs from wildfire affected communities of California (O'Brien)	Current operational products for smoke management, part 2: Interagency Wildland Fire Air Quality Response Program (Larkin)	PB-Piedmont a Decision Support Tool for Wildland Smoke on Roadways (Curcio)
2:30-2:45		Partnerships to Aid in Effective Communication of Smoke Impacts to the Public (Hunter)	Evaluating the Performance of Multi-Pollutant Sensor Pods in Biomass Combustion Smoke (Landis)	Recent Enhancements to Smoke Dispersion Models to Facilitate Meteorological/Fire Behavior/Air Quality Model Integration (Anderson)
2:45-3:00		Evaluating the implementation of an emergency regulation to protect California's outdoor workers from wildfire smoke exposure (Conlon)	How are We Addressing and Preparing for the Risks of Smoke? (Lahm)	Emissions, Transport, and Chemistry of Smoke from Western U.S. Wildfires (Bela)
3:00-3:15		Case Controlled Comparison of Wildfire and Non-Wildfire Burn Injuries (Palmieri)	Improving Smoke Management through Collaboration (M. Long)	Impact of horizontal resolution on wild fire smoke plume rise (McQueen)
3:15-3:30		Investigating Protective Health Decision-Making in Response to Wildfire Smoke in California (Santana)	Rapid Update Automated Smoke Forecasting (Cope)	Investigation of fire smoke plume injection height sensitivities during the 2017 Northern California wildfires (Wilkins)
3:30-3:45		Informing the use of N95 respirators by the general public during wildfires (Kelly)	Wildfire and Prescribed Fire Guidance under the Exceptional Events Program (Scott)	Discussion
Friday - April 24, 2020				
Field Trips				