

# **Annual Conference 2024**

# Program

April 28–30
Philadelphia Marriott Downtown
Philadelphia, PA

## **HEALTH EFFECTS INSTITUTE**

## 2024 Annual Conference

# April 28-30

# Philadelphia Marriott Downtown Philadelphia, PA

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Please Note: With the speakers' permission, presentation slides will be posted at www.healtheffects.org/annual-conference after the conference.

#### **AGENDA AT A GLANCE**

#### **Sunday April 28** 11:30 Lunch 12:45 Welcome and Official Conference Opening 1:10 Climate Change and Air Quality 2:55 **Awardee Announcements and Presentations** 4:00 Poster Session 1 6:00 **Opening Reception** 6:45 Dinner **Monday April 29** 7:00 Breakfast 9:00 Spotlight on HEI Activities and Future Directions 10:30 Poster Session 2 11:45 Clear Skies Ahead: Initiatives Around the World 12:30 Lunch 1:30 Alternative Fuels for a Low-Carbon Energy Transition 3:15 Ice Cream Social Break 3:45 Environmental Justice, Policy, and Decision-Making 5:45 Free Evening **Tuesday April 30** 7:00 Breakfast 9:00 Poster Session 3 10:30 Health and Climate Implications of Transportation 12:30 Lunch 1:30 Optimizing Research to Inform the NAAQS 3:30 Conference Closing and Adjournment



# HEI Annual Conference April 28–30, 2024 Philadelphia, PA Scientific Program

#### Sunday, April 28

10:00 am Registration Table Opens11:30 am Lunch

12:45 pm Welcome and Official Conference Opening

Elena Craft, HEI

1:10 pm What Does the Changing Climate Mean for Air Quality and Public Health Planning and

**Exposure Mitigation?** 

Session chairs: Sara Adar, University of Michigan School of Public Health, USA and HEI Review Committee, and Gregory Wellenius, Boston University School of Public Health, USA and HEI Research Committee

There are a multitude of ways in which air pollution and climate change interact, and attention to the issue from governmental agencies, community groups, and the general public is growing. This session will explore key considerations for air quality and public health planning in the context of a changing climate. Short talks will kick off an interactive discussion on local and national mitigation approaches for exposure reduction and public health planning. Specific topics of interest include interactions between air pollution and climate, smoke from wildfires and prescribed burns, and dust storms.

- 1:10 Welcome and introduction
- 1:15 Vijendra Ingole, Office for National Statistics, UK: Setting the scene: What do future climate scenarios mean for air quality and health around the world?
- 1:23 Makoto Kelp, Stanford University, USA: Fires, air quality, and health: Connections between air quality management, public health messaging, and personal interventions
- 1:31 Kenza Khomsi, General Directorate of Climate, Morocco: Sand and dust storms: implications for air quality and climate
- 1:40 Q&A
- 1:50 Panel discussion:

Vijendra Ingole, Office for National Statistics, UK

Makoto Kelp, Stanford University, USA

Kenza Khomsi, General Directorate of Meteorology, Morocco

Alex Ndyabakira, Kampala Capital City Authority, Uganda

Michelle Bell, Yale University, USA

2:45 Closing remarks

# 2:55 pm Announcing Winners of HEI Awards and Fellowships, and Lightning Talks by Winners of the Walter A. Rosenblith and Jane Warren Awards

Dan Crouse, HEI, Ellen Mantus, HEI

The Walter A. Rosenblith New Investigator Award is given each year to up to two promising researchers at the assistant professor level or equivalent. Applicants of any nationality, and with training and experience in any of the many branches of science relevant to air pollution, are eligible to apply. Winners are selected based on the relevance of the proposed research to HEI's mission, the scientific merit of the proposed research, and the likelihood of the candidate becoming a leader in the field. This award is named for Professor Walter A. Rosenblith, who served as the first Chair of HEI's Research Committee and then as a member of the HEI Board of Directors. The award supports research projects up to three years in length.

HEI's Summer Fellowship Program aims to encourage undergraduate students from backgrounds that are underrepresented in the environmental health sciences to explore research opportunities in this area. The program provides financial support for a 10-week summer fellowship each year and is run in collaboration with the International Society of Exposure Science and the International Society for Environmental Epidemiology. The fellowship is open to mentors and students based in the United States.

The Jane Warren Award is given to graduate students or postdocs at academic or research institutions in the United States whose research is related to air pollution and health. Winners attend and present at HEI's Annual Conference. Selection is based on the scientific merit of their research, quality of the submitted abstract, and relevance to HEI's mission. This award is named in remembrance of Dr. Jane Warren, who joined HEI in the 1980s and led HEI's scientific activities as Director of Science from 1999 until her retirement in 2008. The award covers travel and conference registration expenses for up to six awardees.

3:30 pm Break

4:00 pm Poster Session 1

5:30 pm Break

6:00 pm Opening Reception

Beverages, hors d'oeuvres, and socializing

6:45 pm Conference dinner begins

7:30 pm Presentation by Jane Golden, Mural Arts Philadelphia

# Monday, April 29

7:00 am Breakfast

9:00 am Spotlight on Recent HEI Activities and Accomplishments, and a Look at HEI's Strategic

Plan for 2025-2030

Session chair: Elena Craft, HEI

HEI President Elena Craft will chair presentations highlighting HEI's major accomplishments over the last year and provide an overview of HEI's Strategic Plan for 2025–2030.

9:00 Ellen Mantus, Donna Vorhees, Anna Rosofsky, and Pallavi Pant, HEI: *Highlighting* progress and accomplishments across HEI programs

9:30 Ellen Mantus, Donna Vorhees, and Pallavi Pant, HEI: *Looking ahead: The 2025–2030 Strategic Plan* 

10:00 Discussion

10:30 am Poster Session 2

11:30 am Break

11:45 am Clear Skies Ahead: Progress and Promise in Clean Air Initiatives Around the World

Moderator: Pallavi Pant, HEI

Air pollution is the leading environmental health risk factor around the world, and results in significant health, economic, and societal impacts. In the last two decades, some countries around the world have made significant progress toward clean air, while others have begun to establish air quality monitoring and management programs. With several pivotal moments for air quality action in 2024, the panel will reflect on the gains made in recent years toward clean air for all and identify windows of opportunity for continued collaboration and engagement.

#### **Panelists**

- Juan Castillo, Pan American Health Organization
- Jane Akumu, UN Environment Programme
- Karma Yangzom, Asian Development Bank
- · Nina Renshaw, Clean Air Fund

#### 12:30 pm Lunch

# 1:30 pm Alternative Fuels for a Low-Carbon Energy Transition – Challenges, Opportunities, and Implications for Human Health

Session chairs: Peter Thorne, University of Iowa, USA and HEI Energy Research Committee, and Heather Holmes, University of Utah, USA and HEI Research Committee

Transitioning the energy system will require changes across a number of sectors, including energy production and distribution, buildings, land use planning, industry, and transportation. HEI has a longstanding history in assessing the health effects of traffic-related air pollution, as well as an interest in emerging fuels and technologies. This session will explore the topic of alternative fuels in a changing transportation infrastructure, focusing on on-road transportation and the kinds and combinations of fuels (e.g., electricity, biofuels, ethanol, hydrogen) and their inputs that will support an evolving vehicle fleet, including impacts to greenhouse gas emissions, air quality, and environmental justice implications.

- 1:30 Peter Thorne, University of Iowa, USA and HEI Energy Research Committee: *Welcome* and introduction
- Jonathan Lewis, Clean Air Task Force, USA: Where have we been and where are we going? A historical overview of the transportation and fuel landscape
- 1:55 Vikram Ravi, Department of Energy National Renewable Energy Laboratory, USA: Where are we going, what are the implications? Insights from NREL's Resources and Sustainability Group

- 2:10 Valerie Thomas, Georgia Institute of Technology, USA: *The future of biofuels as on-road vehicles electrify*
- 2:25 Anna Spurlock, Lawrence Berkeley National Laboratory, USA: *Air quality and health implications of electric vehicle charging infrastructure*
- 2:40 Panel discussion and Q&A moderated by chairs
- 3:10 Heather Holmes, University of Utah, USA and HEI Research Committee: *Wrap up and adjourn*
- 3:15 pm Ice Cream Social Break

#### 3:45 pm Integrating Environmental Justice Considerations into Policy and Regulatory Decision-Making: Progress and Barriers

Session chairs: Madeleine Scammell, Boston University, USA and HEI Environmental Justice Oversight Panel, and Neeta Thakur, University of California, San Francisco, USA, HEI Research Committee, and HEI Environmental Justice Oversight Panel

Following Executive Order 12898 and, more recently, establishment of the Environmental Justice (EJ) 40 initiative under Executive Order 14008, US government agencies have been making efforts to incorporate EJ into their policy and regulatory decision-making. In addition, EJ advocates and advisory groups have pushed for government agencies to integrate EJ into policymaking to address the overlapping environmental and social inequities comprehensively. This session will explore local, state, and federal government agency successes and barriers in integrating EJ into policymaking and regulation and recommended paths forward.

- 3:45 Madeleine Scammell, Boston University, USA and HEI Environmental Justice Oversight Panel: *Introduction*
- 3:50 Ana Baptista, The New School and Tishman Environment and Design Center, USA:

  Leveraging community and academic expertise for environmental justice policy and decision-making
- 4:05 Veronica McBeth, Department of Transportation, USA: *Integrating Environmental Justice into US DOT practices and policies*
- 4:20 Christopher Frey, EPA ORD, USA and Onyemaechi Nweke, EPA OEJ, USA: *Integrating environmental justice into US EPA practices and policies*
- 4:40 María Belén Power, Massachusetts Executive Office of Energy and Environmental Affairs, USA, Deneen Simpson, Massachusetts Department of Environmental Protection, USA, and Sofia Owen, Alternatives for Community and Environment, USA: Addressing barriers: State and community perspectives on environmental justice
- 5:10 Panel discussion and Q&A moderated by chairs, featuring speakers above

5:45 pm Free Evening

#### Tuesday, April 30

7:00 am Breakfast

9:00 am Poster Session 3

10:00 am Break

10:30 am Health and Climate Implications of Transportation of Goods and People in a Changing

Landscape

Session chairs: Marianne Hatzopoulou, University of Toronto, Canada and HEI Research Committee, and Ulrike Gehring, Utrecht University, The Netherlands and HEI Review Committee

Global movement of goods and people is supported by an interconnected transport network across land, water, and air. Even as cargo volumes and miles traveled have increased, modern technologies and fuels have substantially reduced air pollution emissions from transportation. These sources, however, still contribute to locally elevated air pollution levels, often near historically marginalized communities where households may be more susceptible to air pollution-related health effects. This session will discuss the contributions of different modes of transportation to air pollution emissions and their potential effects on air quality and health. Particular attention will be given to large transport infrastructure, airports, ports, and freight distribution centers.

- 10:30 Marianne Hatzopoulou, University of Toronto, Canada, and HEI Research Committee: *Transitioning the long-haul: challenges and opportunities*
- 10:40 Matthew Simon, US DOT Volpe National Transportation Systems Center: *Air quality and climate implications of moving goods and people by rail*
- 11:00 Neelakshi Hudda, Tufts University, USA: Airports and associated issues
- 11:20 Edward Carr, Energy & Environmental Research Associates: Climate and air quality implications of maritime ports and shipping
- 11:40 Anne Goodchild, University of Washington, USA: *Building systems of healthy urban goods movement*
- 12:00 Q&A and panel discussion with the speakers

12:30 pm Boxed Lunch

#### 1:30 pm Optimizing Exposure and Health Effects Research to Inform the NAAQS

Session chairs: Armistead Russell, Georgia Institute of Technology, USA and Erika Sasser, US EPA

Since the passage of the US Clean Air Act Amendments, the United States Environmental Protection Agency (EPA) has had the responsibility every five years to review the available scientific evidence on exposure to, and health effects of, several major air pollutants. This allowed the EPA to determine the proper level to set its National Ambient Air Quality Standards (NAAQS) in order to "protect public health with an adequate margin of safety." This standard-setting process is complex and daunting for early career researchers, in particular. This session illuminates the different ways in which information from studies are extracted for use in NAAQS setting, highlights key gaps in current data, and discusses ways forward to improve usefulness of studies for standard-setting decisions.

- 1:30 Erika Sasser, US EPA: NAAQS standard setting process explained and what's on the horizon
- 1:40 Evan Coffman and Lars Perlmutt, US EPA: A deeper dive into current gaps in data in studies informing the NAAQS
- 2:10 Joshua Apte, University of California, Berkeley, USA: *Optimizing exposure assessment for policy decisions*
- 2:30 Rachel Nethery, Harvard T.H. Chan School of Public Health, USA: *Designing* epidemiological studies to inform the NAAQS: Experiences studying air pollution, mortality, and inequalities using Medicare data
- 2:50 Armistead Russell, Georgia Institute of Technology, USA: The NAAQS: *Substantial success and the challenges ahead*
- 3:00 Panel discussion and Q&A featuring the speakers above, along with one panelist: Howard Kipen, Rutgers School of Public Health

#### 3:30 pm Conference Closing and Adjournment

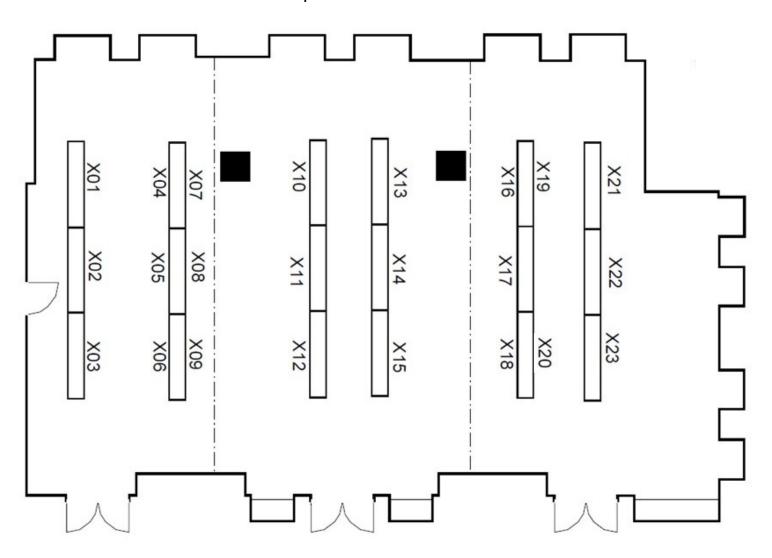
Elena Craft, HEI

Po	ster se	ssions for HEI Annual Con	feren	ce 202	4 * ind	dicates I	HEI-1	funded	l study	
Sunday 4:00-5:30		Mo	Monday 10:30-11:30			Tuesday 9:00-10:00				
Jane Warren awardees			Wildland and agricultural burning, air quality, and health				Energy & Health			
	101	Lucille Joanna Borlaza-Lacoste	*	201	Michelle Bell		*	301	Sewar Almasalha	
	102	Glen Chua	*	202	Talat Odman		*	302	Jennifer Baka	
	103	Soo-Yeon Kim	*	203	Jennifer Stowell		*	303	Jeffrey Collett	
	104	Jagadeesh Puvvula					*	304	Mario Soriano Jr.	
	105	Antonio Saporito		r qualit	ty and global health s		* 305 Bok-Haen		Bok-Haeng Baek	
	106	Rachit Sharma	*	204	Raphael Arku		*	306	Joel Graves	
			*	205	Santu Ghosh		*	307	Katarina Konon	
	•	g air pollution assessment		206	Christine Hagerbaumer		*	308	Jeremy Michael Gernand	
*	107	Kees de Hoogh		207	Egide Kalisa		*	309	Chou-Hsien Lin & Evelyn Deveraux	
*	108	Gerard Hoek		208	Wabinyai Fidel Raja		*	310	Lea Hildebrandt Ruiz	
*	109	Klea Katsouyanni	*	209	Archana Patel		*	311	Gunnar W. Schade	
	110	Chirag Manchanda		210	Abinaya Sekar		*	312	Meredith Franklin	
*	111	Lianne Sheppard		211	Ada Wright & Victor Nth	nusi				
	123	Julien Vachon							9, air pollution, and tudies	
Ac	counta	bility studies		r qualit alth	ty, climate change, and		*	313	Kai Chen	
*	112	Jill Baumgartner & Sam Harper		212	Joshua Apte		*	314	Mike Kleeman	
*	113	Nina Brooks		213	Godfred Boateng					
•	114	Stephanie Ebelt & David Rich		214	Angie Shatas		Research to support air quality regulation and pol			
*	115	Lucas Henneman					*	315	Tanya Alderete	
*	116	Patrick Kinney	En	vironn	nental Justice		*	316	Joseph Antonelli	
	117	Amanda Pappin		215	Lisa Baxter			317	May Bhetraratana	
				216	Lingzhi Chu			318	Evan Coffman	
	-	tation and health in a landscape		217	Xiara Day			319	Patrice Coll	
*	118	Greg Evans		218	Noah Hirshorn			320	Mary Hutson	
*	119	Christopher Griffiths	*	219	Rachel Nethery			321	Nicholas Mailloux	
	120	Toyib Olaniyan	*	220	Yoshira Ornelas Van Hor	ne		322	Catherine Yount	
	121	Yuan Yao		221	Anna Rosofsky & Saman Miller	tha				
	122	Georgia May Gamble		222	Breanna van Loenen				air, healthier : video short	
En	ergy &	Health: StoryMap		223	Eva Vitucci		-	NA	Ada Wright	
	NA	Ayusha Ariana							_	

# **Floor Map for Poster Sessions**

Sunday: posters 101-123 Monday: posters 201-223 Tuesday: posters 301-322

# Independence Ballroom



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(Review Committee continues on next page)

(Review Committee, continued)

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Samantha Miller

Ada Wright

# **CONFERENCE INTERNET ACCESS**

Network Name: HEI\_Annual\_Conference2024

Passcode: HEIAC2024

# **Conference Evaluation Form**

Please take time to complete both sides. We consider ALL feedback in planning future conferences.

## **Overall Conference**

Please rank each of the questions below from 1-5 (1 = Not at all, 5 = Very much).	1	2	3	4	5
How satisfied were you with the conference overall?					
Were you satisfied with the opportunities for participation and discussion during the					
scientific sessions?					
Were you satisfied with the opportunities for breaks, networking, and catching up					
with colleagues between sessions?					
How satisfied were you with the event arrangements (location, meals,					
accommodation, facilities, communications from HEI)?					
How likely are you to attend a future conference?					

Please share any additional thoughts;

# **Individual Session Ranking**

Individual session ranking: How interested were you in each session?	1	2	3	4	5
What Does the Changing Climate Mean for Air Quality and Public Health Planning and					
Exposure Mitigation?					
Announcing Winners of HEI Awards and Fellowships, and Lightning Talks by Winners					
of the Walter Rosenblith and Jane Warren Awards					
Clear Skies Ahead: Progress and Promise in Clean Air Initiatives Around the World					
Alternative Fuels for a Low-Carbon Energy Transition – Challenges, Opportunities, and					
Implications for Human Health					
Integrating Environmental Justice Considerations into Policy and Regulatory Decision-					
Making: Progress and Barriers					
Optimizing Exposure and Health Effects Research to Inform the NAAQS					

What did you like or dislike about the conference?

Are there any sessions/ topics you would like to see in future conferences?								
Please share any additional thoughts								
Type of organization/ affiliation (check all that apply).								
Academic Institution	Government Agency	Environmental Organization						
Industry	Health Organization	Other Public Interest Group						
Other (please specify):								
Thank you for taking the time to fill out this survey. We hope to see you next year in Austin!								