Health Effects Institute

Scientific Program HEI Annual Conference 2026
April 26-28, 2026
Chicago, IL

Sunday, April 26

10:00 am Registration Table Opens

11:30 am Lunch

12:45 pm **Welcome and Official Conference Opening**

Dan Crouse, HEI, Elena Craft, HEI

1:00 pm **Stories of Policy Success: Real Examples of Inspiring Science-based Air Quality Actions**

Session chairs: Neeta Thakur, University of California, San Francisco, USA and HEI Research Committee

Benjamin Barratt, School of Public Health, Imperial College London, UK and HEI Research Committee

HEI has been at the forefront of conceptualizing, supporting, and advancing research that examines relationships between air quality actions aimed at reducing emissions and exposures and subsequent improvements in air quality and public health. This form of research, known as accountability research, is valuable to decision makers because it approximates controlled experimental studies, which can provide evidence for causality, and it provides important feedback that informs the development of health-protective policies. This session will take stock of historical and recent air quality actions, highlight associated accountability research funded by HEI and its utility for decision-making, and explore how to optimize future accountability research to support pragmatic and effective air quality actions in a changing energy and transportation landscape.

1:00 Introduction by Neeta Thakur, University of California, San Francisco, USA

1:03 Mark Frampton, University of Rochester Medical Center, USA

1:18 Stefanie Ebelt, Emory University, USA

1:33 Benjamin Barratt, School of Public Health, Imperial College London, UK

1:48 Jiachen Zhang, University of Southern California, USA

2:03 Panel discussion and Q&A

2:30 pm **Announcing the Winners of HEI Awards and Fellowships, and Lightning Talks by Winners of the Jane Warren and Walter A. Rosenblith Awards**

Ellen Mantus, HEI, and Dan Crouse, HEI

HEI's summer fellowship program aims to encourage undergraduate students 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. 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 registration expenses for up to six awardees.

The Walter A. Rosenblith New Investigator Award aims to bring new, creative investigators into active research on the health effects of air pollution. It provides three years of funding for a study relevant to HEI's research interests to a new investigator with outstanding promise at the Assistant Professor or equivalent level. This award is named after Professor Walter A. Rosenblith (1913-2002), who served as the first Chair of HEI's Research Committee (from 1980 to 1989) and as a member of the HEI Board of Directors from 1990 to 1996.

3:00 pm Break

3:30 pm **Poster Session 1**

5:00 pm Break

5:15 pm **Opening Reception**

Beverages, hors d'oeuvres, and socializing

6:00 pm **Conference dinner begins**

Guest speakers: Serap Erdal, University of Illinois-Chicago, Kirsti Bocskay, Chicago Department of Public Health, Jim Zhang, Duke University

Monday, April 27

7:00 am Breakfast available

9:00 am **Parallel sessions**

Room A: Global Progress Towards Air Quality Action and its Impacts	**Room B: Smog to Synapse: Unraveling the Web of Neurodegenerative Risk and Resilience**
Session chair: Kiros Berhane, Columbia University, USA and HEI Global Initiatives Oversight Committee Air pollution exposures and the associated health impacts and economic burden continue to be substantial, especially in low- and middle-income countries. Across regions, there is a growing interest in investments in clean air action, and as progress is made, it will be important to reflect on lessons and learnings. This session will highlight the global progress towards clean air and examine the role of data and evidence towards policy progress. Speakers will also explore opportunities for fostering cross-sectoral engagement across regions.	*Session chairs: Sara Adar, University of Michigan School of Public Health, USA and HEI Review Committee* *David Dorman, North Carolina State University, USA and HEI Research Committee* Neurodegenerative diseases such as dementias and Parkinson's disease are multifactorial in nature with a multitude of risk factors. These risk factors include not only genetics, but also modifiable lifestyle factors and environmental exposures, including air pollution and pesticides, and treatable medical conditions that collectively might account for a substantial portion of neurodegenerative disease cases. This session will evaluate the state of the science on the effect of environmental exposures on age-based

9:00	Introduction by Kiros Berhane, Columbia University and HEI Global Initiatives Oversight Committee, USA
9:10	Maria Neira, Former Director, WHO and Senior Fellow, Clean Air Fund, Spain (*remote speaker*)
9:20	Forrest Robinette, Independent Consultant, USA
9:40	Panel discussion moderated by Pallavi Pant, Head of HEI's Global Initiatives, USA
	Jordi Pon, UNEP, Panama (*remote speaker*)
	Ashish Tiwari, International Centre for Integrated Mountain Development, Nepal
	Rebecca Garland, University of Pretoria, South Africa (*remote speaker*)
	Kiros Berhane, Columbia University and HEI Global Initiatives Oversight Committee, USA
10:25	Closing remarks

neurological disorders and identify associated research gaps.

9:00 Introduction by Sara Adar, University of Michigan School of Public Health, USA and HEI Review Committee

9:05 Burcin Ikiz, Neuro Climate Working Group and Stanford University, USA

9:25 Jennifer Weuve, Boston University School of Public Health, USA

9:45 Deborah A. Cory-Slechta, University of Rochester Medical Center, USA

10:05 Panel discussion and Q&A

10:30 am Break

10:45 am Poster Session 2

12:15 pm Lunch

1:15 pm **Particles in Motion: Tackling Brake, Tire, and Road Dust Emissions**

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

John Volckens, Colorado State University, USA and HEI Review Committee

Non-tailpipe emissions from tire, brake, and road wear and resuspension of road dust now account for more than half of particulate matter emissions from road transport in some areas. Therefore, there is increasing attention on non-tailpipe emissions of particulate matter from motor vehicles and the effects of those emissions on air pollutant concentrations and health. This session will describe the state of the science of non-tailpipe particulate matter emissions to air and the resulting health effects, and highlight two recently completed HEI studies that contribute to this body of literature. It will close with regulatory, industry, and scientific perspectives on what we know and remaining challenges to better inform future actions to address non-tailpipe particulate matter.

1:15 Introduction by Gregory Wellenius, Boston University School of Public Health, USA and HEI Research Committee

1:20 Chris Griffiths, University of Oxford, UK

James Scales, Queen Mary University of London, UK

1:30 Greg Evans, University of Toronto. Canada

1:40 John Volckens, Colorado State University, USA

1:50 Seungju Yoon, California Air Resources Board, USA

2:00 Paolo Mazzatorta, World Business Council for Sustainable Development / Tire Industry Project, Switzerland

2:10 Q&A, panel discussion, and closing remarks

2:35 pm Break

2:55 pm **Everything You Wanted to Know About Bias in Environmental Health Research (But Were Afraid to Quantify)**

Session chairs: David A. Savitz, Brown University and HEI Research Committee

Evi Samoli, School of Medicine, National and Kapodistrian University of Athens, Greece and HEI Research Committee

Quantitative Bias Analysis (QBA) is any method that quantifies the impact of systematic biases in studies, providing estimates of the direction and magnitude of bias. By answering "what would have been" had key biases been absent, QBA offers insights that extend beyond traditional confidence intervals and qualitative assessments. What are the pros and cons of QBA? How does it fit into evidence synthesis more broadly? What are the barriers that prevent the widespread use of QBA in environmental health research? Join us for a live discussion with the hosts of the popular science podcast, SERious EPI, or listen from your favorite podcast app.

2:55 David A. Savitz, Brown University, USA and Evi Samoli, National and Kapodistrian University of Athens, Greece

3:10 Podcast style conversation with David Miller, US EPA (retired), USA

hosted by Matthew Fox, Boston University, USA

3:55 Q&A

4:15 pm Ice cream social and end of sessions for the day

Tuesday, April 28

7:00 am Breakfast available

9:00 am **From Space to Place: Advancing Environmental Health with Remote Earth Observations**

Session chairs: Heather Holmes, University of Utah, USA and HEI Research Committee

Christine Wiedinmyer, University Corporation for Atmospheric Research, USA and HEI Energy Review Committee

Satellite-derived air quality products have become increasingly widespread and their application in environmental health research continues to grow. New satellite instruments have been launched and are

planned to monitor air quality at finer spatial and temporal resolutions and for more pollutants than have been previously available. HEI has held various convenings on the topic, including a request for applications in March 2025, to identify opportunities to improve satellite-derived air quality products and characterize the inherent uncertainties that stem from both the satellite data themselves as well as the models or data used to create air quality concentration estimates. This session will continue this discussion of new and existing satellite data products and capabilities, highlighting:

- Satellite data needs for exposure assessment and health effects research
- Development of new methodologies and products using satellite datasets for health applications, including epidemiology, emissions and exposure assessment, and accountability studies
- Characterization and quantification of uncertainty for health applications

9:00 Introduction by Heather Holmes University of Utah, USA and HEI Research Committee

9:05 Tracey Holloway, University of Wisconsin—Madison, USA

9:20 Carl Malings, Morgan State University & NASA Goddard, USA

9:35 Lightning talks

Helena Chapman, NASA & Booz Allen Hamilton, USA (*remote speaker*)

Ellen Considine, University of Colorado Boulder, USA

9:45 Panel discussion

10:20 Closing remarks

10:25 New HEI studies advancing satellite-derived air quality data and approaches for use in health studies; Allison Patton, HEI

10:30 am Break

10:50 am **Poster Session 3**

12:20 pm Lunch

1:00 pm **Driving Change: Intermodal Freight's Air Quality and Health Challenges and Opportunities**

Session chairs: Jane Lin, University of Illinois Chicago, USA and HEI Heavy-Duty Diesel Fleet Turnover Panel

Albert Presto, Carnegie Mellon University, USA and Energy Review Committee

This year's HEI Annual Conference is in Chicago, one of the main hubs for intermodal freight and truck activity in the United States. This session will focus on the challenges of reducing air pollutant emissions while maintaining economic efficiency and viable operations to supply goods, both locally and nationally. It will highlight potential near-term, practical approaches to improve human health that apply existing and emerging technologies and fuels, bringing together experts in transportation and freight systems planning, fleet transition and air quality, and the transportation industry. Topics of discussion will include technologies, fuels, and operation of vehicles, and their applications to national, regional, and urban freight, and energy and other infrastructure needs. The session will explore research priorities and potential options for the freight and logistics industry to reduce emissions and other adverse impacts, while continuing to meet operational and customer service needs.

1:00 Introduction

1:05 Michael Roeth, North American Council for Freight Efficiency, USA

1:18	Thomas O'Brien, CSU Long Beach, USA
1:30	Rachael Nealer, Atlas Public Policy, USA
1:43	Kanok Boriboonsomsin, College of Engineering - Center for Environmental Research and Technology, University of California at Riverside, USA
1:55	Panel discussion
2:25	Closing remarks
2:30 pm	**Conference Closing and Adjournment**
	Elena Craft, HEI