2\textsuperscript{nd} Transportation, Air Quality, and Health Symposium

May 18–20, 2021 | Virtual Event

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Welcome and Opening Remarks

10:30 a.m.–11:00 a.m. (CDT)

The welcome and opening remarks will be delivered by Joe Zietsman of the Texas A&M Transportation Institute and Center for Advancing Research in Transportation Emissions, Energy, and Health, and Matt Barth of the University of California, Riverside.

Keynote Session: Challenges and Opportunities in Community Air Quality and Health

11:00 a.m.–12:00 p.m. (CDT)

The keynote session will feature remarks from Liane Randolph of the California Air Resources Board, and a facilitated discussion moderated by Matt Barth of the University of California, Riverside.

Break

12:00 p.m.–12:15 p.m. (CDT)

Breakout Sessions

Breakout Session A: Modeling Traffic Emissions and Air Pollution

12:15 p.m.–1:30 p.m. (CDT)

Moderator: Kirsten Koehler, Johns Hopkins University

Presentations: Presenting authors ONLY are listed

   Yuche Chen, University of South Carolina

2. Assessing Ambient Pollution Concentrations and Personal Exposures in Baltimore: The SEARCH Project
   Misti Zamora, Johns Hopkins University’s Bloomberg School of Public Health
3. Estimating Traffic-Related Air Pollution Using a Noise-Based Model
   Masoud Fallah-Shorshani, University of Southern California

4. Modeling Spatiotemporal Exposures to Traffic-Related Air Pollutants in a Near-Highway Microenvironment
   Mayra Chavez, The University of Texas at El Paso

**Breakout Session B: Characterizing Traffic-Related Air Pollution**

12:15 p.m.–1:30 p.m. (CDT)

**Moderator:** Wen-Whai Li, The University of Texas at El Paso

**Presentations:** Presenting authors ONLY are listed

1. Dynamic Receptor Grid Method for Regional-Level Near-Road Air Quality Analysis: A Case Study for Particulate Matter
   Daejin Kim, Gangneung-Wonju National University

2. Dust and Particulate Matter Hazard on Interstate 10 at Lordsburg Playa in Southwestern New Mexico
   Thomas E. Gill, The University of Texas at El Paso

3. Elemental Analysis of PM2.5 at Four Schools in El Paso, TX, USA and Ciudad Juarez, Chihuahua, MX
   Amit Raysoni, University of Texas Rio Grande Valley

4. COVID-19 and Air Pollution: A Case Study of a London Street
   Daisy Thomas, 3DATX Corporation

**Break**

1:30 p.m.–1:45 p.m. (CDT)
Breakout Sessions

**CARTEEH Spotlight Session 1: UTC Paves the Way for Transportation, Air Quality and Health**

1:45 p.m.–3:00 p.m. (CDT)

**Moderator:** Ann Xu, Texas A&M Transportation Institute

**Presentations: Presenting authors ONLY are listed**

1. Advancing a Research Agenda for Transportation Emissions, Health and Beyond  
   *Tara Ramani, Texas A&M Transportation Institute*

2. Improving Public Health in Disadvantaged Communities Near Ports Through Heavy-Duty Truck Electrification  
   *Kanok Boriboonsomsin, University of California, Riverside*

3. Characterization of Exposures and Associated Health Risks in Underserved Near-Road Communities Due to Traffic Emissions: Recent Investigations in the U.S.-Mexico Border Region  
   *Wen-Whai Li, The University of Texas at El Paso*

4. Public Health Methods for Decision Making in Communities  
   *Mary Fox, Johns Hopkins University*

5. Teaching Transportation, Air Quality and Public Health  
   *Michael Rodgers, Georgia Institute of Technology*
Breakout Session C: Addressing Transportation Emissions to Improve Public Health

1:45 p.m.–3:00 p.m. (CDT)

**Moderator:** John Hall, Texas A&M Transportation Institute

**Presentations:** Presenting authors ONLY are listed

1. Short-Term Associations of Traffic-Related Air Pollutants on Cardiorespiratory Risk Factors from Low-Income Populations in El Paso, TX
   **Juan Aguilera, The University of Texas at El Paso**

2. The TRANSIT Accountability Study: Preliminary Results & Methods to Assess Impacts of Local Congestion Programs on Pregnant Women in Texas
   **Perry Hystad, Oregon State University**

3. Reducing Community Exposure to Diesel Emissions Through Health-Conscious Truck Routing
   **Ji Luo, University of California, Riverside**
Wednesday, May 19, 2021 — Conference Day Two

Plenary Session: Protecting Community Air Quality and Health

10:30 a.m.–12:00 p.m. (CDT)

The plenary session will feature remarks from Hanjiro Ambrose of the California Air Resources Board, Philip Martien of the Bay Area Air Quality Management District, Jo Kay Ghosh of the South Coast Air Quality Management District, and Chris Chavez of the Coalition for Clean Air. The session will be moderated by Vernon Hughes of the California Air Resources Board.

Moderator: Vernon Hughes, California Air Resources Board

Presentations:

1. Toward Improved Mobile Source Activity Data for AB 617 Communities
   Hanjiro Ambrose, California Air Resources Board

2. Environmental Justice and Air Quality: AB 617 Implementation in the San Francisco Bay Area
   Philip Martien, Bay Area Air Quality Management District

3. Improving Air Quality in Environmental Justice Communities in Southern California
   Jo Kay Ghosh, South Coast Air Quality Management District

4. Communities’ Experience and Perspective on Local Air Quality and Health Impacts
   Chris Chavez, Coalition for Clean Air

Break

12:00 p.m.–12:15 p.m. (CDT)
Lightning Talks and Poster Session
12:15 p.m.–2:00 p.m. (CDT)

**Moderator:** Ben Ettelman, Texas A&M Transportation Institute

**Presentations:** *Presenting authors ONLY are listed*

1. Off-Road Construction Equipment Electrification: Current State of Technology Development and Pathway toward Market Adoption  
   *Fuad Un-Noor, University of California, Riverside*

2. The Effect of Vehicular Emissions on the Traffic Wardens  
   *Aderemi Adewunmi, Nigerian Institute of Transport Technology (NITT)*

3. Can Battery Electric Trucks Replace Conventional Heavy-Duty Trucks Used in Port Drayage Operation?  
   *Shams Tanvir, California Polytechnic State University*

   *Heejung Jung, University of California, Riverside*

5. Development and Application of a Micro-PEMS System for Onboard Sensing, Analysis and Reporting  
   *Kent Johnson, University of California, Riverside*

6. Pollutants and Adverse Health Effects of Traffic Related Air Pollution: A Literature Review  
   *Shabnam Bhuiyan, The University of Texas Health Science Center at Houston*

7. Bridging Modeling Estimates of Vehicular Emissions with Near-Roadway Ambient Measurements  
   *Ayla Moretti, University of California, Riverside*

8. Effects of Route Selection on In-Use NOx Emissions from Heavy-Duty Diesel Trucks  
   *George Scora, University of California, Riverside*

9. Evaluation of Population Exposure to Traffic-Related Air Pollution by Demographic Characteristics Using Activity-Based Models with Path Retention and Streamlined Dispersion Modeling Tool: Case in Atlanta, GA  
   *Hongyu Lu, Georgia Institute of Technology*
   Yuche Chen, University of South Carolina

11. Overview of Active Transportation Programs Implemented Between 2017-2020 in the U.S.
   Olga Bredikhina, The University of Alabama
   Sanaa Rafique, The University of Alabama

Breakout Sessions

Breakout Session D: Heavy Duty and Non-Road Transportation Emissions
2:00 p.m.–3:00 p.m. (CDT)

Moderator: Haobing Liu, The University of New Mexico

Presentations: Presenting authors ONLY are listed

1. Measurement of Particulate Matter and Gaseous Emissions from Commercial Harbor Craft During Real-World Operation
   Chas Frederickson, University of California, Riverside

2. Oversize/Overweight Heavy-Duty Vehicle Emissions Impacts Study
   Jason Brown, North Central Texas Council of Governments

3. In-Cab Pollutant Measurements for Nonroad Diesel Equipment
   Phil Lewis, Texas A&M University
Breakout Session E: Life-Cycle and Regional Assessments of Transportation Emissions

2:00 p.m.–3:00 p.m. (CDT)

**Moderator:** Kanok Borboonsomsin, University of California, Riverside

**Presentations:** Presenting authors ONLY are listed

1. Life-Cycle Modeling of Technologies and Strategies for a Sustainable Freight System in California
   *Hanjiro Ambrose, University of California, Davis*
   *Alissa Kendall, University of California, Davis*

2. Regional Assessment of Implementing Autonomous Vehicle Dedicated Lanes on Transportation Congestion and Emissions
   *Farinoush Sharifi, Texas A&M Transportation Institute*

   *Aron Jazcilevich, Centro de Ciencias de la Atmósfera, Universidad Nacional Autónoma de México*
### Breakout Sessions

#### Breakout Session F: Health Effects of Air Pollution

**Moderator:** Haneen Khreis, Texas A&M Transportation Institute

**Presentations:** Presenting authors ONLY are listed

1. Air Pollution and Mental Health-Related Emergency Room Visits in California  
   **Ruwan Thilakaratne**, Air and Climate Epidemiology Section, California Office of Environmental Health Hazard Assessment, Oakland, CA

2. Development of a Consumer Cumulative Risk Profile  
   **Mary Fox**, Johns Hopkins University

3. Systematic Review on the Health Effects of Long-term Exposure to Traffic Related Air Pollution  
   **Hanna Boogaard**, Health Effects Institute

4. Air Quality Monitoring in Glasgow  
   **Craig Michie**, University of Strathclyde

#### Breakout Session G: Policy Making and Partnerships for Transportation and Health

**Moderator:** Katie Turnbull, Texas A&M Transportation Institute

**Presentations:** Presenting authors ONLY are listed

1. Development of a Fuel-Economy Based Automobile Excise Tax in the District of Columbia  
   **Joseph Jakuta**, District of Columbia Department of Energy and Environment

2. A Systems Approach into Health Pathways from Community Development, Active Travel Behavior to Body Mass Index and Health  
   **Xiaobing Li**, Alabama Transportation Institute
3. Frameworks and Tools for Measuring, Understanding, and Realizing Transportation Land Use Coordination for Sustainability, Livability, Health, and Equity
   *Bruce Appleyard, San Diego State University*

4. Software Eats the World: A No Added Hardware, Connected Vehicle Data Driven Approach to Automating Signal Retiming
   *Jatish Patel, Flow Labs*

**Break**

11:45 a.m.–12:00 p.m. (CDT)

**Breakout Sessions**

**CARTEEH Spotlight Session 2: Highlights from Students and Early Career Researchers**

12:00 p.m.–1:15 p.m. (CDT)

**Moderator:** Haneen Khreis, Texas A&M Transportation Institute

**Presentations:** Presenting authors ONLY are listed

1. Transportation, Technology and Public Health: Assessing the Health Impacts of Automated Vehicles
   *Soheil Sohrabi, Texas A&M Transportation Institute*

2. Use of Traffic-Related Air Quality Estimates to Inform Health-Aware Travel Route Choice
   *Ji Luo, University of California, Riverside*

3. Accurately Tracking Emissions from Electric Power Generation
   *Yuanrui Sang, The University of Texas at El Paso*

4. Evaluation of Potential Autonomous Vehicle Deployment Strategies to Improve Health-Food Accessibility
   *Chia Hsiu Chang, Johns Hopkins University*

5. Investigations of MOVES and AERMOD Uncertainty: Impact of Temporal- and Spatial-Aggregation of On-Road Operating Conditions on Emissions and Dispersion Modeling
   *Hongyu Lu, Georgia Institute of Technology*
Breakout Session H: Exposures and Health Effects

12:00 p.m.–1:15 p.m. (CDT)

**Moderator:** Mary Fox, Johns Hopkins University

**Presentations:** Presenting authors ONLY are listed

1. Investigating Health Effects of Various Particulate Matter on Mice by Using Animal Exposure Chambers
   Qi Li, University of California, Riverside

2. Ambient Near-Road Mobile Source Air Toxics Concentrations in the United States: 2016–2018
   Olivia Ryder, Sonoma Technology, Inc.

3. Benzene Exposure and Cancer Risk from Commercial Gasoline Station Fueling Events Using a Novel Self-Sampling Protocol
   Andrew Patton, Johns Hopkins University’s Bloomberg School of Public Health

4. The Impact of Roadside Structures on Near-Road Air Quality
   Ranga Rajan Thiruvenkatachari, University of California, Riverside

Break

1:15 p.m.–1:30 p.m. (CDT)
Plenary Session: Building Back Better — New Directions for Transportation and Health after the Global Pandemic

1:30 p.m.–3:00 p.m. (CDT)

The plenary session will feature presentations from Larry Frank of the University of California, San Diego, Alberto Ayala of the Sacramento Metropolitan Air Quality Management District, and Carter Blakey of the U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion. The session will be moderated by Joe Zietsman of the Texas A&M Transportation Institute and Center for Advancing Research in Transportation Emissions, Energy, and Health.

Moderator: Joe Zietsman, Texas A&M Transportation Institute and Center for Advancing Research in Transportation Emissions, Energy, and Health

Presentations: Presenting authors ONLY are listed

1. Two Pandemics for the Price of One: Chronic and Infectious Disease Impacts of the Built and Natural Environment
   Larry Frank, University of California San Diego

2. Advancing Future Mobility, Clean Air, and Climate Actions in the California Capital Region
   Alberto Ayala, Sacramento Metropolitan Air Quality Management District

3. Pathway to Better Health for All: Connecting Healthy People 2030 and Transportation Policy
   Carter Blakey, U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion

Closing Remarks and Student Awards

3:00 p.m.–3:30 p.m. (CDT)

The closing remarks and student awards will be delivered by Joe Zietsman of the Texas A&M Transportation Institute and Center for Advancing Research in Transportation Emissions, Energy, and Health, and Matt Barth of the University of California, Riverside.
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During the symposium, follow @CARTEEH.UTC and use #TAQHS2021 and #CARTEEH on Twitter to spread the word and get us on the #RoadToCleanAir and the #RoadToHealth!

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