



Center for Advancing Research in
Transportation Emissions, Energy, and Health
A USDOT University Transportation Center

Transportation, Air Quality, and Health Symposium

Draft Program (Subject to Change)
February 18–20, 2019 | Austin, Texas



Monday, February 18, 2019

Workshop 1: Beyond Air Quality — The Wider Impacts of Transportation on Health

1:30 p.m.–3:00 p.m. Part 1 South Park A

3:30 p.m.–5:00 p.m. Part 2 South Park A

This two-part workshop discusses transportation and health linkages beyond air quality. Part 1 of the workshop includes four presentations, and Part 2 involves a facilitated discussion and brainstorming of research needs in the broader transportation and health space.

Facilitator: **Haneen Khreis**, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*

Presentations:

1. Investigation of the Transport–Health Links: An Observational Study from the United Arab Emirates
Ghassan Abu-Lebdeh, *American University of Sharjah*
Mohamed AlQahtani, *American University of Sharjah*
2. A Smart Growth Livability Framework and Calculator for Measuring, Understanding, and Realizing Sustainability, Health, and Equity
Bruce Appleyard, *San Diego State University*
3. Interdependencies Between Transport Planning, Urban Planning, and Health
Karin Menges, *Technische Universität Darmstadt*
Manfred Boltze, *Technische Universität Darmstadt*
4. Monetizing Health Impacts of the Built and Natural Environment: Matching Health Care Utilization and Cost with Land Use, Greenspace, and Regional Accessibility
Lawrence Frank, *University of British Columbia*
Andy Hong, *University of Oxford*

Workshop 2: Data for Transportation, Air Quality, and Health Research

1:30 p.m.–3:00 p.m. South Park B

In this workshop, three presentations will be followed by a facilitated discussion of data needs, gaps, and data management best practices to support cross-disciplinary research on transportation, air quality, and health.



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Facilitator: *Ann Xu, Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*

Presentations:

1. Developing a Transportation, Emissions, and Health Data Hub
Dan Seedah, Texas A&M Transportation Institute
Andrew Birt, Texas A&M Transportation Institute
2. Data Needs for Updating and Improving the U.S. Environmental Protection Agency NONROAD Model
Phil Lewis, Texas A&M University
Carl Fulper, U.S. Environmental Protection Agency
Sarah Roberts, U.S. Environmental Protection Agency
Jeremy Johnson, Texas A&M Transportation Institute
Reza Farzaneh, Texas A&M Transportation Institute
3. Using National Traffic Datasets for Emissions and Noise Modeling
Scott Boone, Cambridge Systematics
Richard Margiotta, Cambridge Systematics
Aldo Tudela Rivadeneyra, Cambridge Systematics
Christopher Porter, Cambridge Systematics
John Koupal, ERG
Roger Wayson, AECOM
David Kall, Federal Highway Administration

Workshop 3: Freight, Air Quality, and Occupational Health

3:30 p.m.–5:00 p.m. South Park B

In this workshop, three presentations will be followed by a facilitated discussion of various facets of freight/heavy-duty vehicles, as well as occupational health issues and in-cab exposure for heavy-duty vehicle drivers. Participants will brainstorm research needs as they relate to unique aspects of freight and heavy-duty vehicle operations.

Facilitator: *Tara Ramani, Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*

Presentations:

1. Oversize/Overweight Heavy-Duty Vehicle Emissions Impact Study
Chris Klaus, North Central Texas Council of Governments
Jason Brown, North Central Texas Council of Governments
2. Truck Driver Wellness Pilot Study
Reza Farzaneh, Texas A&M Transportation Institute
Teresa Penbrooke, GreenPlay, LLC
Joe Zietsman, Texas A&M Transportation Institute



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3. Assessing In-Cab Air Quality for Construction Equipment

Phil Lewis, *Texas A&M University*

Sherif El Khouly, *Texas A&M University*

Andrea Strzelec, *Mississippi State University*

Jeremy Johnson, *Texas A&M Transportation Institute*

Adam Mayer, *Texas A&M Transportation Institute*

Tuesday, February 19, 2019

Welcome and Opening Remarks

8:30 a.m.–9:00 a.m. Ballroom DEF

The welcome and opening remarks will be delivered by **Joe Zietsman**, the Texas A&M Transportation Institute's agency assistant director, strategic advisor, and director of the Center for Advancing Research in Transportation Emissions, Energy, and Health; and **Greg Winfree**, the Texas A&M Transportation Institute's agency director.

Keynote Session

9:00 a.m.–10:30 a.m. Ballroom DEF

The keynote session will feature remarks from **Daniel Greenbaum** of the Health Effects Institute and **Neil Pedersen** of the Transportation Research Board, and a facilitated discussion moderated by **Katie Turnbull** of the Texas A&M Transportation Institute.

Plenary Session: Setting the Stage — From Transportation Emissions to Health Effects

11:00 a.m.–12:15 p.m. Ballroom DEF

Presentations:

1. Trends in On-Road Transportation Energy and Emissions
***Christopher Frey**, North Carolina State University*
2. Transportation, Environmental Justice, and Health
***Bakeyah Nelson**, Air Alliance Houston*
3. Systems Integration of Transportation, Environment, and Health Planning: Models, Tools, and Insights
***Oliver Gao**, Cornell University*

Special Discussion Sessions

These sessions will feature presentations on themes of interest to practitioners and the public, followed by facilitated discussion of what stakeholders can do to work together and advance health in transportation and city planning.

Special Discussion Session 1: Partnerships and Collaborations for Transportation and Health

1:15 p.m.–2:30 p.m. South Park AB

Facilitator: Rob McConnell, *University of Southern California*

Presentations:

1. Heavy-Duty Diesel Vehicle Collaborations and Partnerships and Air Quality Projects
Chris Klaus, *North Central Texas Council of Governments*
Jason Brown, *North Central Texas Council of Governments*
2. Arizona Departments of Transportation and Health Services: Health and the Built Environment Partnership and Co-branding Project
Steven Olmsted, *Arizona Department of Transportation*
3. City Partnerships Toward Local Transportation–Air Quality Nexus
James McGuire, *City of Dallas*
4. U.S. Environmental Protection Agency Cooperative Research and Development Partnerships
Carl Fulper, *U.S. Environmental Protection Agency (pending confirmation)*

Special Discussion Session 2: Schools, Childhood Asthma, and Interventions

1:15 p.m.–2:30 p.m. Ballroom C

Facilitator: Kathy Jack, *The Nature Conservancy*

Presentations:

1. Asthma 411: A Collaboration to Enhance School Health Services and Integrate School, Transportation, and Air Quality Data to Reduce the Impact of Asthma at School
Leslie Allsopp, *University of North Texas, School of Public Health, Department of Biostatistics and Epidemiology, Health Science Center*
David A. Sterling, *University of North Texas, School of Public Health, Department of Biostatistics and Epidemiology, Health Science Center*
Subhash Aryal, *University of North Texas, School of Public Health, Department of Biostatistics and Epidemiology, Health Science Center, SaferTexas*

2. Breathe Easy Dallas: Measuring the Impact of School-Based Interventions on Air Quality and Daily Asthma Exacerbations at High-Risk Schools
Haneen Khreis, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
Kathy Jack, *The Nature Conservancy*
Suriya Vallamsundar, *Texas A&M Transportation Institute*
Bahar Dadashova, *Texas A&M Transportation Institute*
Jeremy Johnson, *Texas A&M Transportation Institute*

3. Assessment of Asthma Control Questionnaire as a Metric for Children’s Traffic Air Pollution Exposures at Two Roadside El Paso Elementary Schools
Amit Raysoni, *The University of Texas Rio Grande Valley*
Soyoung Jeon, *The University of Texas at El Paso*
Juan Aguilera, *The University of Texas at El Paso*
Wen-Whai Li, *The University of Texas at El Paso*

Special Discussion Session 3: Health in Transportation Planning and Project Development

1:15 p.m.–2:30 p.m. Ballroom DEF

Facilitator: **Victoria Martinez**, *Federal Highway Administration*

Presentations:

1. Making Healthy Connections Framework: Safe, Multimodal, and Community Considerations in Corridor Planning
Victoria Martinez, *Federal Highway Administration*

2. Incorporating Health Impacts in Transportation Project Decision Making
Eleni Christofa, *University of Massachusetts Amherst*
Aikaterini Deliali, *University of Massachusetts Amherst*
Sarah Esenther, *Yale University*
Christine Frisard, *University of Massachusetts Medical School*
Karin Valentine Goins, *University of Massachusetts Medical School*
Stephenie Lemon, *University of Massachusetts Medical School*
Mitchell Page, *University of Massachusetts Amherst*
Krystal Pollitt, *Yale University*
Elliot Sperling, *Massachusetts Department of Transportation*

3. TBD

Poster Session 1

2:30 p.m.–3:30 p.m. Lower Foyer

Presentations:

1. Quantifying Light-Duty Vehicles' Emissions to PM_{2.5} and PM₁₀ Focusing on Platinum Group Metals: Yearlong Measurements at a Near-Highway Elementary School in Houston
Sourav Das, Texas A&M University
Shankar Chellam, Texas A&M University
2. Greenhouse Gas Emissions Analysis of Regional Transportation Plans with the U.S. Environmental Protection Agency's MOVES Model: Experience with the Fairbanks Metropolitan Planning Organization in Alaska
Ming Lee, Florida International University, Civil and Environmental Engineering
3. An Advanced Modal-Based Modeling Approach for Estimating the Energy Consumption of Electric Vehicle Subfleets in Large-Scale Transportation Networks
Xiaodan Xu, Georgia Institute of Technology
H. M. Abdul Aziz, Oak Ridge National Laboratory
Haobing Liu, Georgia Institute of Technology
Michael Rodgers, Georgia Institute of Technology
Randall Guensler, Georgia Institute of Technology
4. A Comparative Study of a Multimodal Second-Generation Biomass Biofuel Supply Chain
Seyed Ali Haji Esmaeili, North Dakota State University, College of Business, Department of Transportation, Logistics, and Finance
Joseph Szmerekovsky, North Dakota State University, College of Business, Department of Transportation, Logistics, and Finance
Ahmad Sobhani, Oakland University, School of Business
5. Developing a Mesoscopic Energy Consumption Model for Battery Electric Trucks Based on Real-World Driving Data
Chao Wang, University of California, Riverside
Peng Hao, University of California, Riverside
Kanok Boriboonsomsin, University of California, Riverside
Zhiming Gao, Oak Ridge National Laboratory, National Transportation Research Center
Matthew Barth, University of California, Riverside
6. An Optimization Model to Choose Bus Fleets Under Environmental Constraints: A Case Study
Fangzheng Yuan, North Dakota State University, Upper Great Plains Transportation Institute
Yuan Xu, North Dakota State University, Upper Great Plains Transportation Institute
Joseph Szmerekovsky, North Dakota State University, College of Business, Department of Transportation, Logistics, and Finance

7. Beyond Safety: Utilizing Strategic Highway Research Program 2 Naturalistic Driving Study Data to Model Emissions from Passenger Vehicles at Project Level for Different Work Zone Configurations
Georges Bou-Saab, *Iowa State University*
Shauna Hallmark, *Iowa State University*
Omar Smadi, *Iowa State University*
8. Understanding Air Quality Data, Traffic, and Weather Parameters Collected from Near-Road Stations
Ayla Moretti, *University of California, Riverside, Department of Chemical and Environmental Engineering, Center for Environmental Research and Technology*
Ji Luo, *University of California, Riverside*
Guoyuan Wu, *University of California, Riverside, Department of Chemical and Environmental Engineering, Center for Environmental Research and Technology*
Brandon Feenstra, *University of California, Riverside, Department of Chemical and Environmental Engineering, Center for Environmental Research and Technology*
Kanok Boriboonsomsin, *University of California, Riverside, Department of Chemical and Environmental Engineering, Center for Environmental Research and Technology*
Matthew Barth, *University of California, Riverside, Department of Chemical and Environmental Engineering, Center for Environmental Research and Technology*
9. Traffic-Related Air Pollution Exposures from Border Crossings: Assessing Affected Populations in El Paso, Texas
Inyang Uwak, *Texas A&M Transportation Institute*
Rohit Jaikumar, *Texas A&M Transportation Institute*
Tara Ramani, *Texas A&M Transportation Institute*
Amber Trueblood, *Texas A&M Transportation Institute*
Suriya Vallamsundar, *Texas A&M Transportation Institute*
Natalie Johnson, *Texas A&M University*
Josias Zietsman, *Texas A&M Transportation Institute*
10. The Effect of Re-suspended Dust Emissions on Near-Road Traffic-Related Air Pollution
Mohammad Hashem Askariyeh, *Texas A&M Transportation Institute*
Madhusudhan Venugopal, *Texas A&M Transportation Institute*
Richard Baldauf, *U.S. Environmental Protection Agency*
Haneen Khreis, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
Suriya Vallamsundar, *Texas A&M Transportation Institute*
Reza Farzaneh, *Texas A&M Transportation Institute*
Andrew Birt, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
Joe Zietsman, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
11. Transforming Our Cities: Best Practices Toward Clean Air and Active Transportation
Andrew Glazener, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation, Emissions, Energy, and Health*
Haneen Khreis, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*

12. The Environmental Justice Case for Congestion Pricing
Austin Stanion, University of California, Los Angeles Luskin
13. Particulate Matter Exposure for Paratransit Transport
Kaitlyn Schaffer, Georgia Institute of Technology
Michael Rodgers, Georgia Institute of Technology
Alex Samoylov, Georgia Institute of Technology
Kumar Rajarshi, Georgia Institute of Technology
14. Oxidative Potential of Diesel Exhaust Particles: Role of Fuel, Engine Load, and Emissions Control
Shantanu Jathar, Colorado State University
Naman Sharma, Colorado State University
Cody Vanderheyden, Colorado State University
Kevin Klunder, Colorado State University
Charles Henry, Colorado State University
John Volckens, Colorado State University
15. An Alternative Method for Vehicle Exhaust Emission Modeling and Its Impact on Local Road Transport Emission Inventories: The Case Study of Bradford, United Kingdom
Haneen Khreis, Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health
Luc Pellecuer, École de Technologie Supérieure
James Tate, Institute for Transport Studies

Breakout Sessions

Each breakout session will include four presentations based on a particular theme.

Breakout Session A: Active Travel, Micro-environments, and Exposure Assessment

3:45 p.m.–5:15 p.m. South Park AB

Presentations:

1. Influence of Bike Infrastructure on Cyclist Air Pollution Exposure
April Gadsby, Georgia Institute of Technology
Kaitlyn Schaffer, Georgia Institute of Technology
Nic Alton, Georgia Institute of Technology
Kari Watkins, Georgia Institute of Technology
Christopher Le Dantec, Georgia Institute of Technology
2. Consideration of Exposure to Traffic-Related Air Pollution in Bicycle Route Planning
Ji Luo, University of California, Riverside, Department of Chemical and Environmental Engineering, Center for Environmental Research and Technology
Kanok Boriboonsomsin, University of California, Riverside
Matthew Barth, University of California, Riverside



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3. Multipollutant Analysis of Traffic and Other Microenvironmental Exposures
Kirsten Koehler, Johns Hopkins University, Bloomberg School of Public Health
Nicholas Good, Colorado State University
Ander Wilson, Colorado State University
Anna Molter, University of Manchester
Brianna Moore, Colorado State University
Taylor Carpenter, Colorado State University
Jennifer Peel, Colorado State University
John Volckens, Colorado State University

4. Maternal Exposure to PM_{2.5} in South Texas: A Pilot Study
Misti Levy Zamora, Johns Hopkins University, Bloomberg School of Public Health
Jairus Pulczynski, Johns Hopkins University, Bloomberg School of Public Health
Natalie Johnson, Texas A&M University, School of Public Health
Rosa Garcia-Hernandez, Johns Hopkins University, Bloomberg School of Public Health
Ana Rule, Johns Hopkins University, Bloomberg School of Public Health
Genny Carrillo, Texas A&M University, School of Public Health
Josias Zietsman, Texas A&M Transportation Institute
Brenda Sandragorsian, Texas A&M University, School of Public Health
Suriya Vallamsundar, Texas A&M Transportation Institute
Mohammad Askariyeh, Texas A&M Transportation Institute
Kristen Koehler, Johns Hopkins University, Bloomberg School of Public Health

Breakout Session B: Advances in Air Pollution Monitoring and Modeling and Application in Health Studies

3:45 p.m.–5:15 p.m. Ballroom C

Presentations:

1. Development of an Internet-of-Things–Enabled, On-Road, Traffic-Related, Air Pollution Monitoring Laboratory with Real-Time Computer-Vision-Based Vehicle Counter
Asanga Wijesinghe, Houston Advanced Research Center
Mustapha Beydoun, Houston Advanced Research Center
John Colvin, Houston Advanced Research Center

2. Assessing the Sensitivity of Modeled Near-Road Air Quality to Traffic Data in Six Neighborhoods in Salt Lake County, Utah
Chad Bailey, U.S. Environmental Protection Agency
Daniel Mendoza, University of Utah

3. New Applications in the Use of Satellite Data Monitoring of Air Quality for Population Health, Exposure Risk Estimation, and Public Outreach
Susan Alexander, University of Alabama in Huntsville
Michael Newchurch, University of Alabama in Huntsville
Aaron Naeger, University of Alabama in Huntsville
David Klubert, Apogee Informatics

4. Monte-Carlo Analysis to Inform Mobile Monitoring for Spatial-Temporal Regression Models of Particle Number Concentration near a Highway
Allison Patton, *Health Effects Institute*
John Durant, *Tufts University*
Elena Naumova, *Tufts University*

Breakout Session C: Characterizing Traffic-Related Air Pollution

3:45 p.m.–5:15 p.m. Ballroom DEF

Presentations:

1. Near-Road Monitoring Data Assessment: Impact of Traffic, Meteorology, and Background Concentration
Suriya Vallamsundar, *Texas A&M Transportation Institute*
Mohammad Askariyeh, *Texas A&M Transportation Institute*
Reza Farzaneh, *Texas A&M Transportation Institute*
Madhusudhan Venugopal, *Texas A&M Transportation Institute*
Wen-Whai Li, *The University of Texas at El Paso*
2. Near-Road Human Exposure Assessment Using an Agent-Based Traffic Simulator and a Computational Fluid Dynamics Street-Canyon Model
Aron Jazcilevich, *Universidad Nacional Autónoma de México, Centro de Ciencias de la Atmósfera*
Juan de la Cruz Zavala, *Universidad Nacional Autónoma de México, Centro de Ciencias de la Atmósfera*
Ivan Y. Hernandez, *CONACYT-Consortio CENTROMET*
Adolfo Hernandez, *Universidad Nacional Autónoma de México, Centro de Ciencias de la Atmósfera*
Ulises Diego Ayala, *Escola Universitària Salesiana de Sarrià*
Irma Rosas, *Universidad Nacional Autónoma de México, Centro de Ciencias de la Atmósfera*
3. Implications of Elevated Gasoline Sulfur Content on Air Quality in Central Texas and Beyond
Andrew Hoekzema, *Capital Area Council of Governments*
Sandeep Kishan, *Eastern Research Group*
Allison DenBleyker, *Eastern Research Group*
4. Estimation of Brake Wear Contribution to Particulate Pollution Using On-Road Measurements
Farzan Oroumijeh, *University of California, Los Angeles*

Breakout Session D: Air Pollution and the Burden of Disease

5:15 p.m.–6:30 p.m. South Park AB

Presentations:

1. Air Pollution and the Burden of Childhood Asthma in the Contiguous United States in 2000 and 2010
Raed Alotaibi, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
Mathew Bechle, *University of Washington, Department of Civil and Environmental Engineering*
Julian Marshall, *University of Washington, Department of Civil and Environmental Engineering*
Tara Ramani, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
Mark Nieuwenhuijsen, *ISGlobal, Centre for Research in Environmental Epidemiology*
Haneen Khreis, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
2. Outdoor Air Pollution and the Burden of Childhood Asthma Across Europe
Haneen Khreis, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
Marta Cirach, *ISGlobal, Centre for Research in Environmental Epidemiology*
Natalie Mueller, *ISGlobal, Centre for Research in Environmental Epidemiology*
Kees de Hoogh, *Swiss Tropical and Public Health Institute*
Gerard Hoek, *Utrecht University, Institute for Risk Assessment Sciences, Division of Environmental Epidemiology*
Mark J. Nieuwenhuijsen, *ISGlobal, Centre for Research in Environmental Epidemiology*
David Rojas-Rueda, *ISGlobal, Centre for Research in Environmental Epidemiology*
3. Mobile Source Contributions to Ambient Concentrations of Pollution, Attributable Health Burden, and Monetized Health-Benefit-per-Ton Values in the United States in 2025
Kenneth Davidson, *U.S. Environmental Protection Agency*
Margaret Zawacki, *U.S. Environmental Protection Agency*
4. Compact Urban Re-development and Near-Roadway Air Pollution Health Impact Assessment: Identifying Opportunities for Health Co-benefits of Climate Change Mitigation in Southern California
Rob McConnell, *University of Southern California*
Nino Kunzli, *Swiss Tropical and Public Health Institute; University of Basel*

Breakout Session E: Advances in Vehicle Emission Modeling and Monitoring

5:15 p.m.–6:30 p.m. Ballroom C

Presentations:

1. Some Early Findings from Recent Scottish EDAR Vehicle Emissions Studies
Karl Ropkins, University of Leeds, Institute for Transport Studies
Drew Hill, Transport Scotland
2. Using an On-Road Heavy-Duty Emissions Measurement System for a Heavy-Duty Vehicle Inspection and Maintenance Program
Chris Klaus, North Central Texas Council of Governments
Jason Brown, North Central Texas Council of Governments
3. Artificial Neural Networks for Emissions Modeling and Environmental Routing for Light-Duty Passenger Vehicles
Shantanu Jathar, Colorado State University
Shiva Tarun, Colorado State University
Zachary Asher, Western Michigan University
Thomas Bradley, Colorado State University
Brian Johnston
4. Nonlinear Vehicle Emission Modeling for Urban Areas
Hajar Hajmohammadi, University College London, Centre for Transport Studies
Giampiero Marra, University College London, Department of Statistical Science
Benjamin Heydecker, University College London, Centre for Transport Studies

Breakout Session F: Chemistry, Composition, and Toxicology of Traffic-Related Air Pollution

5:15 p.m.–6:30 p.m. Ballroom DEF

Presentations:

1. Elemental Characterization of PM_{2.5} and PM₁₀ Emitted by Light-Duty Vehicles: Measurements of Rhodium, Palladium, and Platinum in the Washburn Tunnel
Shankar Chellam, Texas A&M University, Zachry Department of Civil Engineering
2. Quantum Mechanical Modeling of Soot, Pyrene, and Benzo[a]pyrene
James Kubicki, The University of Texas at El Paso

3. A Mouse Model of In-Utero Ultrafine Particulate Matter Exposure and Infant Respiratory Syncytial Virus Disease
Natalie Johnson, *Texas A&M University*
Carmen Lau, *Texas A&M University*
Dennis Garcia-Rhodes, *Texas A&M University*
Drew Pendleton, *Texas A&M University*
Alexandra Myers, *Texas A&M University*
Jeremiah Secrest, *Texas A&M University*
Yixin Li, *Texas A&M University*
Tiffanie Vargas, *Texas A&M University*
Renyi Zhang, *Texas A&M University*
Aline Rodrigues Hoffmann, *Texas A&M University*

4. Tracking Epitranscriptomics Modifications to Understand Early Health Effects of Oxidative-Prone Air
Lydia Contreras, *The University of Texas at Austin*
Juan Gonzalez-Rivera, *The University of Texas at Austin*
Kevin Baldrige, *The University of Texas at Austin*
Dongyu Wang, *The University of Texas at Austin*
Jamie Chuvalo-Abraham, *The University of Texas at Austin*
Lea Hildebrandt Ruiz, *The University of Texas at Austin*

Poster Session 2 and Networking Reception

6:30 p.m.–7:30 p.m. The Oaks

Presentations:

1. Health Canada's Assessment of Traffic-Related Air Pollution: Exposure, Health Effects, and Population Health Impacts
Mathieu Rouleau, *Health Canada, Fuels Assessment Section*

2. Leukemia Risk Assessment Approximation from Commercial Gasoline Station Benzene Exposures
Andrew Patton, *Johns Hopkins University, Bloomberg School of Public Health*
Kirsten Koehler, *Johns Hopkins University, Bloomberg School of Public Health*
Mary Fox, *Johns Hopkins University, Bloomberg School of Public Health*
Misti Zamora, *Johns Hopkins University, Bloomberg School of Public Health*

3. Characterization of Construction Equipment In-Cab Pollutants
Sherif El Khouly, *Texas A&M University*
Phil Lewis, *Texas A&M University*

4. Mobility and Public Health: A Conceptual Model and Literature Review
Andrew Glazener, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation, Emissions, Energy, and Health*
Tara Ramani, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
Joe Zietsman, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
Mark Nieuwenhuijsen, *ISGlobal, Centre for Research in Environmental Epidemiology*
Karen Lucas, *University of Leeds, Institute for Transport Studies*
Jennifer Mindell, *University College London, Department of Epidemiology and Public Health*
Haneen Khreis, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
5. Developing and Analyzing a Literature Library on Traffic Emissions, Air Pollution, Exposures, and Health
Kristen Sanchez, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
Tara Ramani, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
Josias Zietsman, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
Mark Nieuwenhuijsen, *ISGlobal, Centre for Research in Environmental Epidemiology*
Haneen Khreis, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
6. Application of the Navigation Guide Systematic Review Methodology to Evaluate the Association between Prenatal Particulate Matter Air Pollution Exposure and Birth Weight
Natalie Johnson, *Texas A&M University*
Inyang Uwak, *Texas A&M Transportation Institute*
Juleen Lam, *California State University, East Bay*
Xiaohui Xu, *Texas A&M University*
Brandy Taylor, *Temple University*
Margaret Foster, *Texas A&M University*
Megan Moriarty, *Texas A&M University*
Samuel Taiwo, *Texas A&M University*
Angelica Fuentes, *Texas A&M University*
Natalie Olson, *Texas A&M University*
Weihshueh Chiu, *Texas A&M University*
7. Conceptualizing Spatial Disparity in Child Health
Amaryllis Park, *Texas A&M University*

8. Active Transportation and Self-Impression of Health: Evidence from 2017 National Household Travel Survey Data
Farinoush Sharifi, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
Reza Farzaneh, *Texas A&M Transportation Institute*
Soheil Sohrabi, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation, Emissions, Energy, and Health; Texas A&M University, Zachry Department of Civil Engineering*
Haneen Khreis, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
9. An Experimental Study of Range-Hood Performance Metrics to Support Energy Savings and Improve Indoor Air Quality
Sammy Meleika, *Texas A&M University*
James Sweeney, *Texas A&M University*
Michael Pate, *Texas A&M University*
10. Cumulative Impact of Traffic-Related Air Pollution Regulations on Infant Health Outcomes
Mary Willis, *Oregon State University*
Perry Hystad, *Oregon State University*
11. Using the ¹³C/¹²C Carbon Isotope Ratio to Characterize the Emission Sources of Airborne Particulate Matter: A Review of Literature
Juan Aguilera, *The University of Texas at El Paso*
Leah D. Whigham, *Paso del Norte Institute for Healthy Living*
12. Determination of the Optimal Sample Size for a Limited Longitudinal Cohort Study of Children’s Respiratory Health and Air Quality
Soyoung Jeon, *The University of Texas at El Paso, Department of Mathematical Sciences*
Joan Staniswalis, *The University of Texas at El Paso, Department of Mathematical Sciences*
Amit Raysoni, *The University of Texas at Rio Grande Valley, School of Earth, Environment, and Marine Sciences*
Wen-Whai Li, *The University of Texas at El Paso*
13. Assessing the Health Impact of Transportation Systems: A Burden of Disease Analysis
Soheil Sohrabi, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation, Emissions, Energy, and Health; Texas A&M University, Zachry Department of Civil Engineering*
Haneen Khreis, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*
14. Developing an Enhanced Street Smart Walk Score for Health Research
Bruce Appleyard, *San Diego State University*
Lawrence Frank, *University of British Columbia*



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15. Breathe Easy Dallas: Quasi-experimental Design for Selection of High-Asthma-Risk Schools for Treatment

Bahar Dadashova, *Texas A&M Transportation Institute*

Haneen Khreis, *Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health*

Kathy Jack, *The Nature Conservancy*

Wednesday, February 20, 2019

Breakout Sessions

Breakout Session G: Influencing Policy Making and Regulations

8:30 a.m.–9:45 a.m. South Park AB

Presentations:

1. The Fuels Assessment Section of Health Canada: Transportation, Air Pollution, and Human Health
Mathieu Rouleau, Health Canada, Fuels Assessment Section
2. Smart Growth for Dallas: Using Data and Geographic Information System Mapping for a Greener, Healthier, More Resilient City
Molly Plummer, Trust for Public Land
3. It's All Connected: Using an Air Quality Health Assessment of a Freeway Expansion Project in Houston as the Basis for Developing Mitigation Recommendations Benefiting Multiple Environmental Impacts
Adele Houghton, Biositu, LLC
Bakeyah Nelson, Air Alliance Houston
Corey Williams, Air Alliance Houston
4. Air Quality Planning and Policy at the Regional Level
Kathryn Higgins, South Coast Air Quality Management District (pending confirmation)

Breakout Session H: Cumulative Risk Assessment

8:30 a.m.–9:45 a.m. Ballroom C

Presentations:

1. Exploring Transportation-Related Chemical Mixtures and Cumulative Risks
Mary Fox, Johns Hopkins University, Bloomberg School of Public Health
Joseph Amoah, Johns Hopkins University, School of Medicine
Andrew Patton, Johns Hopkins University, Bloomberg School of Public Health
Misti Zamora, Johns Hopkins University, Bloomberg School of Public Health
Kristen Koehler, Johns Hopkins University, Bloomberg School of Public Health

2. Assessing the Acute Safety Hazard to Highway Transportation from Blowing Dust at Lordsburg Playa, New Mexico
Thomas Gill, *The University of Texas at El Paso*
David Dubois, *New Mexico State University*
Iyasu Eibedingil, *The University of Texas at El Paso*
Jaylen Fuentes, *New Mexico State University*
Lixin Jin, *The University of Texas at El Paso*
Junran Li, *University of Tulsa*
Marcos Mendez, *The University of Texas at El Paso*
John Tatarko, *U.S. Department of Agriculture, Agricultural Research Service*
R. Scott Van Pelt, *U.S. Department of Agriculture, Agricultural Research Service*
Nicholas Webb, *U.S. Department of Agriculture, Agricultural Research Service*

3. Assessment of the Joint Effects of Traffic-Related Noise, Air Pollution, and Green Space on Children’s Stress
Rebecca Lee, *University of Southern California, Department of Preventive Medicine*
Meredith Franklin, *University of Southern California, Department of Preventive Medicine*
Scott Fruin, *University of Southern California, Department of Preventive Medicine*
Robert Urman, *University of Southern California, Department of Preventive Medicine*
Rob McConnell, *University of Southern California, Department of Preventive Medicine*

4. Relationship Between Physical Activity, Fruits and Vegetables, and Air Quality in Children with Asthma
Juan Aguilera, *The University of Texas at El Paso*
David Perez, *The University of Texas at El Paso*
Alisha Redelfs, *The University of Texas at El Paso*
Soyoung Jeon, *The University of Texas at El Paso*
Amit Raysoni, *The University of Texas Rio Grande Valley, School of Earth, Environment, and Marine Sciences*
Wen-Whai Li, *The University of Texas at El Paso*
Leah D. Whigham, *Paso del Norte Institute for Healthy Living*

Breakout Session I: Local Issues, Interventions and Public Awareness

8:30 a.m.–9:45 a.m. Ballroom DEF

Presentations:

1. A Closer Look at Transportation and Health in Houston
Kai Zhang, *The University of Texas Health Science Center at Houston*

2. Air Quality Awareness in the Big City: Breathe Today — SA Tomorrow
Julia Murphy, *City of San Antonio*

3. Assessing the Contribution of Traffic Emissions to Near-Road PM_{2.5} Pollution Using Concentrations Observed at Near-Road and Urban-Scale Background Air Monitors

Wen-Whai Li, *The University of Texas at El Paso, Department of Civil Engineering*
Mayra Chavez, *The University of Texas at El Paso, Department of Civil Engineering*
Soyoung Jeon, *The University of Texas at El Paso, Department of Mathematical Sciences*
Ivan Ramirez, *The University of Texas at El Paso, Department of Civil Engineering*

4. How Urban Green Infrastructure Can Affect Air Pollution and Health

Richard Baldauf, *U.S. Environmental Protection Agency*

Breakout Session J: Sensors Evaluation and Applications

10:15 a.m.–11:30 a.m. South Park AB

Presentations:

1. Feasibility of Low-Cost Air Quality Sensors for Mobile Emissions Analysis

Nic Alton, *Georgia Institute of Technology*
Saumik Narayanan, *University of Minnesota*
April Gadsby, *Georgia Institute of Technology*
Christopher Le Dantec, *Georgia Institute of Technology*
Kari Watkins, *Georgia Institute of Technology*

2. Intercomparison of Purple Air[®] Particulate Matter Sensors with a GRIMM[®] Optical Particulate Matter Sensor

Alex Samoylov, *Georgia Institute of Technology*
Kumar Rajarshi, *Georgia Institute of Technology*
Michael Rodgers, *Georgia Institute of Technology*
Kaitlyn Schaffer, *Georgia Institute of Technology*

3. Performance Evaluation of Low-Cost Air Quality Sensors at Near-Road Air Quality Monitoring Stations

Ji Luo, *University of California, Riverside, Department of Chemical and Environmental Engineering, Center for Environmental Research and Technology*
Ayla Moretti, *University of California, Riverside, Department of Chemical and Environmental Engineering, Center for Environmental Research and Technology*
Guoyuan Wu, *University of California, Riverside, Department of Chemical and Environmental Engineering, Center for Environmental Research and Technology*
Brandon Feenstra, *University of California, Riverside, Department of Chemical and Environmental Engineering, Center for Environmental Research and Technology*
Kanok Boriboonsomsin, *University of California, Riverside, Department of Chemical and Environmental Engineering, Center for Environmental Research and Technology*
Matthew Barth, *University of California Riverside, Department of Chemical and Environmental Engineering, Center for Environmental Research and Technology*

4. Using Machine Learning to Calibrate Low-Cost Laser-Based Observations of Airborne Particulates

Lakitha Wijeratne, *The University of Texas at Dallas*
David Lary, *The University of Texas at Dallas*

Breakout Session K: Health Effects of Air Pollution

10:15 a.m.–11:30 a.m. Ballroom C

Presentations:

1. Short-Term Effects of Urban Traffic-Related Air Pollution on Blood Pressure
Neelakshi Hudda, Tufts University
Misha Eliasziw, Tufts University
Wig Zamore, Somerville Transportation Equity Partnership
Ellin Reisner, Somerville Transportation Equity Partnership
John Durant, Tufts University
Doug Brugge, Tufts University
2. Near-Highway Criteria Pollutant Concentrations Are Weakly Associated with Adverse Respiratory Symptoms for Asthmatic Children Attending Roadside Schools
Wen-Whai Li, The University of Texas at El Paso, Department of Civil Engineering
Soyoung Jeon, The University of Texas at El Paso
Amit Raysoni, The University of Texas Rio Grande Valley, School of Earth, Environment, and Marine Sciences
Leah Whigham, Paso del Norte Institute for Healthy Living
3. Examining Spatially Varying Relationships Between Preterm Births and Ambient Air Pollution in Georgia Using Geographically Weighted Logistic Regression
Jun Tu, Kennesaw State University
4. Air Quality and Obesity Risk Among Low-Income Children Residing in Los Angeles
Kara MacLeod, University of California, Los Angeles, Fielding School of Public Health
Edmund Seto, University of Washington
Shannon Whaley, PHFE WIC
May Wang, University of California, Los Angeles, Fielding School of Public Health

Breakout Session L: Impact of Technologies

10:15 a.m.–11:30 a.m. Ballroom DEF

Presentations:

1. Simulation of Road Traffic Pollutant Emissions and Atmospheric Concentrations in Île-de-France and France Under Different Technological Scenarios (Diesel, Petrol, Electric, and Traffic Reduction)
Michel André, French Institute of Sciences on Transport, Technologies, Planning, and Networks
Karine Sartelet, ENPC-CEREA
Sophie Moukhtar, AIRPARIF
Jean-Marc Andre, CITEPA
Matteo Redaelli, ANSES
2. An Overview of the University of California, Riverside's Research on Secondary Organic Aerosol Production from Mobile Sources: Discussions on the Effects of High-Speed Driving Conditions on SOA Formation Potential from GDI Vehicles
Georgios Karavalakis, University of California, Riverside
Niina Kuittinen, Tampere University of Technology
Cavan McCaffery, University of California, Riverside
Stephen Zimmerman, University of California, Riverside
Weihan Peng, University of California, Riverside
Patrick Roth, University of California, Riverside
Roya Bahreini, University of California, Riverside
David Cocker, University of California, Riverside
Topi Rönkkö, Tampere University of Technology
Jorma Keskinen, Tampere University of Technology
3. Use of Connected Vehicle Technology to Reduce Human Exposure to Traffic-Related Air Pollutants
Kanok Boriboonsomsin, University of California, Riverside
Ji Luo, University of California, Riverside
Chao Wang, University of California, Riverside
Matthew Barth, University of California, Riverside
4. The Impact of Connected and Autonomous Vehicles on Public Health: A Conceptual Model
Soheil Sohrabi, Texas A&M Transportation Institute, Center for Advancing Research in Transportation, Emissions, Energy, and Health; Texas A&M University, Zachry Department of Civil Engineering
Farinoush Sharifi, Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health
Haneen Khreis, Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health



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Closing Plenary

11:30 a.m.–12:15 p.m. Ballroom DEF