Monday, February 18, 2019 — Pre-conference Day

Registration Desk Open

12:00 noon–6:00 p.m.

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

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<td>Part 1</td>
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<td>3:00 p.m.–3:30 p.m.</td>
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<td>3:30 p.m.–5:00 p.m.</td>
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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.

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’s 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

   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

Break

3:00 p.m.–3:30 p.m.
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

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

Dine Around Austin

6:30 p.m.  Meet in Hotel Lobby

Experience the local flavor and get to know your fellow conference attendees. (Dinner cost on your own.)
Tuesday, February 19, 2019 — Conference Day One

Registration Desk Open
7:30 a.m.–5:00 p.m.

Continental Breakfast
7:30 a.m.–8:30 a.m.

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, 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.

Break
10:30 a.m.–11:00 a.m.

Plenary Session: Setting the Stage — From Transportation Emissions to Health Effects
11:00 a.m.–12:15 p.m.  Ballroom DEF

The plenary session will feature presentations from Christopher Frey of North Carolina State University, Bakeyah Nelson of Air Alliance Houston, and Oliver Gao of Cornell University. The session will be facilitated by Thomas Burke of Johns Hopkins Bloomberg School of Public Health.
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

Lunch and Networking

12:15 p.m.–1:15 p.m.  Ballroom DEF

Lunch buffet and networking.

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. City Partnerships Toward Local Transportation–Air Quality Nexus
   **James McGuire**, City of Dallas

3. U.S. Environmental Protection Agency Cooperative Research and Development Partnerships
   **Sarah Roberts**, U.S. Environmental Protection Agency
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, SaferCare Texas

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: Cecilia Ho, 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. Healthy Regions
   Kelly Porter, Capital Area Metropolitan Planning Organization

**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 PM$_{10}$ 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. 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

8. 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
   Joe Zietsman, Texas A&M Transportation Institute
9. 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

10. 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

11. The Environmental Justice Case for Congestion Pricing

Austin Stanion, University of California, Los Angeles Luskin

12. 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

13. 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

Break

3:30 p.m.–3:45 p.m.
Breakout Sessions

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

3:45 p.m.–5:15 p.m.    South Park AB

**Facilitator:** Kirsten Koehler, Johns Hopkins University

**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

3. Multipollutant Analysis of Traffic and Other Micro-environmental 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 Pulczinski, 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
   - Joe 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

Facilitator: Chad Bailey, U.S. Environmental Protection Agency

Presentations:

1. 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

   Asanga Wijesinghe, Houston Advanced Research Center
   Mustapha Beydoun, Houston Advanced Research Center
   John Colvin, Houston Advanced Research Center

3. 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

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

Facilitator: Andrew Hoekzema, Capital Area Council of Governments

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-Consejo CENTROMET
   Adolfo Hernandez, Universidad Nacional Autónoma de México, Centro de Ciencias de la atmósfera
   Ulises Diego Ayala, Escola Universitarisch 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
   Christiane Alepuz, Capital Area Council of Governments

4. Measuring the Spatio-temporal Distribution of Pollution (NO2, O3, CH2O, SO2, and Aerosols/Particulate Matter) with Tropospheric Emissions: Monitoring of Pollution Geostationary Satellite Observations and Ground-Based Tropospheric Ozone Lidar Network Ozone/Aerosol Differential Absorption Lidar
   Mike Newchurch, University of Alabama in Huntsville
   Kelly Chance, Smithsonian Astrophysical Observatory
   Shi Kuang, University of Alabama in Huntsville
   Aaron Naeger, University of Alabama in Huntsville
   Susan Alexander, University of Alabama in Huntsville
Breakout Session D: Air Pollution and the Burden of Disease

5:15 p.m.–6:30 p.m.   Ballroom DEF

Facilitator: Kenneth Davidson, U.S. Environmental Protection Agency

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. Ambient and Traffic-Related Air Pollution Exposures as Novel Risk Factors for Metabolic Dysfunction and Type 2 Diabetes
   Zhanghua Chen, University of Southern California
   Frank Gilliland, University of Southern California
   Thomas Buchanan, University of Southern California
   Anny Xiang, University of Southern California
   Richard Watanabe, University of Southern California
   Rob McConnell, University of Southern California
   Carrie Breton, University of Southern California
   Ed Avol, University of Southern California
   Leda Chatzi, University of Southern California
   Megan Herting, University of Southern California
   Kiros Berhane, University of Southern California
   Duncan Thomas, University of Southern California
   Britni Belcher, University of Southern California
   Tanya Alderete, University of Southern California
   Claudia Toledo-Corral, University of Southern California
   Jeniffer Kim, University of Southern California
   Rima Habre, University of Southern California
   Theresa Bastain, University of Southern California
   John Wilson, University of Southern California
   Elizabeth Hauser, Duke University
   Christopher Newgard, Duke University
   Olga Ilkayeva, Duke University
   Dean Jones, Emory University
   Douglas Walker, Emory University
   Fred Lurmann, Sonoma Technology, Inc.
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*

   *Rob McConnell, University of Southern California*
   *Nino Kunzli, Swiss Tropical and Public Health Institute; University of Basel*

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**Breakout Session E: Advances in Vehicle Emission Modeling and Monitoring**

5:15 p.m.–6:30 p.m.   Ballroom C

**Facilitator:** Jackie Ploch, *Texas Department of Transportation*

**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, Colorado State University*

   *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.  South Park AB

Facilitator: Natalie Johnson, Texas A&M University

Presentations:

1. Elemental Characterization of PM$_{2.5}$ and PM$_{10}$ 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 Baldridge, 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.  Lower Foyer

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 Nieuwenhuijzen, 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
   Joe Zietsman, Texas A&M Transportation Institute, Center for Advancing Research in Transportation Emissions, Energy, and Health
   Mark Nieuwenhuijzen, 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
   **Weihsueh Chiu**, Texas A&M University

7. Conceptualizing Spatial Disparity in Child Health
   **Amaryllis Park**, Texas A&M University
   **Chanam Lee**, 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. 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

11. 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
12. 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

13. Developing an Enhanced Street Smart Walk Score for Health Research

Bruce Appleyard, San Diego State University

Lawrence Frank, University of British Columbia

Wednesday, February 20, 2019 — Conference Day Two

Registration Desk Open

7:30 a.m.–10:00 a.m.

Continental Breakfast

7:30 a.m.–8:30 a.m.

Breakout Sessions

Breakout Session G: Influencing Policy Making and Regulations

8:30 a.m.–9:45 a.m. South Park AB

Facilitator: Tara Ramani, Texas A&M Transportation Institute

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

Breakout Session H: Cumulative Risk Assessment
8:30 a.m.–9:45 a.m. Ballroom C

Facilitator: Mary Fox, Johns Hopkins Bloomberg School of Public Health

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

**Facilitator:** Kristen Sanchez, Texas A&M Transportation Institute

**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

**Break**

9:45 a.m.–10:15 a.m.
Breakout Session J: Sensors’ Evaluations and Applications

10:15 a.m.–11:30 a.m. South Park AB

Facilitator: Michael Rodgers, Georgia Institute of Technology

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. Application of Dust Aerosol Spectrometer for In-Cabin PM Exposure of 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

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

Facilitator: Wen-Whai Li, The University of Texas at El Paso, Department of Civil Engineering

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. Cumulative Impact of Traffic-Related Air Pollution Regulations on Infant Health Outcomes
   Mary Willis, Oregon State University
   Perry Hystad, Oregon State University
Breakout Session L: Impact of Technologies

10:15 a.m.–11:30 a.m.  Ballroom DEF

**Facilitator:** Kanok Boriboonsomsin, *University of California, Riverside*

**Presentations:**

1. 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

2. An Overview of the University of California, Riverside’s Research on Secondary Organic Aerosol (SOA) 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
   - 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
Closing Plenary: The Way Forward — Health Promotion and the Role of Transportation

11:30 a.m.–12:15 p.m. Ballroom DEF

The closing plenary will feature remarks from Carter Blakey of the U.S. Department of Health and Human Services and a facilitated discussion moderated by Joe Zietsman, director of the Center for Advancing Research in Transportation Emissions, Energy, and Health.

Student Awards

Two student awards will be presented at the closing plenary session. The Best Student Poster and Best Student Oral Presentation awards are sponsored by the Texas A&M Transportation Institute.
Join the conversation!

During the symposium, follow and use #TAQH19 and #CARTEEH on social media to help spread the word and get us on the #RoadToCleanAir and the #RoadToHealth.

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