

## Journal Articles

- Zimpfer A., Okure D., Kutesakwe J., and Mukherjee A. (2022) Air quality management capacity building in Uganda. *EM: The Magazine for Environmental Managers*.
- Eisinger D., Craig K., Landsberg K., Mukherjee A., DeWinter J., McCarthy M., and Brown S. (2021) Near-road air quality insights from a U.S. DOT five-year transportation pooled fund study. *TR News*, (332), 20-27, March-April. Available at <http://www.trb.org/Publications/Blurbs/182193.aspx>.
- Mukherjee A., Huang S., Chaveste M.R., Kramer S.J., Welch K.R., Moody T.J., Talhelm A.F., and Lottes A.M. (2021) Implementation of greenhouse gas benefit quantification for diverse forest management activities in a statewide program. (submitted), (STI-919033-7552).
- Mukherjee A., McCarthy M.C., Brown S.G., Huang S., Landsberg K., and Eisinger D.S. (2020) Influence of roadway emissions on near-road PM<sub>2.5</sub>: monitoring data analysis and implications. *Transportation Research Part D: Transport and Environment*, 86(102442), (STI-7166). Available at <https://www.sciencedirect.com/science/article/pii/S1361920920306295>.
- McCarthy M.C., Mukherjee A.D., Ogletree M., Furst J., Gosselin M.I., Tigges M., Thomas G., and Brown S.G. (2020) Assessment of mobile source air toxics in an Environmental Justice Denver community adjacent to a freeway. *J. Air Waste Manage.*, (STI-7176), February. Available at <https://www.tandfonline.com/doi/abs/10.1080/10962247.2020.1734113>.
- Mukherjee A.D., Brown S.G., McCarthy M.C., Pavlovic N.R., Stanton L.G., Snyder J.L., Andrea S.D., and Hafner H.R. (2019) Measuring spatial and temporal PM<sub>2.5</sub> variations in Sacramento, California, communities using a network of low-cost sensors. *Sensors*, 19(21), 4701, doi: 10.3390/s19214701 (STI-7092). Available at <https://www.mdpi.com/1424-8220/19/21/4701>.
- Coffey E.R., Pfothenauer D., Mukherjee A., Agao D., Moro A., Dalaba M., Begay T., Banacos N., Oduro A., Dickinson K.L., and Hannigan M.P. (2019) Kitchen area air quality measurements in Northern Ghana: evaluating the performance of a low-cost particulate sensor within a household energy study. *Atmosphere*, 10(7), 400, July 16. Available at <https://www.mdpi.com/2073-4433/10/7/400>.
- Brown S.G., Penfold B.M., Mukherjee A., Landsberg K., and Eisinger D. (2019) Conditions leading to elevated PM<sub>2.5</sub> at near-road monitoring sites: case studies in Denver and Indianapolis. *International Journal of Environmental Research and Public Health*, 16(9), 1634, doi: 10.3390/ijerph16091634 (STI-7047), May 10.
- Mukherjee A., Stanton L.G., Graham A.R., and Roberts P.T. (2017). Assessing the utility of low-cost particulate matter sensors over a 12-week period in the Cuyama Valley of California. *Sensors*, 17(8), 1805, doi: 10.3390/s17081805 (STI-6764). Available at <http://www.mdpi.com/1424-8220/17/8/1805>.
- Mukherjee A. and Toohey D.W. (2016). A study of aerosol properties based on observations of particulate matter from the U.S. Embassy in Beijing, China. *Earth's Future*, 4, 381-395. Available online at <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2016EF000367>, July 16.

## Formal Reports

- Mukherjee A. and Hafner H. (2021) Watts rising air quality monitoring study report July 14, 2020, through May 31, 2021. Study report prepared for the City of Los Angeles by Sonoma Technology, Inc., Petaluma, CA, STI-919065-7614, October 8.
- Mukherjee A. and Hafner H. (2021) Watts rising air quality monitoring study report: April 1 through December 31, 2020. Study report prepared for the City of Los Angeles by Sonoma Technology, Inc., STI-919065-7494, January 29.
- Hafner H., Mukherjee A., and Stanton L. (2021) Low-cost sensor evaluation for potential use at community air quality monitoring stations. Final report prepared for the Electric Power Research Institute, Palo Alto, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-918017-7466, January.
- Mukherjee A. and Huang S. (2020) Examining smoke impacts from major California wildfires and smoke damage insurance claims using modeled and observed particulate matter. Technical memorandum prepared for Insurance Institute for Business and Home Safety, Richburg, SC by Sonoma Technology, Inc., Petaluma, CA, STI-918084-7484, December.
- Mukherjee A. and Stanton L. (2020) Final quarterly report of 2019: PM<sub>2.5</sub> measurements from Skymet and Respirer systems and the U.S. Department of State monitors. Prepared for the Shakti Sustainable Energy Foundation, New Delhi, India, by Sonoma Technology, Inc., Petaluma, CA, STI-919008-7250, January.
- Mukherjee A., DeWinter J., Huang S., McCarthy M., Drury S., Brown S., Hafner H., and Roberts P. (2020) Review: framework for research informing the ozone secondary NAAQS. Final report prepared for the Electric Power Research Institute, Washington, DC, by Sonoma Technology, Inc., Petaluma, CA, STI-918085-7269, March 25.
- Mukherjee A. and Stanton L. (2020) Final quarterly report of 2019: PM<sub>2.5</sub> measurements from Skymet and Respirer systems and the U.S. Department of State monitors. Prepared for the Shakti Sustainable Energy Foundation, New Delhi, India, by Sonoma Technology, Inc., Petaluma, CA, STI-919008-7493, January 31.
- Mukherjee A., Ryder O., McCarthy M., Brown S., and Eisinger D. (2019) Near-road particulate pollution: PM<sub>2.5</sub>, black carbon, and ultrafine particles at U.S. near-road monitoring sites. Final report prepared for the Texas Department of Transportation, Austin, TX, by Sonoma Technology, Inc., Petaluma, CA, STI-914206-7208, December 31.
- Mukherjee A., Huang S., and McCarthy M. (2019) 2019 ozone secondary NAAQS review: framework for recent and future research. Final report prepared for the Electric Power Research Institute, Washington, DC, by Sonoma Technology, Inc., Petaluma, CA, STI-918085-7210, December.
- Mukherjee A. and Stanton L. (2019) Quarterly report 2: sensor measurements from Skymet and Respirer systems. Prepared for the Shakti Sustainable Energy Foundation, New Delhi, India, by Sonoma Technology, Inc., Petaluma, CA, STI-919008-7201, November.
- Mukherjee A., McCarthy M.C., Brown S.G., Huang S., Landsberg K., and Eisinger D.S. (2019) Influence of roadway emissions on near-road PM<sub>2.5</sub>: monitoring data analysis and implications for determining

transportation projects of local air quality concern (POAQC). Final report prepared for the Washington State Department of Transportation, lead agency for the Near-Road Air Quality Research Transportation Pooled Fund, by Sonoma Technology, Inc., Petaluma, CA, STI-914203-7088, October.

Mukherjee A. and Stanton L. (2019) Quarterly report 1: sensor measurements from Skymet and Respirer systems. Prepared for the Shakti Sustainable Energy Foundation, New Delhi, India, by Sonoma Technology, Inc., Petaluma, CA, STI-918008-7132, June 28.

Mukherjee, A (2019). Examining PM<sub>2.5</sub> Measurements from the U.S. Embassy in Tashkent. Final report prepared for the U.S. Embassy in Tashkent through the Global Air Quality Fellowship, March.

Mukherjee, A (2018). Examining the Air Quality of Metro Manila and the Role of Particulate Matter. Final report prepared for the U.S. Embassy in Manila through the Global Air Quality Fellowship, June.

Hafner H., Pavlovic N., McCarthy M., Mukherjee A., and Brown S. (2018). Wintertime air toxics from wood smoke in Sacramento. Final report prepared for the Sacramento Metropolitan Air Quality Management District, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-916004-6828-FR, February 26.

Mukherjee, A (2017). Assessing the Air Quality Impact of Criteria Pollutants at Central Western Station, Hong Kong. Final report prepared for the U.S. Consulate of Hong Kong, through the Global Air Quality Fellowship, December.

Mukherjee, A (2017). Examining Fine Particulate Matter (PM<sub>2.5</sub>) Measurements from China and Hong Kong, Final report prepared for the U.S. Consulate of Hong Kong, through the Global Air Quality Fellowship, November.

Stanton L., Graham A., Mukherjee A., Dye T., and MacDonald C. (2016). Evaluation of small sensors for detection of dust at Cuyama Valley High School. Final report prepared for the Santa Barbara County Air Pollution Control District, Santa Barbara, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-915080-6577, December 2.

## Meeting Presentations, Webinars, and Conference Proceedings

Mukherjee A., King D., Nathan Pavlovic, Cavallaro A., Lurmann F., and DeWinter J. (2023) Evaluation of three computationally-efficient, high-resolution bias-correction methods for real-time modeled PM<sub>2.5</sub> concentrations. Presented at *American Meteorological Society (AMS) Annual Meeting, January 11*, by Sonoma Technology, Petaluma, CA. STI-7843.

Mukherjee A., Pavlovic N., Cavallaro A., Lurmann F., DeWinter J., and King D. (2022) Evaluation of a novel approach to estimate PM<sub>2.5</sub> concentrations at high spatial resolution during smoke episodes by fusing low-cost sensor and reference monitor observations with chemical transport model forecasts Poster presented at the *American Geophysical Union (AGU) Conference, Chicago, IL, December 12-16*, by Sonoma Technology, Petaluma, CA. STI-7772.

- DeWinter J., Pavlovic N., Mukherjee A., Churchman L., Cavallaro A., Brown S., and Lurmann F. (2022) Evaluation of high-spatial-resolution air pollutant concentration and AQI estimates across the U.S. by fusing low-cost and reference monitor observations with chemical transport model forecasts Presentation given at the *Air Sensors International Conference, May 13, 2022, Pasadena, CA*, by Sonoma Technology, Petaluma, CA. STI-7627.
- Mukherjee A., Pavlovic N.R., and DeWinter J. (2022) Evaluation of methods for using low-cost sensors to improve hourly air quality forecasts for the United States Poster presented at the *Air Sensors International Conference, May 11-13, 2022, in Pasadena, CA* by Sonoma Technology, Petaluma, CA. STI-7629.
- Mukherjee A., Huang S., Chaveste M.R., Kramer S.J., Welch K.R., Moody T.J., Talhelm A.F., and Lottes A.M. (2021) Quantification of greenhouse gas benefit for diverse forest management activities in a statewide program. Poster presented at the *AGU Fall Meeting, New Orleans, LA, December 13-17*, by Sonoma Technology, Inc., Petaluma, CA. STI-7575.
- Huang S., Mukherjee A., Chaveste M.R., Kramer S.J., Moody K.R.W.T.J., Talhelm A.F., and Lottes A.M. (2021) Quantification of greenhouse gas benefits for diverse forest management activities in a statewide program. Presented at the *Association for Fire Ecology, November 30 - December 3*, by Sonoma Technology, Inc., Petaluma, CA. STI-600600-7644.
- Huang S., Mukherjee A., Chaveste M.R., Kramer S.J., Moody K.R.W.T.J., Talhelm A.F., and Lottes A.M. (2021) Quantification of greenhouse gas benefits for diverse forest management activities in a statewide program. Presented at the *Society of American Foresters, virtual conference, November 3-6*, by Sonoma Technology, Inc., Petaluma, CA. STI-600600-7637
- Mukherjee A., Huang S., Hafner H., and Gorham D. (2021) Examining smoke impacts from major California wildfires in 2017 and 2018 using modeled smoke based on BlueSky Framework and observed smoke data from ground monitors and satellites. Presentation given at the *Air and Waste Management Association Visibility Conference, Bryce Canyon, UT, October 5-8*, by Sonoma Technology, Inc., Petaluma, CA. STI-7389.
- Brown S., Eisinger D., Landsberg K., Ryder O., Mukherjee A., DeWinter J., and McCarthy M. (2020) National assessment of measured near-road (NR) air quality work: sponsored by the Near-Road Air Quality Transportation Pooled Fund (TPF). Presentation given at the *U.S. Transportation Research Board 99th Annual Meeting, Washington, D.C., January 16*, by Sonoma Technology, Petaluma, CA. STI-7230.
- Ryder O., McCarthy M., Mukherjee A., Brown S., and Eisinger D. (2020) Near-Road Mobile Source Air Toxics (MSATs): 2016-2018 monitoring data, analysis, and implications. Presented at the *U.S. Transportation Research Board, 99th Annual Meeting, Subcommittee on Regional and Project-Level Air Quality Innovations and Resources, Washington, D.C., January 13*, by Sonoma Technology, Inc., Petaluma, CA. STI-7224.
- Hafner H., Minor H., O'Brien T., and Mukherjee A. (2019) Sensor technology. Training presentations prepared for the U.S. Environmental Protection Agency by Sonoma Technology, Inc., Petaluma, CA, STI-915510-7502, November.

- Brown S., Craig K., Eisinger D., Landsberg K., Mukherjee A., Baringer L., Chang S.Y., DeWinter J., McCarthy M., and Huang S. (2019) National assessment of near-road (NR) air quality: requirements, trends, and analysis insights. Presented for the U.S. Transportation Research Board webinar series, September 30, by Sonoma Technology, Inc., and the Washington State Department of Transportation.
- Brown S., Craig K., Eisinger D., Landsberg K., Mukherjee A., Baringer L., Chang S.Y., DeWinter J., McCarthy M., and Huang S. (2019) National assessment of near-road (NR) air quality: requirements, trends, and analysis insights. Presented to the AASHTO Committee on Environment and Sustainability, 2019 Annual Meeting, Minneapolis, MN, August 7, by Sonoma Technology, Inc., Petaluma, CA, and the Washington State Department of Transportation, Olympia, WA. STI-7154.
- Pavlovic N., DeWinter J., and Mukherjee A. (2019) Global framework for air quality monitoring. Webinar presented to the United Nations Environment Programme (UNEP), July 24, by Sonoma Technology, Inc. STI-919004-7146.
- Pavlovic N., Huang S., McClure C., and Mukherjee A. (2019) Modeling of smoke impacts on air quality using direct observation of hourly fire activity from geostationary satellites. Presentation given at the *Fire Behavior and Fuels Conference, Albuquerque, New Mexico, April 30*, by Sonoma Technology, Inc., Petaluma, CA. STI-7110.
- Mukherjee A., DeWinter J., and Huang S. (2019) Ozone impacts on vegetation. Webinar presented to Electric Power Research Institute by Sonoma Technology, Inc., Petaluma, CA, STI-918085-7103, April.
- Mukherjee A., Brown S.G., McCarthy M.C., Craig K.J., Snyder J.L., D'Andrea S., and Kennard A. (2018) Sensor variations in wintertime PM among communities in Sacramento measured with a combination of traditional and low-cost sensor methods use for real-world applications. Poster presented at the *17th Annual CMAS Conference, October 22-24, Chapel Hill, NC* by Sonoma Technology, Inc., Petaluma, CA. STI-6907.
- Mukherjee A.D., Brown S.G., McCarthy M.C., Kennard A., Snyder J.L., and D'Andrea S. (2017) Measuring PM in Sacramento communities with a combination of traditional and low-cost sensor methods. Extended abstract for the *AWMA Air Quality Measurement Methods and Technology, Long Beach, CA, November 7-9*. STI-6753.
- Mukherjee A., Brown S.G., McCarthy M.C., Kennard A., Snyder J.L., and D'Andrea S. (2017) Combining traditional and low-cost sensor methods to measure variations in wintertime PM among communities in Sacramento. Presented at the *2017 American Association for Aerosol Research Conference, Raleigh, NC, October 20*, by Sonoma Technology, Inc., Petaluma, CA. STI-6725.
- Mukherjee A.D. (2015) Quantifying the impact of particulate matter and hygroscopic aerosol growth on visibility degradation in Beijing. Poster presented at the *University of Colorado at Boulder Department of Atmospheric and Oceanic Sciences' Earth System and Space Science Poster Conference, Boulder, CO, November 13*.
- Mukherjee A.D. and Toohey D.W. (2015) Assessing U.S. Embassy in Beijing's measurements of PM<sub>2.5</sub>. Poster presented at the *AGU Joint Assembly, Montreal, Quebec, Canada, May 3-7*. AS24A-0043.

Mukherjee A.D. (2016) The impact of aerosol loading and hygroscopic aerosol growth on radiation extinction, a case study in Beijing. Presented to the Atmospheric and Oceanic Sciences' Atmospheric Chemistry 5151, University of Colorado at Boulder, September 22.

### Education and Outreach Presentations

Mukherjee, A.D. (2019) Global Air Quality and the Environment of Tashkent. Virtual presentation for Earth Day program, U.S. Embassy in Tashkent, Uzbekistan, April 22<sup>nd</sup>.

Mukherjee, A.D. and Hartman, S.M. (2018) Clean Air, Fresh Water: Keys to Earth's Survival. Presentation through Virtual Panel with U.S. Experts for the NASA Space Apps Event, Makati-Bonifacio Global City, Phillipines, October 19<sup>th</sup>.

### Thesis

Mukherjee A.D. (2018) Examining Aerosol Properties and Their Impacts to Visibility Utilizing Particulate Monitor and Sensor Measurements, Ph.D. Thesis, University of Colorado Boulder. Available online at [https://scholar.colorado.edu/atoc\\_gradetds/77](https://scholar.colorado.edu/atoc_gradetds/77).

### Courses Taught

Mukherjee A.D. (2016) MTR 1600: Global Climate Change. Affiliate faculty course taught at Metropolitan State University, 890 Auraria Pkwy #310, Denver, CO 80204, Fall 2016.