JULIAN D. MARSHALL

Curriculum Vitæ

Civil and Environmental Engineering
268 Wilcox
352700
Seattle, WA 98195

Phone: 206-685-2591
Fax: 206-685-3836
Email: jdmarsh@uw.edu

EDUCATIONAL HISTORY

University of California, Berkeley, Berkeley, CA
Ph.D., Energy and Resources Group
2005
Dissertation: Inhalation of Vehicle Emissions in Urban Environments
Faculty mentor: Prof. William Nazaroff

University of California, Berkeley, Berkeley, CA
M.S., Energy and Resources Group
2002
Thesis: Intake Fraction for Motor Vehicle Exhaust in the South Coast Air Basin
Faculty mentor: Prof. William Nazaroff

Princeton University, Princeton, NJ
B.S.E. with High Honors, Chemical Engineering
1996
Thesis: Effect of temporal variability in infiltration on contaminant transport in the unsaturated zone
Faculty mentor: Prof. Peter Jaffé

EMPLOYMENT HISTORY

University of Washington, Department of Civil and Environmental Engineering
Seattle, WA, USA
Professor, 2016 – present
Boeing International Professor, 2024 - present
Associate Chair for Justice, Equity, Diversity, and Inclusion, 2020 – 2022
Director, Grand Challenges Impact Lab, 2017 – present
Adjunct Professor, Global Health, 2018 – present
John R. Kiely Endowed Professor, 2016 – 2021

University of Minnesota, Department of Civil, Environmental, and Geo- Engineering
Minneapolis, MN, USA
Associate Professor, 2013 – 2016

University of Minnesota, Department of Civil, Environmental, and Geo- Engineering
Minneapolis, MN, USA
Assistant Professor, 2007 – 2013
McKnight Land-Grant Professorship, 2009 – 2011

University of British Columbia, School of Environmental Health
British Columbia, Vancouver, BC, Canada
Post-doctoral Fellow, 2005 – 2006
Faculty mentor: Prof. Michael Brauer

Ladakh Ecological Development Group
Leh, Ladakh, India
Volunteer, 1999

Temasek Polytechnic
Singapore
Lecturer and International Fellow (via Princeton in Asia program), 1998 – 1999

ENVIRON Corporation (now Ramboll)
Emeryville, CA
Air quality consultant, 1996 – 1998

AWARDS AND HONORS - PAPERS

One article (Bechle et al., 2023) selected for an "Editor's choice" award from *Environmental Science & Technology - Letters*.

One article (Lane et al., 2022) declared one of five "Best *ES&T Letters* Papers in 2022" from *Environmental Science & Technology - Letters*.

One article (Lane et al., 2022) on the "most read" list from *Environmental Science & Technology - Letters.*

Two articles (Tessum et al., 2019; Domingo et al., 2021) listed as a "most read" article from *Proceedings of the National Academy of Sciences* (*PNAS*). Reporting on one article (Tessum et al.) was listed as one of the "Top 10 Articles of 2019" from *PNAS*. The other article (Domingo et al.) received a *PNAS* commentary ("Disproportionate contributions to air quality-related deaths"; https://www.pnas.org/content/118/22/e2107118118) which referred to our article as "stunning", "powerful", and "a tour de force of amazing insights".

One article (Liu et al., 2021) on the "most read" list from *Environmental Health Perspectives*. An accompanying commentary ("Moving from characterizing to addressing racial/ethnic disparities in air pollution exposure"; doi.org/10.1289/EHP10076) states, "Liu et al. (2021) should be commended for their comprehensive, rigorous, and informative analyses."

One article (Ranzani et al., 2019) listed as a "Best of IJE 2019" from *International Journal of Epidemiology*, 2019.

One article (Kelp et al., 2018) listed as one of the "Most Cited" papers from *Development Engineering*.

One article (Apte et al., 2017) declared "Best Environmental Technology Paper of 2017" from *Environmental Science & Technology*.

One article (Ji et al., 2012) on the "most read" list from *Environmental Science & Technology.*

Two articles (Marshall and Toffel, 2005; Apte et al, 2015) on the "most downloaded" list from *Environmental Science & Technology.*

Two articles (Marshall, McKone, et al., 2005; Marshall, Nethery, et al., 2008) on the "most downloaded" list from *Atmospheric Environment.*

AWARDS AND HONORS – RESEARCH AND TEACHING

#3 highest-ranked researcher in air pollution during the past 5 years, according to ScholarGPS (see citations, below), May 2024.

Faculty Appreciation for Career Education and Training (FACET), a student-nominated award for support of students, 2024, UW

CEE Department Chair's Award, 2021, UW

John R. Kiely Endowed Professorship, 2016–2021, UW

Charles E. Bowers Teaching Award, 2014, UMN

C. Eugene Allen Award for Innovative International Initiatives (awarded for the Acara program), 2014, UMN

Joan M. Daisey Outstanding Young Scientist Award, 2013, International Society of Exposure Science

McKnight Land-Grant Professorship, 2009–2011, UMN

Young Engineer of the Year, 2009, American Society of Civil Engineers, Minnesota Section

Post-doctoral research fellowships from the School of Environmental Health and from the Bridge Program in engineering, policy, and health, 2005–2006, UBC

Outstanding Graduate Student Instructor Award, Award states: "Each year, fewer than 10% of GSIs earn this distinguished award", U.C. Berkeley, 2005

Fellowship, U.C. Toxic Substances, 2003–2005, Research & Teaching Program

Dissertation Fellowship, 2003–2004, U.C. Transportation Center

Graduate Research Fellowship, 2000–2003, National Science Foundation (NSF)

AFFILIATIONS, MEMBERSHIPS, AND OTHER APPOINTMENTS

Member, US Environmental Protection Agency (US EPA) – Clean Air Science Advisory Committee (CASAC) NOx Panel (chartered panel to review the national ambient air quality standard for NOx), 2024-present

Adjunct Professor, Global Health, UW, 2018–present

PUBLICATIONS

Citation impact (as of December 2024):
Publons / Web of Science (link): 11,640 citations; h-index: 61.
Scopus / Elsevier (link): 14,808 citations; h-index: 71.
Google Scholar (link): 21,761 citations; h-index: 80.

According to Google Scholar, #75 most-cited researcher in air pollution (link). According to ScholarGPS, #3 highest-ranked researcher in air pollution during the past 5 years (link; "Highly Ranked Scholars™ are the most productive (number of publications) authors whose works are of profound impact (citations) and of utmost quality (h-index)").

Refereed archival journal publications

190. M Wang, M Young, JD Marshall, L Piepmeier, J Bi, JD Kaufman, AA Szpiro. National $PM_{2.5}$ spatiotemporal model integrating intensive monitoring data and land use regression in a likelihood-based universal kriging framework in the United States: 2000–2019. *Environmental Pollution, 366, 125405*. DOI: https://doi.org/10.1016/j.envpol.2024.125405. 2024.

189. PK Saha, A Habib, DR Prapti, T Jubair, AU Zarrah, CA Hossain, SM Rahman, A Salam, Md A Bari, JD Marshall. Characterizing indoor-outdoor $PM_{2.5}$ concentrations using low-cost sensor measurements in residential homes in Dhaka, Bangladesh. *Atmospheric Environment*, *342, 120945*. DOI: 10.1016/j.atmosenv.2024.120945. 2024.

188. LH Koolik, Á Alvarado, A Budahn, L Plummer, JD Marshall, JS Apte. $PM_{2.5}$ exposure disparities persist despite strict vehicle emissions controls in California. Science Advances, *10, 37*. DOI: 10.1126/sciadv.adn8544. 2024.

187. Y Wang, JD Marshall, JS Apte. U.S. ambient air monitoring network has inadequate coverage under new $PM_{2.5}$ standard. *Environmental Science & Technology Letters, 11, 11, 1220-1226.* DOI: 10.1021/acs.estlett.4c00605. 2024.

186. C Manchanda, RA Harley, JD Marshall, AJ Turner, JS Apte. Integrating mobile and fixed-site black carbon measurements to bridge spatiotemporal gaps in urban air quality. *Environmental Science & Technology, 58, 28, 12563-12574.* DOI:10.1021/acs.est.3c10829. 2024.

185. J Xu, H Zhao, Y Zhang, W Yang, X Wang, C Geng, Y Li, Y Guo, B Han, Z Bai, S Vedal, JD Marshall. Reducing indoor particulate air pollution improves student test scores: A randomized double-blind crossover study. *Environmental Science & Technology, 58, 19, 8207–8214.* DOI: 10.1021/acs.est.3c10372. 2024.

184. PK Saha, TM Shovon, SM Rahman, JD Marshall, AL Robinson, AA Presto. Contrasting intra-urban variability of ultrafine particle number and fine particle mass concentrations in Dhaka, Bangladesh, and Pittsburgh, USA. *Atmospheric Environment*, 120497. DOI: 10.1016/j.atmosenv.2024.120497. 2024.

183. CL Schollaert, ME Marlier, JD Marshall, JT Spector, TB Isaksen. Exposure to smoke from wildfire, prescribed, and agricultural burns among at-risk populations across Washington, Oregon, and California. *GeoHealth*, 8(4), 2023GH000961. DOI: 10.1029/2023GH000961. 2024.

182. M Singh, C Tessum, JD Marshall, IML Azevedo. Distributional impacts of fleet-wide change in light duty transportation: mortality risks of PM2.5 emissions from electric vehicles and Tier 3 conventional vehicles. *Environmental Research Letters,* 19(3), 034034. DOI: 10.1088/1748-9326/ad2a1f. 2024.

181. AR Upadhya, M Kushwaha, P Agrawal, JD Gingrich, J Asundi, V Sreekanth, JD Marshall, JS Apte. Multi-season mobile monitoring campaign of on-road air pollution in Bengaluru, India: high-resolution mapping and estimation of quasi-emission factors. *Science of Total Environment,* 914, 169987. DOI: 10.1016/j.scitotenv.2024.169987. 2024.

180. T Peshin, S Sengupta, SK Thakrar, K Singh, J Hill, JS Apte, IML Azevedo, CW Tessum, JD Marshall. Air quality, health, and equity impacts of vehicle electrification in India. *Environmental Research Letters,* 19(2), 024015. DOI: 10.1088/1748-9326/ad1c7a. 2024.

179. PK Saha, AA Presto, S Hankey, JD Marshall, AL Robinson. Cooking emissions are a major source of racial-ethnic air pollution exposure disparities in the United States. *Environmental Research Letters,* 19(1), 014084. DOI: 10.1088/1748-9326/ad1721. 2024.

178. CL Schollaert, E Alvarado, J Baumgartner, TB Isaksen, J Jung, ME Marlier, JD Marshall, Y Masuda, CW Tessum, JL Wilkins, JT Spector. Estimated impacts of forest restoration scenarios on smoke exposures among outdoor agricultural workers in California. *Environmental Research Letters,* 19(1), 014085. DOI: 10.1088/1748-9326/ad16a4. 2024.

177. CL Schollaert, J Jung, J Wilkins, E Alvarado, J Baumgartner, J Brun, TB Isaksen, JM Lydersen, ME Marlier, JD Marshall, YJ Masuda, C Maxwell, CW Tessum, KN Wilson, NH Wolff, JT Spector. Quantifying the smoke-related public health trade-offs of forest management. *Nature Sustainability,* 1-10. DOI: 10.1038/s41893-023-01253-y. 2024.

176. A Feldman, S Kendler, JD Marshall, M Kushwaha, V Sreekanth, AR Upadhya, P Agrawal, and B Fishbain. Urban air-quality estimation using visual cues and a deep convolutional neural network in Bengaluru (Bangalore), India. *Environmental Science & Technology*. DOI: 10.1021/acs.est.3c04495. 2023.

175. JM Gohlke, MH Harris, A Roy, TM Thompson, M DePaola, RA Alvarez, SC Anenberg, JS Apte, MAG Demetillo, IM Dressel, GH Kerr, JD Marshall, AE Nowlan, RF Patterson, SE Pusede, VA Southerland, SA Vogel. State-of-the-science data and methods need to guide place-based efforts to reduce air pollution inequity. *Environmental Health Perspectives*, 131(12), 125003. DOI: 10.1289/EHP13063. 2023.

174. MJ Bechle, ML Bell, DL Goldberg, S Hankey, T Lu, AA Presto, AL. Robinson, J Schwartz, L Shi, Y Zhang, JD Marshall. Intercomparison of six national empirical models for $PM_{2.5}$ air pollution in the contiguous US. *Finding,* November. DOI: 10.32866/001c.89423. 2023.

173. B Bekbulat, P Agrawal, RW Allen, M Baum, B Boldbaatar, LP Clark, J Galsuren, P Hystad, C L'Orange, S Vakacherla, J Volckens, JD Marshall. Application of an ultra-low-cost passive sampler for light-absorbing carbon in Mongolia. *Sensors*, 23(21), 8977. DOI: 10.3390/s23218977. 2023.

172. MJ Bechle, DB Millet, JD Marshall. Ambient NO_2 air pollution and public schools in the United States: relationships with urbanicity, race–ethnicity, and income. *Environmental Science & Technology Letters*, 10, 844-850. DOI: 10.1021/acs.estlett.3c00507. 2023.

171. BT Dinkelacker, PG Rivera, JD Marshall, PJ Adams, SN Pandis. High-resolution downscaling of source resolved $PM_{2.5}$ predictions using machine learning models. *Atmospheric Environment,* 310, 119967. DOI: 10.1016/j.atmosenv.2023.119967. 2023.

170. L Swetschinski, KC Fong, R Morello-Frosch, JD Marshall, ML Bell. Exposures to ambient particulate matter are associated with reduced adult earnings potential. *Environmental Research*, 1(232), 116391. DOI: 10.1016/j.envres.2023.116391. 2023.

169. Y Wang, JS Apte, JD Hill, CE Ivey, D Johnson, E Min, R Morello-Frosch, R Patterson, AL Robinson, CW Tessum, JD Marshall. Air quality policy should quantify effects on disparities. *Science,* 381(6655), 272-274. DOI: 10.1126/science.adg993. 2023.

168. K Bramble, MN Blanco, A Doubleday, AJ Gassett, A Hajat, JD Marshall, L Sheppard. Exposure disparities by income, race and ethnicity, and historic redlining grade in the greater Seattle area for ultrafine particles and other air pollutants. *Environmental Health Perspectives,* 131(7),077004. DOI: 10.1289/EHP11662. 2023.

167. A Doubleday, MN Blanco, E Austin, JD Marshall, TV Larson, L Sheppard. Characterizing ultrafine particle mobile monitoring data for epidemiology. *Environmental Science & Technology*, 57(26), 9538–9547. DOI: 10.1021/acs.est.3c00800. 2023.

166. J Liu, JD Marshall. Spatial decomposition of air pollution concentrations highlights historical causes for current exposure disparities in the United States. *Environmental Science & Technology Letters*, 10(3), 280-286. DOI: 10.1021/acs.estlett.2c00826. 2023.

165. MN Blanco, A Doubleday, E Austin, JD Marshall, E Seto, TV Larson, L Sheppard. Design and evaluation of short-term monitoring campaigns for long-term air pollution exposure assessment. *Journal of Exposure Science & Environmental Epidemiology*, 33, 465-473. DOI: 10.1038/s41370-022-00470-5. 2023.

164. G Kleiman, SC Anenberg, ZA Chafe, DC Appiah, T Assefa, A Bizberg, T Coombes, D Cuestas, DK Henze, A Kessler, I Kheirbek, P Kinney, M Mahlatji, JD Marshall, S Naidoo, N Potwana, A Rodriguez, CW Tessum, C Thomas. Enhanced integration of health, climate, and air quality management planning at the urban scale. *Frontiers in Sustainable Cities*, 4:934672. DOI: 10.3389/frsc.2022.934672. 2022.

163. MPS Thind, CW Tessum, JD Marshall. Environmental health, racial/ethnic health disparity, and climate impacts of inter-regional freight transport in the United States.

Environmental Science & Technology, 57(2), 884–895. DOI: 10.1021/acs.est.2c03646. 2022.

162. MN Blanco, J Bi, E Austin, TV Larson, JD Marshall, L Sheppard. Impact of mobile monitoring network design on air pollution exposure assessment models. *Environmental Science & Technology*, 57(1), 440-450. DOI: 10.1021/acs.est.2c05338. 2022.

161. Y Wang, JS Apte, JD Hill, CE Ivey, RF Patterson, AL Robinson, JD Marshall. Location-specific strategies for eliminating US national racial-ethnic exposure inequality. *Proceedings of the National Academy of Sciences*, 119(44), 2205548119. DOI: 10.1073/pnas.2205548119. 2022.

160. PK Saha, AA Presto, S Hankey, JD Marshall, AL Robinson. Racial-ethnic exposure disparities to airborne ultrafine particles in the United States. *Environmental Research Letters*, 17(10), 104047. DOI: 10.1088/1748-9326/ac95af. 2022.

159. MW Tessum, SC Anenberg, ZA Chafe, DK Henze, G Kleiman, I Kheirbek, JD Marshall, CW Tessum. Sources of ambient $PM_{2.5}$ exposure in 96 global cities. *Atmospheric Environment*, 286, 119234. DOI: 10.1016/j.atmosenv.2022.119234. 2022.

158. PK Saha, AA Presto, S Hankey, BN Murphy, C Allen, W Zhang, JD Marshall, AL Robinson. National exposure models for source-specific primary particulate matter concentrations using aerosol mass spectrometry data. *Environmental Science & Technology*, 56(20), 14284-14295. DOI: 10.1021/acs.est.2c03398. 2022.

157. M Qi, K Dixit, JD Marshall, W Zhang, S Hankey. National land use regression model for NO_2 using street view imagery and satellite observations. *Environmental Science & Technology*, 56(18), 13499-13509. DOI: 10.1021/acs.est.2c03581. 2022.

156. M Kushwaha, V Sreekanth, AR Upadhya, P Agrawal, JS Apte, JD Marshall. Bias in $PM_{2.5}$ measurements using collocated reference-grade and optical instruments. *Environmental Monitoring and Assessment*, 194(9), 610. DOI: 10.1007/s10661-022-10293-4. 2022.

155. LP Clark, MH Harris, JS Apte, JD Marshall. National and intraurban air pollution exposure disparity estimates in the United States: impact of data-aggregation spatial scale. *Environmental Science & Technology Letters,* 9(9), 786-791. DOI: 10.1021/acs.estlett.2c00403. 2022.

154. SK Thakrar, CW Tessum, JS Apte, S Balasubramanian, DB Millet, SN Pandis, JD Marshall, JD Hill. Global, high-resolution, reduced-complexity air quality modeling for $PM_{2.5}$ using InMAP (Intervention Model for Air Pollution). *PLOS ONE*, 17(5), 0268714. DOI: 10.1371/journal.pone.0268714. 2022.

153. MN Blanco, A Gassett, T Gould, A Doubleday, D Slager, E Austin, E Seto, T Larson, JD Marshall, L Sheppard. Characterization of annual average traffic-related air pollution levels (particle number, black carbon, nitrogen dioxide, $PM_{2.5}$, carbon dioxide) in the greater Seattle area from a year-long mobile monitoring campaign. *Environmental Science & Technology,* 56(16), 11460-11472. DOI: 10.1021/acs.est.2c01077. 2022.

152. MM Islam, R Wathore, H Zerriffi, JD Marshall, R Bailis, A Grieshop. Assessing the effects on indoor air quality of stove use patterns and kitchen chimneys during a large, multi-year cookstove randomized control trial in rural India. *Environmental Science Technology*, 56(12), 8326–8337. DOI: 10.1021/acs.est.1c07571. 2022.

151. OT Ranzani, S Bhogadi, C Mila, B Kulkarni, K Balakrishnan, S Sambandam, J Garcia-Aymerich, JD Marshall, S Kinra, C Tonne. Association of ambient and household air pollution with lung function in young adults in an Peri-urban area of South-India: a cross-sectional study. *Environment International*, 165, 107290. DOI: 10.1016/j.envint.2022.107290. 2022.

150. Y Wang, Y Wang, H Xu, Y Zhao, JD Marshall. Ambient air pollution and socio-economic status in China. *Environmental Health Perspectives*, 130(6), 067001. DOI: 10.1289/EHP9872. 2022.

149. HM Lane, R Morello-Frosch, JD Marshall, JS Apte. Historical redlining is associated with present-day air pollution disparities in U.S. cities. *Environmental Science & Technology Letters*, 9(4), 345-350. DOI: 10.1021/acs.estlett.1c01012. 2022.

148. Z Pond, C Hernandez, P Adams, S Pandis, G Garcia, AL Robinson, JD Marshall, R Burnett, K Skyllakou, P Garcia River, E Karnezi, C Coleman, CA Pope III. Cardiopulmonary mortality and fine particulate air pollution by species and source in a national U.S. cohort. *Environmental Science & Technology*, 56(11), 7214-7223. DOI: 10.1021/acs.est.1c04176. 2022.

147. LP Clark, S Tabory, K Tong, JL Servadio, K Kappler, CK Xu, AS Lawal. P Wiringa, L Kne, R Feiock, JD Marshall, A Russell, A Ramaswami. A data framework for assessing social inequality and inequity in multi-sector Social-Ecological Infrastructural Urban Systems (SEIUS): focus on fine-spatial scales. *Journal of Industrial Ecology*, 26, 145-163. DOI: 10.1111/jiec.13222. 2022.

146. SY Kim, AC Pope III, JD Marshall, N Fann, L Sheppard. Reanalysis of the association between reduction in long-term $PM_{2.5}$ concentrations and improved life expectancy. *Environmental Health*, 20(1), 10. DOI: 10.1186/s12940-021-00785-0. 2021.

145. J Liu, LP Clark, MJ Bechle, A Hajat, SY Kim, AL Robinson, L Sheppard, AA Szpiro, JD Marshall. Disparities in air pollution exposure in the United States by race/ethnicity and income, 1990–2010. *Environmental Health Perspectives*, 129(12), 127005. DOI: 10.1289/EHP8584. 2021.

144. MD Castillo, SC Anenberg, ZA Chafe, R Huxley, LS Johnson, I Kheirbek, M Malik, JD Marshall, S Naidoo, ML Nelson, NV Pendleton, Y Sun, HB d'Obrenan, PL Kinney. Quantifying the health benefits of urban climate mitigation actions: current state of the epidemiological evidence and application in health impact assessments. *Frontiers in Sustainable Cities*, 3, 768227. DOI: 10.3389/frsc.2021.768227. 2021.

143. SE Chambliss, CPR Pinon, KP Messier, B LaFranchi, CR Upperman, MM Lunden, AL Robinson, JD Marshall, JS Apte. Local and regional-scale racial and ethnic disparities in air pollution determined by long-term mobile monitoring. *Proceedings of the National Academy of Sciences*, 118(37), 2109249118. DOI: 10.1073/pnas.2109249118. 2021.

142. T Lu, JD Marshall, W Zhang, P Hystad, SY Kim, MJ Bechle, M Demuzere, S Hankey. National empirical models of air pollution using microscale measures of the urban environment. *Environmental Science & Technology*, 55(22), 15519-15530. DOI: 10.1021/acs.est.1c04047. 2021.

141. PK Saha, S Hankey, JD Marshall, AL Robinson, A Presto. High spatial resolution estimates of ultrafine particle concentrations across the continental United States. *Environmental Science & Technology*, 55(15), 10320-10331. DOI: 10.1021/acs.est.1c03237. 2021.

140. S Balasubramanian, N Hunt, N Domingo, M Gittlin, K Colgan, JD Marshall, AL Robinson, I Azevedo, S Thakrar, M Clark, CW Tessum, P Adams, S Pandis, JD Hill. The food we eat, the air we breathe: a review of the fine particulate matter-induced air quality health impacts of the global food system. *Environmental Research Letters*, 16(10), 103004. DOI: 10.1088/1748-9326/ac065f. 2021.

139. CW Tessum, DA Paolella, SE Chambliss, JS Apte, JD Hill, JD Marshall. $PM_{2.5}$ Polluters disproportionately and systemically affect people of color in the United States. *Science Advances*, 7(18), abf4491. DOI: 10.1126/sciadv.abf4491. 2021.

138. N Domingo, S Balasubramanian, SK Thakrar, MA Clark, P Adams, JD Marshall, NZ Muller, SN Pandis, S Polasky, AL Robinson, C Tessum, D Tilman, P Tschofen, JD Hill. Air-quality-related health damages of food. *Proceedings of the National Academy of Sciences*, 118(20), 2013637118. DOI: 10.1073/pnas.2013637118. 2021.

137. NC Coleman, CA Pope III, M Ezzati, JD Marshall, AL Robinson, RT Burnett. Fine particulate matter air pollution and mortality risk among U.S. cancer patients and survivors. *JNCI Cancer Spectrum*, 5(1), pkab001. DOI: 10.1093/jncics/pkab001. 2021.

136. B Bekbulat, JS Apte, DB Millet, AL Robinson, KC Wells, JD Marshall. Changes in criteria air pollution levels in the US following societal Covid-19 response: evidence from regulatory monitors before, during, and after stay-at-home orders. *Science of the Total Environment*, 769, 144693. DOI: 10.1016/j.scitotenv.2020.144693. 2021.

135. MM Islam, R Wathore, H Zerriffi, JD Marshall, R Bailis, A Grieshop. In-use emissions from biomass and LPG stoves measured during a large, multi-year cookstove intervention study in rural India. *Science of the Total Environment*, 758, 143698. DOI: 10.1016/j.scitotenv.2020.143698. 2021.

134. MM Kelp, D Jacob, N Kutz, JD Marshall, CW Tessum. Toward stable, general machine-learned models of the atmospheric chemical system. *Journal of Geophysical Research - Atmospheres*, 125(23), 2020JD032759. DOI: 10.1029/2020JD032759. 2020.

133. NC Coleman, RT Burnett, JD Higbee, JS Lefler, RM Merrill, M Ezzati, JD Marshall, SY Kim, M Bechle, AL Robinson, CA Pope. Cancer mortality risk, fine particulate air pollution, and smoking in a large, representative cohort of U.S. adults. *Cancer Causes Control*, 31(8), 767-776. DOI: 10.1007/s10552-020-01317-w. 2020.

132. NC Coleman, RT Burnett, M Ezzati, JD Marshall, AL Robinson, CA Pope. Fine particulate matter exposure and cancer incidence: analysis of SEER cancer registry data

from 1992–2016. *Environmental Health Perspectives*, 128(10), 107004. DOI: 10.1289/EHP7246. 2020.

131. LP Clark, V Sreekanth, B Bekbulat, M Baum, S Yang, P Baylon, TR Gould, TV Larson, EYW Seto, CD Space, JD Marshall. Developing a low-cost passive method for long-term average concentrations of black carbon air pollution in polluted indoor environments. *Sensors*, 20(12), 3417. DOI: 10.3390/s20123417. 2020.

130. OT Ranzani, C Milà, M Sanchez, S Bhogadi, B Kulkarni, K Balakrishnan, S Sambandam, J Sunyer, JD Marshall, S Kinra, C Tonne. Personal exposure to particulate air pollution and vascular damage in peri-urban South India. *Environmental International*, 139, 105734. DOI: 10.1016/j.envint.2020.105734. 2020.

129. RU Shah, E Robinson, P Gu, J Apte, JD Marshall, AL Robinson, A Presto. Socio-economic disparities in exposure to urban restaurant emissions are larger than for traffic. *Environmental Research Letters*, 15(11), 114039. DOI: 10.1088/1748-9326/abbc92. 2020.

128. SE Chambliss, C Preble, J Caubel, T Cados, K Messier, R Alvarez, B LaFranchi, M Lunden, JD Marshall, A Szpiro, T Kirchstetter, J Apte. Comparison of mobile and fixed-site black carbon measurements for high-resolution urban pollution mapping. *Environmental Science & Technology*, 54(13), 7848-7857. DOI: 10.1021/acs.est.0c01409. 2020.

127. J Xiang, E Austin, T Gould, T Larson, J Shirai, Y Liu, JD Marshall, E Seto. Impacts of the COVID-19 responses on traffic-related air pollution in a Northwestern US city. *Science of The Total Environment*, 747, 141325. DOI: 10.1016/j.scitotenv.2020.141325. 2020.

126. SK Thakrar, S Balasubramanian, PJ Adams, IML Azevedo, NZ Muller, SN Pandis, S Polasky, CA Pope III, AL Robinson, JS Apte, CW Tessum, JD Marshall, JD Hill. Reducing mortality from air pollution in the United States by targeting specific emission sources. *Environmental Science & Technology Letters*, 7(9), 639-645. DOI: 10.1021/acs.estlett.0c00424. 2020.

125. B Sergi, PJ Adams, NZ Muller, AL Robinson, SJ Davis, JD Marshall, I Azenvedo. Optimizing emissions reductions from the U.S. power sector for climate and health benefits. *Environmental Science & Technology*, 54(12), 7513-7523. DOI: 10.1021/acs.est.9b06936. 2020.

124. Y Wang, MJ Bechle, SY Kim, P Adams, SN Pandis, CA Pope III, AL Robinson, L Sheppard, AA Szpiro, JD Marshall. Spatial decomposition analysis of NO_2 and $PM_{2.5}$ air pollution in the United States. *Atmospheric Environment*, 241, 117470. DOI: 10.1016/j.atmosenv.2020.117470. 2020.

123. JD Higbee, JS Lefler, RT Burnett, M Ezzati, JD Marshall, SY Kim, M Bechle, AL Robinson, CA Pope III. Estimation long-term pollution exposure effects through inverse probability weighting methods with Cox proportional hazards models. *Environmental Epidemiology*, 4(2): 085. DOI: 10.1097/EE9.0000000000000085. 2020.

122. SY Kim, MJ Bechle, S Hankey, L Sheppard, AA Szpiro, JD Marshall. Concentration of criteria pollutants in the contiguous U.S., 1979 - 2015: role of prediction model parsimony

in integrated empirical geographic regression. *PLOS One*, 15(2): 0228535. DOI: 10.1371/journal.pone.0228535. 2020.

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21. EJ Wilson, JD Marshall, RD Wilson, KJ Krizek. School choice and children's school commuting. *Environment and Planning A,* 42(9), 2168–2185. 2010.

20. JD Marshall, RD Wilson, KL Meyer, SK Rajangam, NC McDonald, EJ Wilson. Vehicle emissions during children's school commuting: impacts of education policy. *Environmental Science & Technology,* 44(5), 1537–1543. 2010.

19. S Hankey, JD Marshall. Impacts of urban form on future U.S. passenger-vehicle greenhouse gas emissions. *Energy Policy,* 38(9), 4880–4887. 2010.

18. A Boies, S Hankey, D Kittelson, JD Marshall, P Nussbaum, W Watts, E Wilson. Reducing motor vehicle GHG emissions in a non-California state: a case study of Minnesota. *Environmental Science & Technology,* 43(23), 8721–8729. 2009.

17. JD Marshall, M Brauer, LD Frank. Healthy neighborhoods: walkability and air pollution. *Environmental Health Perspectives,* 117(11), 1752–1759. 2009.

16. FJ Ries, JD Marshall, M Brauer. Intake fraction of urban wood smoke. *Environmental Science & Technology,* 43(13), 4701–4706. 2009.

15. JD Marshall. Environmental equality: air pollution exposures in California's South Coast Air Basin, *Atmospheric Environment,* 42(21), 5499-5503. 2008.

14. JD Marshall. Energy-efficient urban form. *Environmental Science & Technology,* 42(9), 3133-3137. 2008.

13. JD Marshall, E Nethery, M Brauer. Within-urban variability in ambient air pollution: comparison of estimation methods. *Atmospheric Environment,* 42(6), 1359-1369. 2008.

12. JD Marshall. Urban land area and population growth: a new scaling relationship for metropolitan expansion. *Urban Studies,* 44(10), 1889-1904. 2007.

11. PJ Marcotullio, JD Marshall. Potential futures for road transportation CO_2 emissions in the Asia Pacific. *Asia Pacific Viewpoint,* 48(3), 355-377. 2007.

10. JD Marshall, PW Granvold, AS Hoats, TE McKone, E Deakin, WW Nazaroff. Inhalation intake of ambient air pollution in California's South Coast Air Basin. *Atmospheric Environment*, 40(23), 4381-4392. 2006.

9. JD Marshall, E Behrentz. Vehicle self-pollution intake fraction: children's exposure to school bus emissions. *Environmental Science & Technology*, 39(8), 2559-2563. 2005. Widely reported in news media, including *New York Times* and *Los Angeles Times*.

8. JD Marshall, TE McKone, EA Deakin, WW Nazaroff. Inhalation of motor vehicle emissions: effects of urban population and land area. *Atmospheric Environment*, 39(2), 283-295. 2005. Listed as a "most-downloaded article."

7. JD Marshall, SK Teoh, WW Nazaroff. Intake fraction of nonreactive vehicle emissions in US urban areas. *Atmospheric Environment*, 39(7), 1363-1371. 2005

6. JD Marshall, MW Toffel. Framing the elusive concept of sustainability: a sustainability hierarchy. *Environmental Science & Technology*, 39(3), 673-682. 2005. Listed as a "mostdownloaded article."

5. PJ Marcotullio, E Williams, JD Marshall. Faster, sooner, and more simultaneously: how recent road and air transportation CO_2 emission trends in developing countries differ from historic trends in the United States. *Journal of Environment and Development*, 14(1), 125-148. 2005.

4. MW Toffel, JD Marshall. Comparative analysis of weighting methods used to evaluate chemical release inventories. *Journal of Industrial Ecology*, 8(1-2), 143-172. 2004. Chosen as the issue's "sample article."

3. JD Marshall, WJ Riley, TE McKone, WW Nazaroff. Intake fraction of primary pollutants: motor vehicle emissions in the South Coast Air Basin. *Atmospheric Environment*, 37(24), 3455-3468. 2003.

2. JD Marshall, BW Shimada, PR Jaffe. Effect of temporal variability in infiltration on contaminant transport in the unsaturated zone. *Journal of Contaminant Hydrology*, 46(1-2), 151-161. 2000.

1. SR Hayes, JD Marshall. Designing optimal strategies to attain the new US particulate matter standards: some initial concepts. *Journal of the Air & Waste Management Association*, 49(SI):192-198. 1999.

Conference proceedings and other non-journal articles

Complete books written

Parts of books (chapters in edited books)

4. D Philippon, B Colombo, F Rose, JD Marshall. Translating Knowledge to Engage Global Grand Challenges: A Case Study. (Peer reviewed.) In *Innovative Learning and Teaching: Experiments Across the Disciplines*, ID Alexander, RK Poch, (eds). 2017; University of Minnesota libraries publishing: Minneapolis, MN.

3. KJ Krizek, E Wilson, JD Marshall, R Wilson. Transport Costs of School Choice. (Peer reviewed.) In *Education, Land, and Location*, GK Ingram, DA Kenyon (eds). 2014; Lincoln Institute LPS: Cambridge, MA.

2. M Brauer, B Ainslie, M Buzzelli, S Henderson, T Larson, JD Marshall, E Nethery, D Steyn, J Su. Models of Exposure for Use in Epidemiological Studies of Air Pollution Health Impacts. In *Air Pollution Modeling and Its Application XIX (NATO Science for*

Peace and Security Series C: Environmental Security), C Borrego, AI Miranda (eds). 2008; Springer: Dordrecht, The Netherlands.

1. JD Marshall, WW Nazaroff. Intake Fraction. (Peer reviewed.) In *Exposure Analysis*, WR Ott, A Steinemann, L Wallace (eds). 2007; CRC Press: Boca Raton, FL.

Books edited

Journal issues edited

Patents submitted and/or awarded

Letters

1. FJ Ries, JD Marshall, M Brauer. Wood Energy: The Dangers of Combustion. Letter to the editor (peer reviewed), *Science*, 324(5933). 2009.

Abstracts, non-refereed papers, technical reports

11. CW Tessum, JD Marshall. Air quality and health impacts of potential nuclear electricity generator closures in Pennsylvania and Ohio. Report to the Nuclear Energy Institute. April 2019.

10. MM Kelp, CW Tessum, JD Marshall. Orders-of-magnitude speedup in atmospheric chemistry modeling through neural network-based emulation. Published at *arXiv preprint arXiv*:1808.03874. August 2018.

9. CW Tessum, JD Marshall, JD Hill. Tank-to-Wheel Emissions of Ethanol and Biodiesel Powered Vehicles as Compared to Petroleum Alternatives. Report to the Center for Transportation Studies, University of Minnesota, Minneapolis, MN. March 2010.

8. C Cherry, S Ji, JD Marshall, Y Wu. Emissions and Public Health from Electric Vehicles in China. Report to the Energy Foundation, Beijing, China. September 2009.

7. CW Tessum, A Boies, JD Hill, JD Marshall. Assessing the Sustainability of Biofuels: Metrics, Models, and Tools for Evaluating the Impact of Biofuels. In *Expanding Biofuel Production and the Transition to Advanced Biofuels*. National Research Council, 2009: 117-140.

6. M Brauer, SB Henderson, JD Marshall. A Land Use Regression Road Map for the Burrard Inlet Area Local Air Quality Study. Report to the Greater Vancouver Regional District (GVRD), Vancouver, BC. December 2006.

5. B Haryanto, JD Marshall, D Westerdahl, S Fruin, I Trihandini. Personal Exposure Measurements of $PM_{2.5}$and Carbon Monoxide in Jakarta, Indonesia. Report to US Agency for International Development, and US Asia Environmental Partnership (USAID, USAEP), Jakarta, Indonesia. October 2005.

4. JD Marshall, WW Nazaroff. Using Intake Fraction to Guide ARB Policy Choices: The Case of Particulate Matter. Report to the Research Division of the California Air Resources Board (ARB), Sacramento, CA. October 2004.

3. MW Toffel, JD Marshall. Assessing Environmental Performance with Chemical Release Inventories. In *Proceedings of the 11th International Conference of the Greening of Industry Network*. October 2003.

2. JD Marshall. Exposure to Motor Vehicle Emissions: An Intake Fraction Approach. Report LBL-51854, Lawrence Berkeley Laboratory, Berkeley, CA. December 2002.

1. JD Marshall, WW Nazaroff. Health Risk Assessment of Diesel-fired Back-up Generators Operating in California. Report to Environmental Defense, Oakland, CA. August 2002. Presented to the California Air Resources Board, Sacramento, CA, May 2002.

Other significant research dissemination (web sites, software, Wikis, etc.)

- www.caces.us
- www.spatialmodel.com

OTHER SCHOLARLY ACTIVITY

Invited lectures and seminars

1. University of Minnesota, Minneapolis, MN. "Air pollution and environmental justice", iCOMOS (International Conference on One Medicine One Science), April 25, 2016

2. McMaster Institute for Transportation & Logistics, Big Ideas, Better Cities conference, Hamilton, Ontario "Air pollution and environmental justice", April 20, 2016

3. UC Berkeley, Energy and Resources Group, Berkeley, CA, "Air pollution kills! So what? Air quality engineering to improve public health", February 12, 2014

4. University of Southern California, USC Program for Environmental and Regional Equity, Los Angeles, CA. “Environmental-justice & -equality in the U.S.: Quantifying and addressing regional variability", February 8, 2014

5. University of Southern California, Los Angeles, CA, "Air pollution kills! So what? Air quality engineering to improve public health", February 7, 2014

6. Center for Research in Environmental Epidemiology, Barcelona, Spain.,” Air pollution kills! So what? Air quality engineering to improve public health", October 5, 2012

7. Geography Department, University of Minnesota, Minneapolis, MN, “Urban sustainability: Designing cities for human health and the environment”, Geography, February 10, 2012

8. Peking University, Beijing, China., "Air quality and public health impacts of biofuel production and use in the United States", August 15, 2011

9. Civil Engineering Department, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, "Urban sustainability: Designing cities for human health and the environment", June 9, 2011

10. Swiss Tropical & Public Health Institute, Basel, Switzerland, "Exposure to PM in a low-income country: Real-time measurements in India", June 7, 2011

11. Institute for Risk Assessment Sciences, Utrecht University, The Netherlands, "Satellite-based land-use regression", February 11, 2011

12. The Flemish Institute for Technological Research [Vlaamse Instelling voor Technologisch Onderzoek], Mol, Belgium, "Mobility-based exposure assessment", February 2, 2011

13. Transportation, Air Pollution, and Physical Activities International Workshop (TAPAS), Barcelona, Spain., R Wilson, KL Meyer, SK Rajangam, N McDonald, E Wilson, "Active travel & children: Effects of education policy", November 9–10, 2009

14. TAPAS, Barcelona, Spain, "Healthy neighborhood design: Exposure to air pollution and physical inactivity", November 9–10, 2009

15. First Annual Fulbright US-Brazil Biofuels Short Course, Sao Paulo, Brazil, "Spatially and temporally explicit life-cycle analysis of biofuels", First Annual Fulbright US-Brazil Biofuels Short Course, July 27-August 7, 2009

16. 2nd Colombian Congress on Air Quality & Public Health. Inter-university Group for Research on Air Quality & Health, Manizales, Colombia, "Incorporating environmental justice into air quality management", July 14–17, 2009

17. How Land Use Can Help Minnesota Reach Its Greenhouse Gas Reduction Goals (Workshop held at University of Minnesota), Minneapolis, MN.

18. "Urban land-use and transportation-GHG: Minnesota", January 5, 2009

19. Minnesota Pollution Control Agency, St Paul, MM, "Urban sustainability engineering", December 4, 2008

20. Center for Urban Environmental Research and Education, University of Maryland Baltimore County, November 7, 2008

21. Liu Institute for Global Issues, University of British Columbia, Vancouver, BC. "Urban sustainability engineering", October 31, 2008

22. 7th International Conference on Urban Health, Vancouver, BC, "Urban Health: Walkability and Air Pollution", October 30, 2008

23. Minnesota Air, Water, and Waste Environmental Conference, Bloomington, MN. "Fine particles and haze: Reductions and resulting benefits", February 26–28, 2008

24. International Workshop on Urban Energy and Carbon Modeling. Global Carbon Project, Asian Institute of Technology, Pathumthani, Thailand, "Energy efficient urban form: Carbon implications of reducing urban sprawl in United States", February 4–6, 2008

25. 20th Annual Research Symposium, UC Toxic Substances Research & Teaching Program, Santa Cruz, CA, "Intake fraction: a new tool for air quality management", April 20–21, 2007

26. 1st Colombian Congress on Air Quality & Public Health. Inter-university Group for Research on Air Quality & Health, Manizales, Colombia, "Incorporating exposures into air quality management", March 14–16, 2007

27. 4th Annual Workshop on Air Pollution & Public Health. British Columbia Lung Association, Vancouver, BC, "Intake fraction: a new tool for air quality management", March 7, 2007

28. Symposium on Current Advances in Exposure and Health Effect Assessment of Traffic Exhaust. International Society of Exposure Analysis and International Society for Environmental Epidemiology (ISEA/ISEE) Joint Annual Meeting, Paris, France, "Mobility-based estimates of inhalation of vehicle emissions", September 2–6, 2006

29. California Air Resources Board's Chairman's Air Pollution Seminar Series, Sacramento, CA, "Applying New Exposure Tools to ARB Efforts: Mobility-Based Exposure Modeling and Intake Fraction", January 30, 2006

30. Panel discussion on effective library research techniques for graduate students, California Clearinghouse on Library Instruction, Fremont, CA, Spring 2004. May 17, 2004

31. Workshop by the Institute for Global Environmental Strategies, Hayama, Japan, "Policy Integration towards Sustainable Energy Use for Asian Cities: Integrating Local Air Pollution and Greenhouse Gas Emissions Concerns", January 28–30, 2004

32. United Nations University, Tokyo, Japan, "Making Sense of Sustainability", January 27, 2004

33. California Air Resources Board Haagen-Smit Symposium Lake Arrowhead, CA., WW Nazaroff, GA Heath, AS Hoats, JD Marshall. "Environmental Health Implications of Electricity Generation Choices: Pollutants of Concern and Exposure Issues", April 9–12, 2002

Presentations given at conferences

120. O Ranzani, C Mila, M Sanchez, B Kulkarni, K Balakrishnan, S Sambandam, J Sunyer, JD Marshall, S Kinra, C Tonne. "Personal Exposure to Particulate Air Pollution and Cardiovascular Markers in Peri-urban South India", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Utrecht, The Netherlands, August 25-28, 2019.

119. A Curto, O Ranzani, C Mila, M Sanchez, JD Marshall, B Kulkarni, S Bhogadi, S Kinra, G Wellenius, C Tonne. “Particulate Air Pollution and Blood Glucose Levels and Diabetic Status in Peri-urban India”, International Society for Environmental Epidemiology (ISEE) Annual Meeting, Utrecht, The Netherlands, August 25-28, 2019

118. Y Wang, MJ Bechle, H Xu, X Chen, H Cui, Y Wang, Y Zhao, JD Marshall. “National Disparities of Air Pollution Exposure Level by Socioeconomic Status in China”, International Society for Environmental Epidemiology (ISEE) Annual Meeting, Utrecht, The Netherlands, August 25-28, 2019.

117. J Liu, L Clark, MJ Bechle, SY Kim, JD Marshall. “National Patterns in Exposure to Criteria Air Pollutants in the United States by Race-Ethnicity and Income, 1990-2010”, International Society for Environmental Epidemiology (ISEE) Annual Meeting, Utrecht, The Netherlands, August 25-28, 2019.

116. MJ Bechle, JD Marshall. “Outdoor NO2 Exposure Disparities at Public Schools in the Contiguous United States”, International Society for Environmental Epidemiology (ISEE) Annual Meeting, Utrecht, The Netherlands, August 25-28, 2019.

115. L Clark, S Vakacherla, M Baum, S Yang, JD Marshall. “A Low-Cost Passive Monitor for Black Carbon Air Pollution: Initial Testing”, International Society for Environmental Epidemiology (ISEE) Annual Meeting, Utrecht, The Netherlands, August 25-28, 2019.

114. M Kushwaha, A Upadhya, E Savio, V Sreekanth, J Asundi, J Apte, JD Marshall. “Mobile-monitoring of Black Carbon and PM2.5 Air Pollution - Data-only Approach from Bangalore, India”, International Society for Environmental Epidemiology (ISEE) Annual Meeting, Utrecht, The Netherlands, August 25-28, 2019.

113. MJ Bechle, JD Marshall. “Inter-comparison of Publicly-available National-scale Integrated Empirical Geographic Regression Models for Outdoor Air Pollution in the Contiguous United States”, International Society for Environmental Epidemiology (ISEE) Annual Meeting, Utrecht, The Netherlands, August 25-28, 2019.

112. C Tonne, M Sanchez, C Mila, V Sreekanth, S Sambandam, K Balakrishnan, JD Marshall. “Particle Exposure Assessment in Peri-Urban India: Lessons Learned from the CHAI Project”, International Society for Environmental Epidemiology (ISEE) Annual Meeting, Ottawa, Canada, August 26-30, 2018.

111. D Paolella, CW Tessum, JD Hill, JD Marshall. “Source-Specific Contributions to Fine Particulate Matter Exposure Disparities in the United States”, International Society for Environmental Epidemiology (ISEE) Annual Meeting, Ottawa, Canada, August 26-30, 2018.

110. HT Wicks, J Bennett, MJ Bechle, RM Parks, CA Pope, JD Marshall, R Burnett, M Ezzati. “A National Study of the Mortality Effects of PM2.5 on All-Cause and Cause-Specific Mortality in the Contiguous U.S.”, International Society for Environmental Epidemiology (ISEE) Annual Meeting, Ottawa, Canada, August 26-30, 2018.

109. SY Kim, MJ Bechle, S Hankey, L Sheppard, A Szpiro, JD Marshall. “A Parsimonious Approach to National Prediction: Criteria Pollutants in the Contiguous

U.S., 1979 - 2015", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Ottawa, Canada, August 26-30, 2018.

108. M Wang, PD Sampson, MJ Bechle, JD Marshall, S Vedal, JD Kaufman. "National PM2.5 and NO2 Spatiotemporal Models Integrating Intensive Monitoring Data and Satellite-Derived Land Use Regression in a Universal Kriging Framework in the United States: 1999-2016", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Ottawa, Canada, August 26-30, 2018.

107. H Xu, MJ Bechle, M Wang, A Szpiro, S Vedal, JD Marshall. "National PM2.5 and NO2 Exposure Models for China Based on Land Use Regression, Satellite Measurements, and Universal Kriging", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Ottawa, Canada, August 26-30, 2018.

106. K Messier, S Chambliss, A Roy, JD Marshall, M Brauer, A Szpiro, C Portier, J Kerckhoffs, R Vermeulen, JS Apte. "Mapping Air Pollution with Google Street View Cars: Towards Efficient Mobile Monitoring", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Ottawa, Canada, August 26-30, 2018.

105. JS Apte, K Messier, S Chambliss, M Brauer, S Gani, S Hamburg, TW Kirchstetter, JD Marshall, B LaFranchi, M Lunden, C Portier, KT Bettman, R Vermeulen, R Alvarez. "Understanding Traffic-Related Air Pollution Exposures through Mobile Monitoring", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Ottawa, Canada, August 26-30, 2018.

104. O Ranzani, C Mila, M Sanchez, JD Marshall, S Kinra, C Tonne. "Air Pollution and Subclinical Atherosclerosis in a Peri-Urban Area in South India (CHAI-Project)", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Ottawa, Canada, August 26-30, 2018.

103. AC Tirado, GA Wellenius, C Mila, M Sanchez, O Ranzani, JD Marshall, B Kulkarni, S Bhogadi, S Kinra, C Tonne. "Residential Ambient Particulate Air Pollution and Blood Pressure in Peri-Urban India", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Ottawa, Canada, August 26-30, 2018.

102. JD Marshall, M Baum, P Baylon, LP Clark, T Gould, T Larson, S Vakacherla, S Yang. "A One-Dollar Passive Sensor for Black Carbon Monitoring: Capturing the Blackening", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Ottawa, Canada, August 26-30, 2018.

101. JS Apte, K Messier, S Chambliss, M Brauer, J Caubel, S Gani, S Hamburg, TW Kirchstetter, JD Marshall, B LaFranchi, MM Lunden, CV Preble, AA Presto, C Portier, A Robinson, ES Robinson, R Shah, K Tuxen-Bettman, R Vermeulen, R Alvarez. "Early Lessons from New Air Pollution Exposure Science: High-resolution Mapping of Urban Air Quality using Google Street View Cars, Low-cost Samplers, and Aerosol Mass Spectrometry", American Association for Aerosol Research (AAAR) International, St. Louis, MO, September 2-7, 2018.

100. MM Islam, R Wathore, G Jain, K Sethuraman, H Zerriffi, JD Marshall, R Bailis, AP Grieshop. "Emission Factors and Optical Properties of Health and Climate Relevant Pollutants Measured in a Multi-year Cookstove Intervention Study in Rural India",

American Association for Aerosol Research (AAAR) International, St. Louis, MO, September 2-7, 2018.

99. MM Islam, R Wathore, G Jain, K Sethuraman, H Zerriffi, JD Marshall, R Bailis, AP Grieshop. “Linking PM 2.5 Indoor Air Quality and Emission Factors Measured during a Cookstove Intervention Trial in Rural India”, American Association for Aerosol Research (AAAR) International, St. Louis, MO, September 2-7, 2018.

98. JS Apte, K Messier, S Chambliss, M Brauer, J Caubel, S Gani, S Hamburg, TW Kirchstetter, JD Marshall, B LaFranchi, MM Lunden, CV Preble, AA Presto, C Portier, A Robinson, ES Robinson, R Shah, K Tuxen-Bettman, R Vermeulen, R Alvarez. “Early lessons from new air pollution exposure science: High-resolution mapping of urban air quality using Google Street View cars, low-cost samplers, and aerosol mass spectrometry”, American Association for Aerosol Research (AAAR) International, St. Louis, MO, September 2-7, 2018.

97. JS Apte, JD Marshall. "Addressing Global Mortality from PM2.5", Art Rosenfeld Symposium, Berkeley, CA, December 1, 2017.

96. TW Aung, AP Grieshop, MM Kelp, JD Marshall. "Emission and Concentration Linkages from a Cookstove Intervention Trial in India", International Society of Exposure Science (ISES) Annual Meeting, Research Triangle Park, NC, October 15-19, 2017.

95. M Sanchez, A Ambros, M Salmon, C Mila, V Sreekanth, JD Marshall, C Tonne. " Development of land use regression model for fine particles in peri-urban South India", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Sydney, Australia, September 24-28, 2017.

94. JD Marshall, LP Clark, MJ Bechle, N Nguyen, K Swor, CW Tessum, JD Hill, DB Millet. "Environmental justice aspects of transportation-related air pollution in the United States: evidence from national-scale longitudinal analyses, case studies, and life cycle assessment", Health Effects Institute Annual Conference, Denver, CO, May 1–3, 2016.

93. LP Clark, MJ Bechle, JD Marshall. "National Patterns in Environmental Injustice Over Time: Outdoor NO2 Air Pollution in United States Urban Areas, 2000-2010", International Society for Environmental Epidemiology (ISEE) Annual Meeting, São Paulo, Brazil, August 30 - September 3, 2015.

92. S Hankey, G Lindsey, JD Marshall. "Active Travel and Exposure to Air Pollution: Implications for Planning Healthy Cities", ISEE Annual Meeting, São Paulo, Brazil, August 30 - September 3, 2015.

91. S Hankey, JD Marshall. "Exposure to On-Road Particulate Air Pollution (PM2.5, Black Carbon, Particle Number, Particle Size) While Cycling", ISEE Annual Meeting, São Paulo, Brazil, August 30 - September 3, 2015.

90. N Nguyen, JD Marshall. "Addressing Environmental Justice: Importance of Spatially-Targeted Emission-Reductions", ISEE Annual Meeting, São Paulo, Brazil, August 30 - September 3, 2015.

89. MJ Bechle, JD Marshall. "Use of LUR Models to Cover a Large Spatial Scale: Integration with Satellite Data", International Society of Exposure Science Annual Meeting, Cincinnati, Ohio, October 12–16, 2014.

88. S Hankey, JD Marshall, G Lindsey. "Modeling Spatial Patterns of Bicycle and Pedestrian Traffic to Estimate Exposure to Hazards", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Seattle, Washington, August 24–28.

87. S Hankey, K Sullivan, A Kinnick, A Koskey, K Grande, J Davidson, JD Marshall. "Using Objective Measures of Stove Use and Indoor Air Quality to Evaluate a Cookstove Intervention in Rural Uganda", ISEE Annual Meeting, Seattle, Washington, August 24–28.

86. MT Young, MJ Bechle, PD Sampson, JD Marshall, LA Sheppard, JD Kaufman. "A National Prediction Model Based on Universal Kriging and Land-Use Regression Using Satellite-Based NO2 Measurements for Epidemiological Analysis of Long-Term Health Effects", ISEE Annual Meeting, Seattle, Washington, August 24–28.

85. T Aung, JD Marshall, J Baumgartner, B Alexander, G Ramachandran, A Grieshop, C Reynolds, M Brauer, S Narayanswami, T Pradeep, G Jain, K Sethuraman. "Air Quality and Health Evaluation of a Climate-Financed Cookstove Intervention. Institute for Resources", Environment and Sustainability (IRES) Seminar (University of British Columbia), Vancouver, Canada, January 7, 2014.

84. T Aung, JD Marshall, J Baumgartner, B Alexander, G Ramachandran, A Grieshop, C Reynolds, M Brauer, S Narayanswami, T Pradeep, G Jain, K Sethuraman. "Air Pollution and Blood Pressure Outcomes from a Cookstove Intervention", Occupational and Environmental Health (OEH) Seminar (University of British Columbia), Vancouver, Canada, October 25, 2013.

83. JS Apte, JD Marshall. “Addressing Global Mortality from PM2.5”, American Association for Aerosol Research Annual Meeting, Orlando, FL, October 20-24, 2013.

82. JS Apte, JD Marshall, WW Nazaroff. “Inhalation Intake of Urban Emissions of Semivolatile Organic Compounds from Vehicles”, American Association for Aerosol Research Annual Meeting, Portland, OR, September 30–October 4, 2013.

81. JS Apte, JD Marshall. “Addressing Global Mortality from PM2.5”, International Society for Environmental Epidemiology Annual Meeting, Seattle, WA, August 25-28, 2013.

80. JS Apte, A Goodkind, J Coggins, JD Marshall. "Blue Skies Bluer? Puzzling Implications of a Possible Supra-Linear Relationship Between PM Exposure and Mortality", International Society of Exposure Science, International Society for Environmental Epidemiology, and International Society of Indoor Air Quality and Climate (ISES/ISEE/ISIAQ) Joint Annual Meeting, Basel, Switzerland, August 19–23, 2013.

79. T Aung, JD Marshall, T Pradeep, S Narayanswami, G Jain, K Sethuraman, A Grieshop, J Baumgartner, C Reynolds, M Brauer. "Air Quality and Health Evaluation of a Climate Financed Cookstove Intervention in Rural India", ISES/ISEE/ISIAQ Joint Annual Meeting, Basel, Switzerland, August 19–23, 2013.

78. MJ Bechle, DB Millet, JD Marshall. "Monthly National Satellite-Based Land-Use Regression of NO_2 in the United States for 2000-2010", ISES/ISEE/ISIAQ Joint Annual Meeting, Basel, Switzerland, August 19–23, 2013.

77. MJ Bechle, DB Millet, JD Marshall. "Remote Sensing of Exposure to NO_2: Satellite Versus Ground Based Measurement in a Large Urban Area", ISES/ISEE/ISIAQ Joint Annual Meeting, Basel, Switzerland, August 19–23, 2013.

76. L Clark, DB Millet, MJ Bechle, JD Marshall. "Environmental Injustice and Inequality: NO_2 Air Pollution in the United States", ISES/ISEE/ISIAQ Joint Annual Meeting, Basel, Switzerland, August 19–23, 2013.

75. S Hankey, M Brauer, G Lindsey, JD Marshall. "Neighborhood Walkability and Air Pollution Exposure", ISES/ISEE/ISIAQ Joint Annual Meeting, August 19–23, 2013.

74. S Hankey, G Lindsey, JD Marshall. "Comparing Spatial Patterns of Non-Motorized Traffic and Particulate Air Pollution in Minneapolis, MN", ISES/ISEE/ISIAQ Joint Annual Meeting, Basel, Switzerland, August 19–23, 2013. Basel, Switzerland.

73. S Hankey, G Lindsey, JD Marshall. "Measuring and Modeling Particulate Air Pollution Using a Mobile, Bicycle-Based Platform", ISES/ISEE/ISIAQ Joint Annual Meeting, Basel, Switzerland, August 19–23, 2013.

72. JD Marshall, K Swor, N Nguyen. "Measuring and Improving Environmental Equality and Justice: Diesel Particles in California's South Coast", ISES/ISEE/ISIAQ Joint Annual Meeting, Basel, Switzerland, August 19–23, 2013.

71. C Tessum, J Hill, JD Marshall. " Air Pollution, Health, and Environmental Justice Implications of Shifting Transportation Fuels", ISES/ISEE/ISIAQ Joint Annual Meeting, Basel, Switzerland, August 19–23, 2013.

70. D Vienneau, K de Hoogh, MJ Bechle, R Beelen, RV Martin, A van Donkelaar, EV Novotny, DB Millet, G Hoek, JD Marshall. "High Resolution NO_2 and PM_{10} Models for Europe Using Satellite-Derived Measurements", ISES/ISEE/ISIAQ Joint Annual Meeting, Basel, Switzerland, August 19–23, 2013.

69. T Aung, G Jain, K Sethuraman, A Greishop, T Pradeep, S Narayanswami, JD Marshall, M Brauer. "Air Quality and Health Evaluation of a Climate Financed Cookstove Intervention in Rural India", Institute for Heart + Lung Health FEST, Vancouver, Canada, February 19–23, 2013.

68. T Aung, G Jain, K Sethuraman, A Greishop, T Pradeep, S Narayanswami, JD Marshall, M Brauer. "Evaluating Climate Financed Cookstove Intervention in Rural Karnataka, India", Symposium on Atmospheric PM Research in British Columbia, Vancouver, Canada, December 10, 2012.

67. JS Apte, JD Marshall, WW Nazaroff. “Intraurban Intake Fraction of Vehicle Emissions: Asian Cities in Global Context.” Better Air Quality 2012 Meeting, Hong Kong, China, December 5-7, 2012.

66. G Jain, K Sethuram, T Aung, MJ Bechle, A Grieshop, J Baumgartner, T Pradeep, M Narayanswamy, C Reynolds, M Brauer, JD Marshall. "Stove Emissions and Indoor and Outdoor Pollution Levels from a Randomized Cook-stove Exchange in Karnataka, India", International Society of Exposure Science (ISES) Annual Meeting, Seattle, WA, October 28–November 1, 2012.

65. T Aung, JD Marshall, J Baumgartner, B Alexander, G Ramachandran, A Grieshop, C Reynolds, M Brauer, S Narayanswami, T Pradeep, G Jain, K Sethuraman. " Emissions, Health, and Livelihood Impacts of a Randomized Cookstove Exchange in Karnataka, India", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Columbia, SC.August 26–30, 2012.

64. JD Marshall. “Experiential Education: Designing Solutions to Global Grand Challenges”, American Association for the Advancement of Science (AAAS) Annual Meeting, Vancouver, Canada, February 16–20, 2012.

63. JD Marshall. “Verifying Health and Emission Improvements from a Stove Change-Out”, AAAS Annual Meeting, Vancouver, Canada, February 16–20, 2012.

62. JD Marshall, LP Clark, DB Millet, MJ Bechle. “Environmental Justice and Equality in NO2 Air Pollution in the United States”, AAAS Annual Meeting, Vancouver, Canada, February 16–20, 2012.

61. K Wagstrom, C Tessum, J Hill, JD Marshall. “Air Pollution Impacts of Conventional and Alternative Transportation Fuels”, AAAS Annual Meeting, Vancouver, Canada, February 16–20, 2012.

60. C Tessum, K Wagstrom, J Hill, JD Marshall. “Air Quality and Public Health Impacts of Biofuel Production and Use in the United States”, Initiative for Renewable Energy and the Environment E3 Conference, St Paul, MN, November 7, 2011.

59. C Tessum, K Wagstrom, J Hill, JD Marshall. “Air Quality and Public Health Impacts of Biofuel Production and Use in the United States”, Student Sustainability Symposium, St Paul, MN, October 26, 2011.

58. K Wagstrom, C Tessum, J Hill, JD Marshall. “Air Quality Impacts of Achieving U.S. Renewable Fuels Mandates”, American Institute of Chemical Engineers Annual Meeting, Minneapolis, MN, October 16–21, 2011.

57. JS Apte, JD Marshall, WW Nazaroff. “Inhalation Intake Fraction for Vehicle-Attributable Organic PM2.5”, American Association for Aerosol Research Annual Meeting, Minneapolis, MN, October 8–12, 2011.

56. JS Apte, E Bombrun, JD Marshall, WW Nazaroff. “Intake Fraction of Nonreactive Ground-Level Pollutant Emissions in 3,646 Global Urban Areas”, American Association for Aerosol Research (AAAR) Annual Meeting, Orlando, FL, October 3–7, 2011.

55. K Wagstrom, C Tessum, J Hill, JD Marshall. “Air Quality Impacts of Achieving U.S. Renewable Fuel Mandates”, AAAR Annual Meeting, Orlando, FL, October 3–7, 2011.

54. C Tessum, K Wagstrom, J Hill, JD Marshall. "Air Quality and Public Health Impacts of Biofuel Production and Use in the United States", American Center for Life Cycle Analysis, Chicago, IL, October 3–6. 2011, Won "Third Place Student Poster" award.

53. K Lundquist, JD Marshall. "Air Quality Modeling and Exposure Analysis for Environmental Justice Opportunities", Promoting Healthy Communities: Developing and Exploring Linkages Between Public Health Indicators, Exposure and Hazard Data, Washington, DC, September 26–27, 2011.

52. K Lundquist, JD Marshall. "Effect of Emission Reductions by Source or Location", Promoting Healthy Communities: Developing and Exploring Linkages Between Public Health Indicators, Exposure and Hazard Data, Washington, DC, September 26–27, 2011.

51. JS Apte, JD Marshall, WW Nazaroff. Transient Exposure to Vehicle Exhaust Plumes Inside New Delhi Auto-rickshaws", International Society for Environmental Epidemiology (ISEE) Annual Meeting, Barcelona, Spain, September 13–16, 2011.

50. S Hankey, JD Marshall, M Brauer. "Health Impacts of the Built Environment: Physical Inactivity, Exposure to Air Pollution, and Ischemic Heart Disease", ISEE Annual Meeting. September 13–16, 2011. Barcelona, Spain.

49. D Martinez, A De Nazelle, S Fruin, D Westerdahl, JD Marshall, J Matamala, N Kubesch, A Ripoll, M Nieuwenhujsen. "Relation Between Commuter and Exposure to Pollution Related to Traffic in Barcelona", ISEE Annual Meeting, Barcelona, Spain, September 13–16, 2011.

48. C Tessum, K Wagstrom, J Hill, JD Marshall. "Air quality and public health impacts of biofuel production and use in the United States", ISEE Annual Meeting, Barcelona, Spain, September 13-16, 2011.

47. D Vienneau, K de Hoogh, G Hoek, MJ Bechle, EV Novotny, DB Millet, JD Marshall. "European NO_2 Land Use Regression Incorporating Satellite- and Ground-based Measurements", ISEE Annual Meeting, Barcelona, Spain, September 13–16, 2011.

46. K Wagstrom, C Tessum, J Hill, JD Marshall. "Air Pollution Impacts of Conventional and Alternative Transportation Fuels". 22nd Annual CTS Transportation Research Conference, Portland, OR, May 24–25, 2011.

45. LP Clark, DB Millet, JD Marshall. "Air pollution and urban form in US urban areas", University of Minnesota Center for Transportation Studies Research Conference, St. Paul, MN, May 24, 2011.

44. C Tessum, K Wagstrom, J Hill, JD Marshall. "Air Quality Implications of Alternative Fuels: A spatially, Temporally Explicit Life Cycle Modeling Approach", Minnesota Supercomputing Institute Research Exhibition, Minneapolis, MN, April 25, 2011.

43. A de Nazelle, E Seto, D Donaire, M Mendez, D Rodriguez, L Maurer, J Matamala, M Portella, JD Marshall, M Nieuwenjuisen, M Jerret. "Ubiquitous Sensing Technology: A Tool to Understand and Promote Bicycling Behavior". X Fòrum TIG SIG, Barcelona, Spain, March 15–16, 2011.

42. NL Boeke, JD Marshall, S Alvarez, K Chance, A Fried, T Kurosu, B Rappenglück, D Richter, J Walega, P Weibring, DB Millet. “Formaldehyde Columns from the Ozone Monitoring Instrument: Urban vs. Background Levels and Evaluation Using Aircraft Data and a Global Model”. American Geophysical Union Fall Meeting, San Francisco, CA, December 13–17, 2010.

41. C Tessum, K Wagstrom, J Hill, JD Marshall. “Air Quality Implications of Alternative Fuels: A Spatially, Temporally Explicit Life Cycle Modeling Approach”. Initiative for Renewable Energy and the Environment E3 Conference, Saint Paul, MN, November 30, 2010.

40. JS Apte, TW Kirchstetter, JD Marshall, WW Nazaroff. “An Instrumentation Package for Measuring Commuter Exposure to Vehicle Exhaust Pollutants in New Delhi, India”. AWMA Symposium on Air Quality Measurement Methods and Technology, Los Angeles, CA, November 2–4, 2010.

39. K Wagstrom, C Tessum, J Hill, JD Marshall. “Air Pollution Impacts of Conventional and Alternative Fuels”. American Association for Aerosol Research Annual Meeting, Portland, OR, October 25–29, 2010.

38. NL Boeke, S Alvarez, K Chance, A Fried, T Kurosu, B Rappenglück, D Richter, P Weibring, J Walega, JD Marshall, DB Millet. “Formaldehyde Columns From the Ozone Monitoring Instrument: Urban vs. Background Levels and Evaluation Using Aircraft Data and a Global Model”. NASA Aura Science Team Meeting, Boulder, CO, September 27–29, 2010.

37. JD Marshall. “Exposure Assessment for Improved Air Quality Management”. International Society of Exposure Science and International Society for Environmental Epidemiology (ISES/ISEE) Joint Annual Meeting, Seoul, Korea, August 28–September 1, 2010.

36. JD Marshall. “Is Epidemiology Important for Environmental Sustainability?” ISES/ISEE, Seoul, Korea, August 28–September 1, 2010.

35. JD Marshall, P Hystad, EV Novotny, M Brauer. “Challenges and Next Steps for LUR Models”. ISES/ISEE, Seoul, Korea, August 28–September 1, 2010.

34. S Aggarwall, R Jain, JD Marshall. “Real Time, Size-resolved Prediction of Ultrafine and Accumulation-mode Particle Concentrations on Freeways”. ISES/ISEE, Seoul, Korea, August 28–September 1, 2010.

33. JS Apte, E Bombrun, WW Nazaroff, JD Marshall. “Intake Fractions for Vehicle Emissions in 88 Worldwide Urban Areas”. ISES/ISEE, Seoul, Korea, August 28–September 1, 2010.

32. JS Apte, TW Kirchstetter, JD Marshall, WW Nazaroff. “Commuter Exposure to Vehicle Exhaust Plumes in New Delhi, India”. ISES/ISEE, Seoul, Korea, August 28–September 1, 2010.

31. NL Boeke, B Rappenglück, A Fried, JD Marshall, DB Millet. “Satellite-derived NO_2 and HCHO: Comparison to in Situ Measurement and Application to Air Quality Management”. ISES/ISEE, Seoul, Korea, August 28–September 1, 2010.

30. S Hankey, JD Marshall, M Brauer, LD Frank. “Within-city Variation in Exposures to Air Pollution and Physical Inactivity”. ISES/ISEE, Seoul, Korea, August 28–September 1, 2010.

29. KR Lundquist, JD Marshall. “Intake and Exposure Effects of Reducing Diesel PM in the South Coast”. ISES/ISEE, Seoul, Korea, August 28–September 1, 2010.

28. EV Novotny, MJ Bechle, DB Millet, JD Marshall. “National Satellite-based Land Use Regression: NO_2 in the United States”. ISES/ISEE, Seoul, Korea, August 28–September 1, 2010.

27. NL Boeke, A Fried, P Weibring, J Walega, D Richter, B Rappenglück, S Alvarez, T Kurosu, K Chance, JD Marshall, DB Millet. “Investigating Ozone Chemistry with Measurements of HCHO and NO_2 from the Ozone Monitoring Instrument and GEOS-Chem”. International Commission on Atmospheric Chemistry and Global Pollution and International Global Atmospheric Chemistry (CACGP/IGAC), Halifax, Canada, July 11–16, 2010. Won a “Best Student Poster” award at this international conference.

26. K Wagstrom, C Tessum, J Hill, JD Marshall. “Air Pollution Impacts of Conventional and Alternative Fuels”. Initiative for Renewable Energy and the Environment E3 Conference, Saint Paul, MN, November 17, 2009.

25. KR Lundquist, JD Marshall. "Exposure to Diesel Particulate Matter in the South Coast". International Society of Exposure Science (ISES) Annual Meeting, Minneapolis, MN, November 1–5, 2009.

24. AF Both, B Joseph, JD Marshall. "PM2.5 in Low- and Middle-income Neighborhoods in Bangalore, India". ISES, Minneapolis, MN, November 1–5, 2009.

23. MJ Bechle, LC Ohman, KR Lundquist, DB Millet, JD Marshall. “Within-urban Variability in Outdoor NO_2 Concentrations: Satellite versus Ground-based Estimates”. ISES, Minneapolis, MN, November 1–5, 2009.

22. S Hankey, JD Marshall. “Impacts of Urban Form on Passenger-vehicle CO_2 Emissions”. Transportation, Planning, Land Use and Air Quality (TPLUAQ) Conference 2009, Denver, CO, July 28–29, 2009.

21. JD Marshall, E Setton, M Brauer. “Enhancing Spatiotemporal Aspects of Air Pollution Epidemiological Studies”. International Society of Exposure Analysis and International Society for Environmental Epidemiology (ISEA/ISEE) Joint Annual Meeting, Pasadena, CA, October 12–16, 2008.

20. KL Lundquist, JD Marshall. “Strategies for Improving Exposure and Exposure Distributions: Air Pollution and Environmental Justice in the South Coast”. ISEA/ISEE, Pasadena, CA, October 12–16, 2008.

19. S Humbert, S Shaked, Y Nishioka, P Preiss, JD Marshall, *et al*. "Development of Consensus Characterization Factors for Primary and Secondary Particulate Matter". Society of Environmental Toxicology and Chemistry (SETAC) North America Annual Meeting. November 11–15, 2007. Milwaukee, WI. And, SETAC Europe Annual Meeting, Warsaw, Poland, May 25–29, 2008.

18. M Brauer, C Lencar, L Tamburic, JD Marshall, *et al*. "The Impact of Woodsmoke, Point Sources and Traffic-related Air Pollution on Intrauterine Growth Retardation (IUGR)". ISEE Annual Meeting, Mexico City, Mexico, September 5–9, 2007.

17. JD Marshall. "Environmental Equality and Environmental Justice: Exposure to Air Pollution in California's South Coast". ISEE, Mexico City, Mexico, September 5–9, 2007.

16. JD Marshall, E Nethery, C Lencar, M Brauer. "Accounting for Intra-urban Variability in Outdoor Air Concentrations: Estimating Exposures Using Monitoring Station Data and Land-Use Regression Models". ISEA/ISEE. September 2–6, 2006. Paris, France. Abstract published in *Epidemiology*, 17(6): S473–474. November 2006.

15. JD Marshall. "U.S. Urban-scale Intake Fraction of Motor Vehicle Emissions: Trends During 1950 – 2000". ISEA/ISEE. September 2–6, 2006. Paris, France. Abstract published in *Epidemiology*, 17(6): S31. November 2006.

14. D Westerdahl, S Fruin, JD Marshall, PL Fine, *et al.* "Fine and Ultrafine Particles in Jakarta, Indonesia." Asian Aerosol Conference, Mumbai, India, December 13–16, 2005.

13. D Westerdahl, JD Marshall, S Fruin, B Haryanto. "Assessing Micro-environmental and Personal Exposures to Carbon Monoxide and Fine and Ultrafine Particles in Jakarta, Indonesia." Asian Aerosol Conference, Mumbai, India, December 13–16, 2005.

12. JD Marshall, PW Granvold, AS Hoats, TE McKone, *et al.* "Mobility, Demographics, and Air Pollutant Exposure." Coordinating Research Council Mobile Source Air Toxics Workshop, Scottsdale, AZ, December 1–2, 2004.

11. JD Marshall, PW Granvold, AS Hoats, TE McKone, *et al.* "Mobility, Demographics, and Air Pollutant Exposure." ISEA, Philadelphia, PA, October 18–21, 2004.

10. JD Marshall. "'Smart Growth,' Infill Development, and Health." U.C. Toxic Substances Research & Teaching Program Annual Conference, San Diego, CA, April 23–24, 2004.

9. MW Toffel, JD Marshall. "Assessing Environmental Performance with Chemical Release Inventories." International Conference of the Greening of Industry Network, San Francisco, CA, October 12–15, 2003.

8. JD Marshall, TE McKone, EA Deakin, WW Nazaroff. "The Relationship between Land Use Patterns and Human Exposure to Motor Vehicle Emissions." ISEA. September 21–25, 2003. Stressa, Italy.

7. MC DeSimone, TE McKone, JD Marshall. "How Source Location, Population Distribution, and Pollutant Travel Distance Affect Exposure Estimates for Pollution

Prevention." August 11–15, 2002. Vancouver, Canada. ISEA/ISEE. Abstract published in *Epidemiology*, 13(4): 204. July 2002.

6. JD Marshall, WJ Riley, TE McKone, WW Nazaroff. "Population, Proximity, and Persistence: Incorporating Exposure into Life-cycle Assessment." (LBNL-53038 Abs.). August 11–15, 2002. Vancouver, Canada. ISEA/ISEE. Abstract published in *Epidemiology*, 13(4): 205. July 2002.

5. MC DeSimone, TE McKone, JD Marshall. "Health Impact Calculations for Life-cycle Impact Assessment Based on Source Location, Population Distribution, and Characteristic Travel Distance." SETAC Europe Annual Meeting, Vienna, Austria, May 12–16, 2002.

4. JD Marshall, T Kyosai, C Poomontree, M Kane, *et al.* "The 10 or 20 Million Dollar Question: Can Airlines Recycle Their Aluminum Beverage Cans?" International Society for Industrial Ecology, Leiden, the Netherlands, November 12–14, 2001.

3. JD Marshall, WJ Riley, TE McKone, WW Nazaroff. "Exposure to Motor Vehicle Emissions: a Dose Fraction Approach." ISEA, Charleston, SC, November 4–8, 2001.

2. SR Hayes, JD Marshall, "Designing Optimal Strategies to Attain the New US Particulate Matter Standards: Some Initial Concepts." Air & Waste Management Association International Specialty Conference on PM2.5, Long Beach, CA, January 28–30, 1998.

1. JD Marshall, BW Shimada, PR Jaffe, "Effect of Temporal Variability in Infiltration on Contaminant Transport in the Unsaturated Zone." Spring meeting of the American Geophysical Union, Baltimore, MD, May 20–24, 1996.

Professional society memberships.

International Society of Environmental Epidemiology, 2007-present

Other

GRADUATE STUDENTS

Chaired Doctoral Degrees

- Matthew Bechle, PhD in Environmental Engineering, 2021. Current position: Air Monitoring Specialist, Washington State Department of Ecology, Seattle, WA.
- Maninder Thind, PhD in Environmental Engineering, 2020. Current position: Air Resources Engineer, California Energy Commission, Sacramento, CA.
- Lara Clark, PhD in Environmental Engineering, 2018, Current position: Researcher, National Institute of Environmental Health Sciences (NIEHS), National Institute of Health (NIH), Durah, NC.
- Steve Hankey, PhD in Environmental Engineering, 2014, Current position: Associate Professor at Virginia Tech. Blacksburg, VA.
- Christopher Tessum, PhD in Environmental Engineering, 2014, Current position: Assistant Professor at University of Illinois at Urbana-Champaign. Champaign, Illinois.

Current Doctoral Students

- Bujin Bekbulat
- Jiawen Liu
- Yuzhou Wang

Chaired Masters Degrees

- Eric Svingen, MS in Civil Engineering, 2014, Position upon graduation: Environmental Engineer at US Environmental Protection Agency. Chicago, IL.
- Srinidhi Murali, MS in Mechanical Engineering, 2014, Position upon graduation: Building Information Designer at Permasteelisa North America. Minneapolis, MN.
- Nam Nguyen, MS in Civil Engineering and Masters in Urban and Regional Planning. 2014, Position upon graduation: Staff Engineer at Liesch Associates, A Terracon Company. St Paul, MN.
- Nik Boeke, MS in Civil Engineering. 2012, Position upon graduation: Research Analyst at Minnesota Pollution Control Agency. St Paul, MN.
- Adam Both, MS in Civil Engineering. 2012. Master's thesis: "PM2.5 Concentration in Low- and Middle-Income Neighborhoods in Bangalore, India" (link), Position upon graduation: Environmental Engineer at Leggette, Brashears & Graham. Madison, WI.
- Katie Swor, née Lundquist, MS in Civil Engineering. 2010. Master's research: "Air Quality Engineering to Reduce Environmental Injustice: Diesel PM2.5 in Southern California", Position upon graduation: Environmental Engineer at Wenck Associates. Maple Plain, MN.
- Ryan Wilson, MS in Civil Engineering and Masters in Urban and Regional Planning. 2007, Master's thesis: "Effect of Education Policy and Urban Form on Elementary-age School Travel". Position upon graduation: Planning Engineer at Minnesota Department of Transportation. Minneapolis, MN.

Current Masters Students

Other significant student supervision

Committee membership

- Magali Blanco, PhD committee, UW, 2020.
- Claire Schollaert, PhD committee, UW, 2020.
- Sumil Thakrar, PhD committee, UMN, 2020.

Undergraduate researchers

- Kathryn McLaughlin, Darin Avila, Julia Kashimura, summer 2020, Princeton Internships in Civil Service, Topic: US InMAP PM2.5 environmental justice modeling project.
- Lexie Garrity, summer 2017, Topic: US NO2 environmental justice data project.
- Cheng Ni, summer 2017, Topic: Software development for ultra-low cost monitors for Black Carbon.
- Chris Space, 2016-2017, Topic: Ultra-low-cost monitors for Black Carbon.

RESEARCH ACTIVITIES

Funded Research

Funding Agency	***Title***	**Your role with other PI's and co-PI's**	**Total Amount, Your Amount, (Subcontracts if any, University Matching if any)**	**Dates (start - finish)**
Tides Foundation	*InMAP Air Quality Modeling*	PI	$320, 000	04/01/2021 – 03/31/2027
Bay Air Area Quality Management District	*Application of the Intervention Model for Air Pollution (InMAP) in the San Francisco Bay Area*	PI	$418, 000	08/01/2021 – 12/31/2023
NIH	*Air Pollution Exposures in Early Life and Brain Development in Children*	Co-PI (PI, Benk-Nuget)	Annual Direct Costs: $520,185	06/01/2020-05/31/2025
US EPA – Air Climate & Energy	Center for Air, Climate, and Energy Solutions (CASES)	Dual-PI (other dual-PI: Allan Robinson)	Total amount $10M, my amount $1.7M	05/01/2016 - 04/30/2021
NSF	*S&CC-IRG Track 1: Connecting the Smart-City Paradigm with a Sustainable Urban Infrastructure Systems Framework to advance Equity in Communities*	Co-PI (PI, Shekhar)	Total amount $2,492,152, my amount $428,914	09/01/2017 - 08/31/2021
NIH	*Air Pollutants and Cardiovascular Risk: Investigating Thresholds with Pooled Cohorts and Electronic Health Records*	Co-PI (PI, Kaufman)	Total amount $3,248,792, my amount $62,522	09/01/2017 - 08/31/2021
China Scholarship Council	Stipend for PhD student, Fang Guo, from Tsinghua University.		Total amount $22,800	10/01/2019-09/30/2020
US EPA	*Experimental interventions to facilitate clean cookstove adoption, promote*	Co-PI (PI, Rob Bailis)	Total amount $1.5M	2013-2019

	clean indoor air, and mitigate climate change			
NSF	*SRN: Integrated Urban Infrastructure Solution for Sustainable, Healthy and Livable Cities*	Co-PI (PI, Anu Ramaswami)	Total amount $12M	2014– 2018
European Research Council	*Cardiovascular health effects of particulate air pollution in Andhra Pradesh, India*	Collaborator	Total amount €1.4M	2014-2018
NSF	*Air pollution, environmental justice, and urban form*	PI	Total amount $310k, my amount: 100%	2013-2016
Global Programs and Strategies Alliance, University of Minnesota	*Urbanization and exposure to air pollution (Hyderabad, India)*	PI	Total amount $75,000, my amount 100%	2012-2014
Discovery Grant, Institute on the Environment, University of Minnesota	*Stove change-out: A 'win-win-win' for development, environment, and health?*	PI	Total amount $300,000 my amount 100%	2011-2013
UMN Institute for Renewable Energy and the Environment	*Air pollution impacts of conventional and alternative fuels: a spatial and temporal life cycle analysis decision support tool*	PI (Co-PI: JD Hill, Ecology / Applied Economics, University of Minnesota)	Total amount $599,786	2009-2014
Canadian Institutes of Health Research (CIHR)	*The Bridge Program: CIHR Strategic Training Program bridging public health, engineering and policy research*	Co-PI (2 PIs, 53 co-Investigators.)	Total amount CND$19 million	2009-2014
SLPP TechPlan, ITS Institute,	*Smartphone-based travel experience sampling*	Co-PI (PI, Yingling Fan)	Total amount $578,000	2011-2012

University of Minnesota	*(UbiHappy Phase I): Transportation, health, and happiness*			
NSF	*Air pollution and urban form: evidence from satellite data*	PI	Total amount $199,970, my amount 100%	2009-2011
National Collegiate Inventors and Innovators Alliance	*The Acara Summer Institute for High Impact Businesses*	PI	Total amount $20,500, my amount 100%	2009-2011
EPA	*Impact of emission reductions on exposures and exposure distributions: application of a geographic exposure model*	PI	Total amount $459,276, my amount 100%	2007-2011
University of Minnesota Intelligent Transportation Systems / State and Local Policy Program / Center for Transportation Studies	*Decision tools for assessing transportation impacts of school policy and school choice*	Co-PI	Total amount $78,400	2008-2010
The Energy Foundation, Beijing	*Comparing GHG emissions and health impacts of emissions of traditional pollutants from electric and traditional motorized transport modes in China*	Co-PI (PI, C. Cherry, Civil & Environmental Engineering, University of Tennessee.)	Total amount $78,812	2008-2009
University of Minnesota Grant-in-Aid	*Urban environmental health: air pollution in Bangalore, India*	PI	Total amount $39,898, my amount 100%	2008-2009
Minnesota State Legislature	*Assessment of transportation policy and*	Co-PI	Total amount $300k	2007-2008

	technology options to reduce greenhouse gas emissions in Minnesota			
University of Minnesota Intelligent Transportation Systems / State and Local Policy Program / Center for Transportation Studies	*School travel and the implications for advances in transportation related technology*	Co-PI	Total amount $97,400	2007-2008

Pending Proposals

Funding Agency	***Title***	**Your role with other PI's and co-PI's**	**Total Amount, Your Amount, (Subcontracts if any, University Matching if any)**	**Dates (start - finish)**

DOCUMENTATION OF TEACHING EFFECTIVENESS

Courses Taught & Student Evaluations

Course	**Title**	**Quarter**	**Credit Hrs**	**Enrollment**	**Evaluations? Response**	**Item 1**	**Item 3**	**Item 4**	**Overall Adj. Median**
CEE 498 E	Civil & Env Engineering for Justice, Equity, Diversity, & Inclusion	Winter 2022	2		(class planned)				
CEE 480 / ATM S 480	Air-quality Modeling	Fall 2021	3	23	(class in progress)				
CEE 498 E / CEWA 599A-B	Civil & Env Engineering for Justice, Equity, Diversity, & Inclusion	Spring 2021 (COVID)	1	27	Yes, 16/27	4.6	4.3	4.0	4.0

CEE 480 / ATM S 480	Air-quality Modeling	Fall 2020 (COVID)	3	24	Yes, 8/23	2.8	2.4	2.3	2.7
GCIL-India	Grand Challenges Impact Lab – Bangalore, India	Winter 2020	15	28					
CEE 498 B	Special Topics – GCIL pre-departure	Fall, 2019	1	22	Yes, 2/22	4.1	4.6	4.1	4.3
CEWA 557	Air Resources Management	Fall, 2019	3	6	Yes, 3/6	4.3	4.3	4.3	4.3
CEE 498/ CEE 599	Special Topics/Grand Challenges Impact Lab	Fall, 2018	15	16	Yes, 3/15	4.5	4.5	4.5	4.5
CEE 498/CEE 599	Special Topics/Grand Challenges Impact Lab	Fall, 2017	15	16					

SERVICE

Departmental service

Committee/Activity	Role/Contribution	Dates
Executive Committee	Member	09/2021 – 6/2022
Associate Chair		09/2020 – 6/2022
Diversity, Equity, Inclusion and Culture Committee	Co-Chair	09/2020 – 6/2022
Undergraduate Education Committee	Member	2017-2020
Assistant Professorship Search Committee	Member	11/2016-4/2017

College service

Committee/Activity	Role/Contribution	Dates
Strategic Planning Steering Committee	Member	10/2020 – 05/2021
Strategic Planning Steering Committee - “CoE: A Powerful Engine for Public Good” subcommittee	Co-chair	10/2020 – 05/2021

University service

Committee/Activity	Role/Contribution	Dates
Grand Challenges Impact Lab	Director	9/2016 – present
Population Health Initiative	Executive Council	8/2017 – 08/2020
Chair Review Committee, Department of Environmental and Occupational Health Sciences	Member	9/2019 – 2/2020

Journal editorships, other outside service

- Associate Editor, Development Engineering (2015–2023)
- Associate Editor, Environmental Health Perspectives (2016–2020)
- Science Advisory Committee, Harvard/MIT center on Air, Climate, and Energy (2016-2022)
- External Advisory Committee, MIT Superfund Program (2018-2021)