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EDUCATION

UNIVERSITY OF MICHIGAN, ANN ARBOR

Research Fellow, Departments of Environmental Health Sciences and Epidemiology 2012
(Advisors: Drs. Marie O'Neill and Sara Adar)

UNIVERSITY OF MICHIGAN, ANN ARBOR

Ph.D., Department of Environmental Health Sciences 2010

Dissertation: "Exposures and Health Risks due to Traffic Congestion" (Advisor: Dr. Stuart Batterman)

M.A., Department of Statistics 2009

TSINGHUA UNIVERSITY, Beijing, China

M.S., Department of Environmental Science and Engineering 2002

SOUTHEAST UNIVERSITY, Nanjing, China

B.S. with honors, Department of Environmental Engineering; minor in Accounting 1998

EDUCATIONAL EMPLOYMENT

UNIVERSITY AT ALBANY, STATE UNIVERSITY OF NEW YORK

Empire Innovation Associate Professor, Environmental Health Sciences 2021 – present

UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON

Dept. of Epidemiology, Human Genetics and Environmental Sciences

Associate Professor 2020

Assistant Professor 2012 – 2020

Assistant Professor (secondary appointment), Dept. of Biostatistics and Data Science 2015 – 2020

PEER-REVIEWED PUBLICATIONS (*, corresponding author; __, mentored students)

84. Lin S, Deng X, Zhang W, Ryan I, **Zhang K**, Oghaghare E, Bennett D, Shaw B. COVID-19 Symptoms and Deaths Among Health Care Workers in the United States. Accepted by Emerging Infectious Diseases.
83. Wang B, Liu J, Lei R, Xue B, Li Y, Tian X, **Zhang K***, Luo B*. Cold exposure, gut microbiota, and hypertension: A mechanistic study. Science of The Total Environment. 2022:155199.
82. Egbert J, Krenz J, Sampson PD, Jung J, Calkins M, **Zhang K**, Palmández P, Faestel P, Spector JT. Accuracy of an estimated core temperature algorithm for agricultural workers. Archives of Environmental & Occupational Health. 2022:1-10.
81. He L, Xue B, Wang B, Liu C, Gimeno D, Delclos GL, Hu M, Luo B*, **Zhang K***. Impact of high, low, and non-optimum temperatures on chronic kidney disease in a changing climate, 1990–2019: A global analysis. Environ Res. 2022;212:113172.
80. Xue B, Wang B, Lei R, Li Y, Luo B*, Yang A*, **Zhang K***. Indoor solid fuel use and renal function among middle-aged and older adults: A national study in rural China. Environ Res. 2022;206:112588.
79. Miao L, Liu C, Yang X, Kwan M-P, **Zhang K**. Spatiotemporal heterogeneity analysis of air quality in the

Yangtze River Delta, China. *Sustainable Cities and Society*. 2022;78:103603.

78. Luo L, Bai X, Liu S, Wu B, Liu W, Lv Y, Guo Z, Lin S, Zhao S, Hao Y, Hao J, **Zhang K**, Zheng A, Tian H. Fine particulate matter (PM_{2.5}/PM_{1.0}) in Beijing, China: Variations and chemical compositions as well as sources. *Journal of Environmental Sciences*. 2022;121:187-98.
77. Li H, Li M, Zhang S, Qian Z, Zhang Z, **Zhang K**, Wang C, Arnold LD, McMillin SE, Wu S, Tian F, Lin H. Interactive effects of cold spell and air pollution on outpatient visits for anxiety in three subtropical Chinese cities. *Science of The Total Environment*. 2022;817:152789.
76. Su W, Lee J, Xi J, **Zhang K**. 2022. Investigation of Mask Efficiency for Loose-fitting Masks against Ultrafine Particles and Effect on Airway Deposition Efficiency. *Aerosol and Air Quality Research* 22: 210228.
75. Liu S, Tian H, Luo L, Bai X, Zhu C, Lin S, Zhao S, **Zhang K**, Hao J, Guo Z, Lv Y. 2022. Health impacts and spatiotemporal variations of fine particulate and its typical toxic constituents in five urban agglomerations of China. *Science of The Total Environment* 806 (4): 151459.
74. Zhao H*, Shen J, Chang D, Ye Y, Wu X, Chow WH, **Zhang K***. 2021 Land Use Mix and Leukocyte Telomere Length in Mexican Americans. *Scientific Reports* 11(1): 19742
73. Liu S, Tian H, Bai X, Zhu C, Wu B, Luo L, Hao Y, Liu W, Lin S, Zhao S, Wang K, Liu K, Gao J, Zhang Q, **Zhang K**, Kan K, Liu Y, Hao J. 2021. Significant but Spatiotemporal-Heterogeneous Health Risks Caused by Airborne Exposure to Multiple Toxic Trace Elements in China. *Environmental Science & Technology* 55 (19): 12818-12830.
72. Joyce B, Gao T, Koss K, Zheng Y, Cardenas A, Heiss J, Just A, **Zhang K**, van Horn L, Allen N, Greenland P, Cohen S, Gordon-Larsen P, Mitchell C, McLanahan S, Schneper L, Notterman D, Rifas-Shiman S, Oken E, Hivert M, Wright R, Baccarelli A, Lloyd-Jones D, Hou L. 2021. Impact of paternal education on epigenetic ageing in adolescence and mid-adulthood: a multi-cohort study in the USA and Mexico. *International Journal of Epidemiology*: <https://doi.org/10.1093/ije/dyab196>
71. Lanza K, Alcazar M, Ehlers S, Durand C, **Zhang K**, Kohl H. 2021 *School Parks as a Community Health Resource: Use of Joint-Use Parks by Children before and during COVID-19 Pandemic*. *International Journal of Environmental Research and Public Health* 18: 9237.
70. Cianconi P, Hanife B, Grillo F, **Zhang K**, Janiri L. *Human Responses and Adaptation in a Changing Climate: A Framework Integrating Biological, Psychological and Behavioural Aspects*. *Life* 11, 895. <https://doi.org/10.3390/life11090895>.
69. Wang B, Wang S, Li L, Xu S, Li C, Li S, Wang J, He H, Niu J, **Zhang K**, Luo B. 2021. *The association between drought and outpatient visits for respiratory diseases in four northwest cities of China*. *Climatic Change* 167, 2: doi.org/10.1007/s10584-021-03152-7.
68. Liu C, Wang B, Liu S, Li S, **Zhang K**, Luo B, Yang A. 2021. *Type 2 diabetes attributable to PM_{2.5}: A global burden study from 1990 to 2019*. *Environment International* 156: 106725.
67. Xu X, Qin N, Qi L, Zou B, Cao S, **Zhang K**, Yang Z, Liu Y, Zhang Y, Duan X. 2021. *Development of season-dependent land use regression models to estimate BC and PM₁ exposure*. *Science of Total Environment* 793: 148540.
66. Fu S, Wang B, Zhou J, Xu X, Liu J, Ma Y, Li L, He X, Li S, Niu J, Luo B, **Zhang K**. 2021. *Meteorological factors, governmental responses and COVID-19: Evidence from four European countries*. *Environmental Research* 194: 110596. PMID: 33307083
65. Luo L, Tian H, Tian H, Liu H, Bai X, Liu W, Liu S, Wu B, Lin S, Zhao S, Hao Y, Sun Y, Hao J, **Zhang K**. 2021. *Seasonal variations in the mass characteristics and optical properties of carbonaceous constituents of PM_{2.5} in six cities of North China*. *Environmental Pollution* 268: 115780.
64. Li Z, Xu T, **Zhang K**, Deng H, Boerwinkle E, Xiong M. 2020. *Causal Analysis of Health Interventions and Environments for Influencing the Spread of COVID-19 in the United States of America*. *Frontiers in Applied Mathematics and Statistics*: [doi: 10.3389/fams.2020.611805](https://doi.org/10.3389/fams.2020.611805).

63. He X, Zhou G, Ma Y, Li L, Fu S, Liu S, Liu C, He Y, Su Z, Liu J, Niu J, Zhu W, **Zhang K**, Luo B. 2020. *Winter vacation, indoor air pollution and respiratory health among rural college students: A case study in Gansu Province, China*. Building and Environment: doi.org/10.1016/j.buildenv.2020.107481
62. O'Lenick C, Baniassadi A, Michael R, Monaghan A, Boehnert J, Yu X, Hayden M, Wiedinmyer C, **Zhang K**, Crank P, Heusinger J, Hoel P, Sailor D, Wilhelmi O. 2020. *A case-crossover analysis of indoor heat exposure on mortality and hospitalizations among the elderly in Houston, Texas*. Environmental Health Perspective 128(12): 127007.
61. Wang B, Liu J, Li Y, Fu S, Xu X, Li L, Zhou J, Liu X, He X, Yan J, Shi Y, Niu J, Yang Y, Li Y, Luo B, **Zhang K**. 2020. *Airborne particulate matter, population mobility and COVID-19: a multi-city study in China*. BMC Public Health. 20:1585. doi: 10.1186/s12889-020-09669-3. PMCID: PMC7576551.
60. Zhao H*, Shen J, Leung E, Zhang X, Chow WH, **Zhang K***. 2020. *Leukocyte mitochondrial DNA copy number and built environment in Mexican Americans: a cross-sectional study*. Scientific Reports 10: 14988. PMID: 32917938 PMCID: PMC7486918.
59. Li Y, Bakos-Block C, Rammah A, Magal, R, Adekanye J, Esquenazi S, McDaniel MR, **Zhang K**, Symanski E, Perkison WB, 2020. *The Post Hurricane Harvey Respiratory Protection Training Program*. Journal of Occupational and Environmental Medicine. 62(10):842-846. PMID: 32769779
58. Li Z, **Zhang K**, Xu T, Deng HW, Boerwinkle E, Xiong M. 2020. *Evaluation of Various Health Interventions to Curb the Spread of COVID-19 in the United States of America*. Epidemiology International Journal 4(4): 000157.
57. Liu J, Zhou J, Yao J, Zhang X, Li L, Xu X, He X, Wang B, Fu S, Niu T, Yan J, Shi Y, Ren X, Niu J, Zhu W, Li S, Luo B*, **Zhang K***, 2020. *Impact of meteorological factors on the COVID-19 transmission: A multi-city study in China*. Science of Total Environment 726(15): 138513. PMID: 32304942 PMCID: PMC7194892.
56. Fang S, Hu Z, Xu T, Zhang K, Li S, Lee J, Xiong M. 2020. *Mass testing and containment of COVID-19*. Journal of Emergency Medicine Trauma & Surgical Care S1001.
55. Chido-Amajuoyi OG, Ozigbu C, **Zhang K**. 2020. *School proximity and census tract correlates of e-cigarette specialty retail outlets (vape shops) in Central Texas*. Preventive Medicine Reports 18: 101079. DOI:10.1016/j.pmedr.2020.101079. PMID: 32257777 PMCID: PMC7115100.
54. Yang Y, Li S, **Zhang K**, Xiang X, Li Z, Ahn S, Murphy J. 2020. *How the Daily Smartphone is Associated With Daily Travel, Physical Activity, and Self-Perceived Health: Evidence From 2017 National Household Travel Survey*. Journal of Aging and Physical Activity: 1-9. PMID: 32434149. DOI: 10.1123/japa.2019-0222.
53. Liu X, Bai X, Tian H, Wang K, Hua S, Liu H, Liu S, Wu B, Wu Y, Liu W, Luo L, Wang Y, Hao J, Lin S, Zhao S, **Zhang K**. 2020. *Fine particulate matter pollution in North China: Seasonal-spatial variations, source apportionment, sector and regional transport contributions*. Environmental Research 184 (2020): 109368. PMID: 32192990.
52. Wu Y, Lin S, Tian H, **Zhang K**, Wang Y, Sun B, Liu X, Liu K, Xue Y, Hao J, Liu H, Liu S, Shao P, Luo L, Bai X, Liu W, Wu B, Zhao S. 2020. *A quantitative assessment of atmospheric emissions and spatial distribution of trace elements from natural sources in China*. Environmental Pollution 259:113918. PMID: 32023794 DOI: doi.org/10.1016/j.envpol.2020.113918.
51. Zhang X, Zhao H, Chow WH, Bixby M, Durand C, Markham C, **Zhang K***. 2020. *Population-Based Study of Traffic-Related Air Pollution and Obesity in Mexican Americans*. Obesity 28(2): 412-420. DOI: doi.org/10.1002/oby.22697. PMID: 31797571.
50. Li Q, Qiao F, McCreight C, Mao A, **Zhang K**. 2020. *Impact of Weaving Segment Configuration Designs on Drivers' Acute Driving Stress: A Case Study on Houston Freeway Weaving Segments*. International Journal of Civil Engineering 18:641-653. DOI: 10.1007/s40999-020-00497-5.
49. Delclòs-Alió X, Marquet O, Vich G, Schipperijn J, **Zhang K**, Maciejewska M, Miralles-Guasch C. 2019 *Temperature and Rain Moderate the Effect of Neighborhood Walkability on Walking Time for Seniors in Barcelona*. International Journal of Environmental Research and Public Health. 17(1):14. DOI:

10.3390/ijerph17010014. PMID: 31861363 PMCID: PMC6981853.

48. Mantravadi S, **Zhang K**. 2019. *Quality of Nursing Home: Spatial Patterns in Southwestern United States*. Journal of Strategic Innovation and Sustainability 14(5): 62-75 DOI:doi.org/10.33423/jsis.v14i5.2522.
47. Nannini D, Joyce B, Zheng Y, Gao T, Liu L, Yoon G, Huan T, Ma J, Jacobs D, Wilkins J, Ren J, **Zhang K**, Khan S, Allen N, Horvath S, Lloyd-Jones D, Greenland P, Hou L. 2019. *Epigenetic age acceleration and metabolic syndrome in the Coronary Artery Risk Development in Young Adults Study*. Clinical Epigenetics 11, 160. PMID: 31730017 PMCID: PMC6858654 DOI:doi.org/10.1186/s13148-019-0767-1.
46. Brown P, **RELISH Consortium**, Zhou Y. 2019. *Large expert-curated database for benchmarking document similarity detection in biomedical literature search*. Database: The Journal of Biological Databases and Curation. 2019: baz085. DOI:10.1093/database/baz085.
45. Liu J, Ma Y, Wang Y, Li S, Liu S, He X, Li L, Guo L, Niu J, Luo B, **Zhang K**. 2019. *The Impact of Cold and Heat on Years of Life Lost in a Northwestern Chinese City with Temperate Continental Climate*. International Journal of Environmental Research and Public Health 16(19): 3529. PMID: 31547211 PMCID: PMC6801473.
44. Liu S, Zhu C, Tian H, Wang Y, **Zhang K**, Wu B, Liu X, Hao Y, Liu W, Bai X, Lin S, Wu Y, Shao P, Liu H. 2019. *Spatiotemporal variations of ambient concentrations of trace elements in a highly polluted region of China*. Journal of Geophysical Research: Atmospheres 124: 4186–4202 DOI: doi.org/10.1029/2018JD029562.
43. Liu H, Tian H, **Zhang K**, Liu S, Cheng K, Yin S, Liu Y, Liu X, Wu Y, Liu W, Bai X, Wang Y, Shao P, Luo L, Lin S, Chen J, Liu X. 2019. *Seasonal variation, formation mechanisms and potential sources of PM_{2.5} in two typical cities in the Central Plains Urban Agglomeration, China*. Science of the Total Environment 657: 657-670. PubMed PMID: 30677932.
42. Tong W, Li L, Zhou X, Hamilton A, **Zhang K**. 2019. *Deep learning PM_{2.5} concentrations with bidirectional LSTM RNN*. Air Quality, Atmosphere & Health 12(4):411-423. DOI: 10.1007/s11869-018-0647-4.
41. Chen T, Du X, Chan WY, **Zhang K***. 2019. *Impacts of cold weather on emergency hospital admission in Texas, 2004-2013*. Environmental Research[▲] 169: 139-146. PubMed PMID: 30453131.
40. Zhang X, Zhao H, Chow WH, Durand C, Markham C, **Zhang K***. 2019. *Associations between the built environment and body mass index in the Mexican American Mano A Mano cohort*. Science of the Total Environment[▲] 654: 456-462. PubMed PMID: 30447584.
39. GBD 2017 Risk Factor Collaborators. 2018. *Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017*. The Lancet[▲] 392(10159): 1923-1994. PubMed PMID: 30496105; PubMed Central PMCID: PMC6227755.
38. GBD 2017 Disease and Injury Incidence and Prevalence Collaborators. 2018. *Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017*. The Lancet[▲] 392(10159): 1789-1858. PubMed PMID: 30496104; PubMed Central PMCID: PMC6227754.
37. GBD 2017 Causes of Death Collaborators. 2018. *Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980-2017: a systematic analysis for the Global Burden of Disease Study 2017*. The Lancet[▲] 392(10159): 1736-1788. PubMed PMID: 30496103; PubMed Central PMCID: PMC6227606.
36. GBD 2017 Mortality Collaborators. 2018. *Global, regional, and national age-sex-specific mortality and life expectancy, 1950-2017: a systematic analysis for the Global Burden of Disease Study 2017*. The Lancet[▲] 392(10159): 1684-1735. PubMed PMID: 30496102; PubMed Central PMCID: PMC6227504.
35. Nnoli N, Linder S, Smith M, Gretchen G, **Zhang K**. 2018. *The combined effect of ambient ozone exposure and toxic air releases on hospitalization for asthma among children in Harris County, Texas*. International Journal of Environmental Health Research, 28(4): 358-378. PubMed PMID: 29962221.
34. Zhang X, Chu Y, Wang Y, **Zhang K***. 2018. *Predicting daily PM_{2.5} concentrations in Texas using*

- high-resolution satellite aerosol optical depth*. *Science of the Total Environment*▲ 631-632: 904-911. PubMed PMID: 29728001.
33. Acharya P, Boggess B, **Zhang K***. 2018. *Assessing heat stress and health among construction workers in a changing climate: A review*. *International Journal of Environmental Research and Public Health*▲ 15(2): 247. PubMed PMID: 29389908; PubMed Central PMCID: PMC5858316.
 32. Durand C, **Zhang K**, Salvo D. 2017. *Weather is not significantly correlated with destination-specific transport-related physical activity among adults: A large-scale temporally matched analysis*. *Preventive Medicine*▲ 101:133-136. PubMed PMID: 28576399; PubMed Central PMCID: PMC5551438.
 31. Zhang X, Craft E, **Zhang K***. 2017 *Characterizing Spatial Variability of Air Pollution from Vehicle Traffic around the Houston Ship Channel Area*. *Atmospheric Environment*▲ 161: 167–175. DOI: 10.1016/j.atmosenv.2017.04.032.
 30. Chen T, Li X, Zhao J, **Zhang K***. 2017. *Impacts of cold weather on all-cause and cause-specific mortality in Texas, 1990-2011*. *Environmental Pollution*▲ 225: 244-251. PubMed PMID: 28390302.
 29. Luong C, **Zhang K***. 2017. *An Assessment of Emissions Events Trends within the Greater Houston Area during 2003-2013*. *Air Quality, Atmosphere & Health*▲ 10(5): 543–554. DOI: 10.1007/s11869-016-0449-5
 28. Danysh H, Mitchell L, **Zhang K**, Scheurer M, Lupo P. 2017. *Differences in environmental exposure assignment due to residential mobility among children with a central nervous system tumor: Texas, 1995-2009*. *Journal of Exposure Science And Environmental Epidemiology*▲ 27: 41–46. PubMed PMID: 26443468.
 27. Liu S, Ganduglia C, Li X, Delclos G, Franzini L, **Zhang K***. 2016. *Short-term Associations of Fine Particulate Matter Components and Emergency Hospital Admissions among a Privately Insured Population in Greater Houston*. *Atmospheric Environment*▲ 147: 369-375. DOI: 10.1016/j.atmosenv.2016.10.021.
 26. Hou L**, **Zhang K****, Luthin M, Baccarelli A**. 2016. *Public Health Impact and Economic Costs of Volkswagen's Lack of Compliance with the United States' Emission Standards*. *International Journal of Environmental Research and Public Health* 13(9): 891 (** equal contribution). PubMed PMID: 27618076; PubMed Central PMCID: PMC5036724.
 25. Liu S, Ganduglia C, Li X, Delclos G, Franzini L, **Zhang K***. 2016. *Fine Particulate Matter Components and Emergency Department Visits among a Privately Insured Population in Greater Houston*. *Science of the Total Environment*▲ 566–567:521–527. PubMed PMID: 27235902.
 24. Liu Z, **Zhang K**, Du X. 2016. *Risks of developing breast and colorectal cancer in association with incomes and geographic locations in Texas: a retrospective cohort study*. *BMC Cancer*▲ 16(1):294. PubMed PMID: 27118258; PubMed Central PMCID: PMC4847204.
 23. Chien L, Guo Y, **Zhang K***. 2016. *Spatiotemporal analysis of heat and heat wave effects on elderly mortality in Texas, 2006-2011*. *Science of the Total Environment*▲ 562:845-851. PubMed PMID: 27110995.
 22. **Zhang K***, Arauz R, Chen T, Cooper S. 2016. *Heat effects among migrant and seasonal farmworkers: A case study in Colorado*. *Occupational and Environmental Medicine*▲ 73(5):324-328. PubMed PMID: 26872487.
 21. Danysh H, **Zhang K**, Mitchell L, Scheurer M, Lupo P. 2016. *Maternal residential proximity to major roadways at delivery and Childhood central nervous system tumors*. *Environmental Research*▲ 146:315-322. PubMed PMID: 26802618.
 20. Xie Y, Wang Y, **Zhang K**, Dong W, Lv B, Bai Y. 2015. *Daily estimation of ground-level PM_{2.5} concentrations over Beijing using 3 km resolution MODIS AOD*, *Environmental Science & Technology*▲ 49(20): 12280-12288. PubMed PMID: 26310776.
 19. Liu S, **Zhang K***. 2015. *Fine particulate matter components and mortality in Greater Houston: Did the risk reduce from 2000 to 2011?* *Science of the Total Environment*▲ 538:162-168. PubMed PMID: 26311577.
 18. Yan F, Chu Y, **Zhang K**, Zhang F, Bhandari N, Ruan G, Dai Z, Liu Y, Zhang Z, Kan AT, Tomson MB. 2015. *Determination of adsorption isotherm parameters with correlated errors by measurement error models*.

Chemical Engineering Journal[▲] 281: 921-930. DOI: 10.1016/j.cej.2015.07.021.

17. Rivera-González L, Zhang Z, Sánchez B, **Zhang K**, Brines S, Brown D, Rojas-Bracho L, Osornio-Vargas A, Vadillo-Ortega F, O'Neill M. 2015. *An assessment of air pollutant exposure methods in Mexico City, Mexico.* Journal of the Air & Waste Management Association[▲] 65(5): 581-591. PubMed PMID: 25947316; PubMed Central PMCID: PMC4670782.
16. Danysh H, Mitchell L, **Zhang K**, Scheurer M, Lupo P. 2015. *Traffic-related air pollution and the incidence of childhood central nervous system tumors: Texas, 2001-2009.* Pediatric Blood & Cancer[▲] 62(9):1572-8. PubMed PMID: 25962758.
15. **Zhang K***, Chen T, Begley C. 2015. *Impact of the 2011 heat wave on mortality and emergency department visits in Houston, Texas,* Environmental Health[▲] 14:11. PubMed PMID: 25627975; PubMed Central PMCID: PMC4417210.
14. Zhou W, Ji S, Chen T, Hou Y, **Zhang K***. 2014. *The 2011 heat wave in Greater Houston: Effects of land use on temperature,* Environmental Research[▲] 135: 81–87. PubMed PMID: 25262079.
13. **Zhang K***, Li Y, Schwartz J, O'Neill M. 2014. *What weather variables are important in predicting heat-related mortality? A new application of statistical learning methods,* Environmental Research[▲] 132: 350-359. PubMed PMID: 24834832; PubMed Central PMCID: PMC4091921.
12. **Zhang K***, Chen Y, Schwartz J, Rood R, O'Neill M. 2014. *Using forecast and observed weather data to assess performance of forecast products in identifying heat waves and estimating heat wave effects on mortality,* Environ Health Perspect[▲] 122(9): 912-918. PubMed PMID: 24833618; PubMed Central PMCID: PMC4154209.
11. **Zhang K***, Larson T, Gasset A, Szpiro A, Daviglius M, Burke G, Kaufman J, Adar S. 2014. *Characterizing spatial patterns of airborne coarse particulate (PM_{10-2.5}) mass and chemical components in three cities: The Multi-Ethnic Study of Atherosclerosis,* Environ Health Perspect[▲] 122(8): 823-830. PubMed PMID: 24642481; PubMed Central PMCID: PMC4123025.
10. White-Newsome J, Brines S, Brown D, Dvonch JT, Gronlund C, **Zhang K**, Oswald E, O'Neill M. 2013. *Validating satellite-derived land surface temperature with in-situ measurements: a public health perspective,* Environ Health Perspect[▲] 121(8):925-31. PubMed PMID: 23777856; PubMed Central PMCID: PMC3734495.
9. **Zhang K**, Batterman S. 2013. *Air pollution and health risks due to vehicle traffic,* Science of the Total Environment[▲] 450-451: 307-316. PMID: 23500830; PubMed Central PMCID: PMC4243514.
8. **Zhang K***, Rood R, Michailidis G, Oswald E, Schwartz J, Zanobetti A, Ebi K, O'Neill M. 2012. *Comparing exposure metrics for classifying 'dangerous heat' in heat wave and health warning systems,* Environment International[▲] 46(1): 23-29. PubMed PMID: 22673187; PubMed Central PMCID: PMC3401591.
7. Oswald E, Rood R, **Zhang K**, Gronlund C, O'Neill M, White-Newsome J, Brines S, Brown D. 2012. *An investigation into the spatial variability of near-surface air temperatures in the Detroit, MI metropolitan region,* Journal of Applied Meteorology and Climatology[▲], 51(7): 1290-1304. DOI:10.1175/JAMC-D-11-0127.1
6. **Zhang K***, Oswald E, Brown D, Brines S, Gronlund C, White-Newsome J, Rood R, O'Neill M. 2011. *Geostatistical exploration of spatial variation of summertime temperatures in the Detroit metropolitan region,* Environmental Research[▲] 111(8): 1046-1053. PubMed PMID: 21924413; PubMed Central PMCID: PMC4345124.
5. **Zhang K**, Batterman S, Dion F. 2011. *Vehicle emissions in congestion: comparison of work zone, rush hour and free-flow conditions,* Atmospheric Environment[▲] 45(11):1929-1939. DOI: 10.1016/j.atmosenv.2011.01.030.
4. Batterman S, **Zhang K**, Kononowech R. 2010. *Prediction and analysis of near-road concentrations using a reduced-form emission/dispersion model,* Environmental Health[▲] 9-29. PubMed PMID: 20579353; PubMed Central PMCID: PMC2914002.

3. **Zhang K**, Batterman S. 2010. *Near-road air pollutant concentrations of CO and PM_{2.5}: A comparison of MOBILE6.2/CALINE4 and generalized additive models*. Atmospheric Environment[▲] 44:1740-1748. DOI: 10.1016/j.atmosenv.2010.02.008
2. **Zhang K**, Batterman S. 2009. *Time allocation shifts and pollutant exposure due to traffic congestion: An analysis using the national human activity pattern survey*, Science of The Total Environment[▲] 407:5493-5500. PubMed PMID: 19683333.
1. Stevanovic A, Stevanovic J, **Zhang K**, Batterman S. 2009. *Optimizing traffic control to reduce fuel consumption and vehicular emissions: Integrated approach of VISSIM, CMEM, and VISGAOST*. Transportation Research Record. 2009; 2128(1):105-113

PEER-REVIEWED CONFERENCE PUBLICATIONS

5. Mantravadi S, **Zhang K**. 2017. *Using Geographic Information Systems to Capture Spatial Patterns in Nursing Home Quality in the Southwestern United States*. The Association of Business Information Systems's 2017 conference, March 8-11, 2017 in Little Rock, Arkansas.
4. Qiao F, **Zhang K**, Li Q, You B, Yu L. 2016. *Effects and Framework to Estimate Environmental and Public Health Impacts of Infill Development for Urban Planning*. The 2016 International Conference on Transportation and Development, June 26-29, 2016 in Houston, Texas.
3. **Zhang K**, Batterman S. 2009. *In-cabin Measurements of Traffic Related Air Pollutants in Ann Arbor, Michigan*. The Air & Waste Management Association's 102nd Annual Conference, June 16-19, 2009, in Detroit, MI.
2. **Zhang K**, Gronlund C, White-Newsome J, Brines S, Oswald E, O'Neill M, Rood R, Brown D, Parker E. 2009. *Exploring the Spatial Variability of Temperature in Wayne County, Michigan*. The Air & Waste Management Association's 102nd Annual Conference, June 16-19, 2009, in Detroit, MI.
1. Stevanovic A, Stevanovic J, **Zhang K**, Batterman S. 2009. *Optimizing Traffic Control to Reduce Fuel Consumption and Vehicular Emissions: An Integrated Approach of VISSIM, CMEM, and VISGAOST*. The Transportation Research Board 2009 Annual conference, January 11-15, 2009, in Washington, DC.

CONFERENCE PRESENTATIONS / POSTERS (__, metored students)

47. Garcia M, Allicock M, Jetelina K, **Zhang K**. 2020. *Protective or destructive? An investigation into the relationships between neighborhood gentrification, perceptions of community safety, and adolescent mental health*. American Public Health Association Annual Conference. October 24-28, San Francisco, CA
46. Liu B, **Zhang K**. 2020. *Identifying neighborhoods in greater need of intervention for hurricanes*. Clinical Climate Change Conference. January 24, 2020 in New York City.
45. O'Lenick CR, Baniassadi A, Michael R, Boehnert J, Yu X, Hayden MH, **Zhang K**, Monaghan A, Wiedinmyer C, Crank PJ, Heusinger J, Sailor DJ, Wilhelmi OV. 2019. *A case-crossover analysis of indoor heat exposure on mortality and hospitalizations among the elderly in Houston, Texas*. The 31st annual conference of the International Society for Environmental Epidemiology. August 2019 in Utrecht, the Netherlands.
44. O'Lenick CR, Baniassadi A, Michael R, Boehnert J, Yu X, Hayden MH, **Zhang K**, Monaghan A, Wiedinmyer C, Crank PJ, Heusinger J, Sailor DJ, Wilhelmi OV. 2019. *A case-crossover analysis of indoor heat exposure on mortality and hospitalizations among the elderly in Houston, Texas*. The 2019 Annual Meeting of Society for Epidemiologic Research. June 2019 in Minneapolis.
43. Zhou X, Tong W, Li L, **Zhang K**. 2019. *Spatiotemporal predictions of ground PM_{2.5} concentrations based on deep learning algorithm*. The Association of American Geographers (AAG) Annual Meeting, April 2019 in Washington DC.
42. **Zhang K***. Zhang X, Chu Y, Wang Y. 2019. *Developing a high resolution spatiotemporal model for predicting PM_{2.5} concentrations in Texas*. The Association of American Geographers (AAG) Annual Meeting, April 2019 in Washington DC.

41. **Zhang K***, Chen TH, Li F. 2019. *Impact of cold weather on cardiovascular diseases in Texas*. EPI Lifestyle Scientific Sessions 2019 of American Heart Association. March, 2019 in Houston.
40. **Zhang K***. 2019. *A Closer Look at Transportation and Health in Houston*. Transportation, Air Quality, and Health Symposium sponsored by the Center for Advancing Research in Transportation Emissions, Energy, and Health. February 2019, in Austin.
39. **Zhang K***. 2018. *Applications of Big Data in Environmental Health*. The 4th International Conference on Big Data and Information Analytics: Theories, Algorithms and Applications in Data Science, December, 2018 in Houston
38. **Zhang K***, Yu X, Li Y, Cooper S. 2018. *Assessing Heat Effects among Migrant and Seasonal Farmworkers: A Multi-state Study*. The Joint Conference of the International Society of Exposure Science and the International Society for Environmental Epidemiology, August, 2018 in Ottawa, Canada.
37. Luo R, Li R, **Zhang K**. 2018. *Middle/High School Proximity and Census Tract Correlates of Electronic Cigarette Retail Outlets in Harris County of Texas*. Summer Undergraduate Innovation in Cancer Prevention Research Fellowship Poster Presentations. The Cancer Prevention & Research Institute of Texas (CPRIT) – UTHealth's Training Program.
36. Yu X, Chien LC, **Zhang K**. 2018. *Different Methods and Comparisons Dealing with Censored Count Data*. 2018 Joint Statistical Meetings - American Statistical Association, July 28 – August 2 in Vancouver, Canada.
35. Bounds G, Durand C, **Zhang K**. 2017. *Assembling Data for Use of the ITHIM (Integrated Transport and Health Impact Modeling) Tool for Houston, Texas*. American Public Health Association's 2017 Annual Meeting, November in Atlanta.
34. Zhang X, Zhao H, Chow WH, Craft E, **Zhang K***. 2017. *Characterizing spatial variability of air pollution from vehicle traffic around the Houston Ship Channel area and potential associations with obesity in a Mexican-American Cohort*. The 16th Annual CMAS Conference, October at UNC-Chapel Hill.
33. **Zhang K***, Arauz R, Chen TH, Cooper S. 2017. *Assessing heat effects among migrant and seasonal farmworkers*. The 27th Annual Conference International Society of Exposure Science, October in Durham, North Carolina.
32. Zhang X, Chu Y, **Zhang K***. 2017. *Estimating Daily Ambient PM_{2.5} Concentrations in Texas Using High Resolution Satellite Product*. The 27th Annual Conference International Society of Exposure Science, October in Durham, North Carolina.
31. Chen TH, **Zhang K***. 2017. *Impacts of cold weather on emergency hospital admission in Texas*. The 27th Annual Conference International Society of Exposure Science, October in Durham, North Carolina.
30. Zhang X, Chu Y, **Zhang K***. *Estimating Daily Ambient PM_{2.5} Concentrations in Texas Using High Resolution Satellite Product*. The 15th Annual CMAS Conference, October at UNC-Chapel Hill, 2016.
29. Xie Y, Wang Y, Zhang K, Dong W, Lv B, Bai Y. 2015. *Daily estimation of ground-level PM_{2.5} concentrations over Beijing using 3 km resolution MODIS AOD*. The AOGS 13th Annual Meeting, August in Beijing, 2016
28. Ramírez-Rubio O, **Zhang K**, Li X, Laws RL, Mcclean MD, Scammell MK, Amador JJ, Brooks DR, 2015. *Weather trends at a sugar mill in Northwest Nicaragua, 1973-2013*. The 2015 meeting of Consortium for the Epidemic of Nephropathy in Central America and Mexico. November in San Jose, Costa Rica.
27. Zhang X, Craft E, **Zhang K**, 2015. *Characterizing spatial variability of fine particulate matter due to traffic goods movement in the Houston port area*. The 25th Annual Conference International Society of Exposure Science, October in Henderson, Nevada.
26. Chen TH, Li X, Acharya P, **Zhang K**, 2015. *Impacts of cold weather on mortality in Texas, 1990-2011*. The 25th Annual Conference International Society of Exposure Science, October in Henderson, Nevada.
25. Danysh HE, **Zhang K**, Mitchell LE, Scheurer ME, Lupo PJ. 2015. *Maternal residential proximity to roadways during pregnancy and childhood central nervous system tumors: A population-based assessment in Texas, 2003-2009*. International Society of Paediatric Oncology 2015 Annual Congress, October in Cape Town.

24. Greene TJ, **Zhang K**. 2015. *A two-state Markov mixture model for renal colic emergency room admission counts during the summer months in Houston, Texas*, Joint Statistical Meetings. August in Seattle.
23. **Zhang K**, 2015. *Climate Change, Extreme Weather Events, Air pollution and Health*. Texas Air Quality Workshop, April at UT Austin.
22. Danysh HE, Mitchell LE, **Zhang K**, Scheurer ME, Lupo PJ. 2014. *A statewide assessment of childhood central nervous system tumors and traffic-related air pollution*. International Society of Paediatric Oncology 2014 Annual Congress, October in Toronto.
21. **Zhang K**, Chen TH, Begley CE. 2014. *Impact of the 2011 heat wave on mortality and emergency department visits in Houston, Texas*. The 24th Annual Conference International Society of Exposure Science, October in Cincinnati.
20. Adar S, D'Souza JC, Larson T, **Zhang K**, Hoffman E, Vedal S, Sheppard L, Kaufman J, Barr RG. 2013. Long-term exposures to ambient coarse particulate matter (PM_{10-2.5}) and lung function and structure: The Multi-Ethnic Study of Atherosclerosis and Airborne Coarse Particulate Matter (MESA Coarse). American Thoracic Society 2013 International Conference. May 17-22 in Philadelphia.
19. **Zhang K**, Chen YH, Schwartz J, Rood R, O'Neill M. 2013. *Comparing forecast and observed weather data products' performance in assessing heat-mortality associations*. The 93rd Annual Meeting of American Meteorological Society, January 6 – 10 in Austin.
18. **Zhang K**, Gasset A, Larson T, Szpiro A, Jacobs D, Daviglius M, Burke G, Kaufman J, Adar S. 2012. *Predicting the spatial variability of chemical components of coarse particulate matter (PM_{10-2.5}) in three cities: The Multi-Ethnic Study of Atherosclerosis and Coarse Particles (MESA Coarse)*. The 22nd Annual Conference International Society of Exposure Science, October 28 – November 1, in Seattle.
17. **Zhang K**, Li Y, Schwartz J, O'Neill M, 2012. *Identifying the most important weather parameters in predicting mortality related to heat using statistical learning methods*. The 24th Annual Conference of the International Society for Environmental Epidemiology, August 26 -30, Columbia, South Carolina. ,
16. **Zhang K**, Gasset A, Larson T, Szpiro A, Jacobs D, Daviglius M, Burke G, Kaufman J, Adar S. 2011. *Predicting ambient coarse particulate matter (PM_{10-2.5}) in three cities using land use regression and universal kriging: The Multi-Ethnic Study of Atherosclerosis (MESA)*. The 21st Annual Conference of International Society of Exposure Science, October 23 - 27, in Baltimore.
15. **Zhang K**, Rood R, Michailidis G, Oswald E, O'Neill M, Schwartz J, Zanobetti A, Ebi K. 2011. Comparing methods for classifying 'dangerous heat' in heat health warning systems. The 23rd Annual Conference of the International Society for Environmental Epidemiology, September 13-16, in Barcelona, Spain.
14. Adar S, **Zhang K**, Klein R, Klein B, Szpiro A, Cotch M, Wong T, Shrager S, Siscovick D, Daviglius M, Jacobs D, O'Neill M, Kaufman J, Larson T. 2011. Coarse and traffic-related particulate matter and the human microvasculature *in vivo* assessed via retinal imaging: The Multi-Ethnic Study of Atherosclerosis. The 23rd Annual Conference of the International Society for Environmental Epidemiology, September 13-16, in Barcelona, Spain.
13. Rivera-González L, Sánchez B, **Zhang K**, Zhang Z, Brines S, Brown D, Rojas-Bracho L, Osornio-Vargas A, Vadillo-Ortega F, O'Neill M. 2011. Comparing particulate matter and ozone exposure metrics for perinatal epidemiology in Mexico City. The 23rd Annual Conference of the International Society for Environmental Epidemiology, September 13-16, in Barcelona, Spain.
12. White-Newsome J, O'Neill, Brines S, Oswald E, Gronlund C, Brown D, Rood R, **Zhang K**. Heat vulnerability mapping using satellite imagery, census data and mortality data: Case study in Wayne County, MI. The 138th APHA Annual Meeting, November 6-10, 2010, in Denver, CO.
11. Oswald E, **Zhang K**, Brines S, Brown D, Gronlund C, O'Neill M, Rood R, and White-Newsome J. 2010. *The structure of the urban heat island of Detroit, Michigan*. American Meteorological Society 2010 Annual Meeting. January 17-21, in Atlanta, GA.
10. Rood R, O'Neill M, Brines S, Brown D, Gronlund C, Oswald E, Parker E, White-Newsome J and **Zhang K**.

2010. *Heat and human health: an integrated approach*. Accepted by American Meteorological Society 2010 Annual Meeting. January 17-21, in Atlanta, GA.

9. **Zhang K**, Batterman S. 2009. *Vehicle Emissions in Congestion: Comparison of Work Zone, Rush Hour and Free-flow Conditions*. The ISES 2009 Annual Conference, November 1-5, 2009, in Minneapolis, MN.
 8. **Zhang K**, Gronlund C, White-Newsome J, Brines S, Oswald E, O'Neill M, Rood R, Brown D, Parker E. 2009. *Enhancing Heat Wave Health Warning Systems to Address Within-City Vulnerabilities: A Pilot Study in Detroit, Michigan. Exploring the Spatial Variability of Temperature in Wayne County, Michigan* The International Society of Environmental Epidemiology 2009 Annual Conference, August 25-29, 2009, in Dublin, Ireland.
 7. **Zhang K**, Batterman S. 2009. *In-cabin Measurements of Traffic Related Air Pollutants in Ann Arbor, Michigan*. The Air & Waste Management Association's 102nd Annual Conference, June 16-19, 2009, in Detroit, MI.
 6. **Zhang K**, Gronlund C, White-Newsome J, Brines S, Oswald E, O'Neill M, Rood R, Brown D, Parker E. 2009. *Exploring the Spatial Variability of Temperature in Wayne County, Michigan*. The Air & Waste Management Association's 102nd Annual Conference, June 16-19, 2009, in Detroit, MI.
 5. **Zhang K**, Batterman S. 2008. *Estimating On-road and Near-road Exposures due to Traffic Congestion*, International Society of Exposure Analysis 2008 Annual Conference, Pasadena, CA.
 4. **Zhang K**, 2008. Integrated Air Quality Modeling for Estimating Exposures and Health Risks Due to Traffic Congestion. "Materials Use: Science, Engineering, and Society" (MUSES) Workshop, March 12, 2008, University of Michigan.
 3. **Zhang K**, Batterman S. 2007. *Estimating Time Allocation Shifts due to Congestion Using the National Human Activity Pattern Survey*, International Society of Exposure Analysis 2007 Annual Conference, Durham, NC.
 2. **Zhang K**, 2007. Predicting Air Pollutant Concentration by Using Generalized Additive Model. "Materials Use: Science, Engineering, and Society" (MUSES) workshop, March 12, 2007, University of Michigan.
 1. **Zhang K**, 2006. Estimating Air Pollution Exposure due to Traffic Congestion. "Materials Use: Science, Engineering, and Society" (MUSES) workshop, October 18, 2006, University of Michigan.
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SERVICE

Department Service

- **2021** UAlbany EHS Dept. Preliminary Examination Committee Member
- **2013 - 2020** UTHealth EOHS Program Curriculum Committee
- **2016 - 2020** UTHealth EOHS Program Admission Committee

School/College Service

- **2021** UAlbany SPH Academic Committee
- **2021** UAlbany SPH Student Poster Judge
- **2019 - 2020** Associate Director and then Director of Pilot Projects Research Training Program at Southwest Center for Occupational and Environmental Health

University Service

- **2014 - 2016** The University of Texas Health Science Center at Houston (UTHealth) Chemical Safety Committee

Professional Service

- **2022** Grant Reviewer for NIH Social Sciences and Population Studies (B) Study Section (SSPB)
- **2022** Grant Reviewer for NIOSH grant review panel for Centers for Agriculture Safety and Health Special Emphasis Panels
- **2022** Grant Reviewer for US EPA STAR Grant – “Cumulative Health Impacts at the Intersection of Climate Change, Environmental Justice, and Vulnerable Populations/Lifestages: Community-Based Research for Solutions”
- **2021** Grant Reviewer for NIH Infectious, Reproductive, Asthma and Pulmonary Conditions Study Section
- **2021** Grant Reviewer for Northeast Center for Occupational Health and Safety
- **2021** Grant Reviewer for US EPA STAR Grant
- **2021** Grant Reviewer for NIOSH World Trade Center Registry Review
- **2021** Grant Reviewer for NIOSH Centers of Excellence for Total Worker Health
- **2021** Plenary Speaker Subcommittee of the Conference of the International Societies of Exposure Science (ISES 2021) and Technical Organizing Committee Member
- **2020** Grant Reviewer for the UK Medical Research Council (MRC)
- **2020** Lead of Plenary Speaker Subcommittee of the Conference of the International Societies of Exposure Science (ISES 2020) and Technical Organizing Committee Member
- **2020** Grant Reviewer for American Heart Association
- **2020** Grant Reviewer for University of North Texas Health Science Center
- **2020** Book Proposal Reviewer for Elsevier
- **2019** Session Organizer of the Association of American Geographers (AAG) Annual Meeting
- **2019** Grant Reviewer for The University of Toledo
- **2019** Grant Reviewer for The University of Wisconsin-Milwaukee
- **2018** Program Committee Member and Session Chair of 4th International Conference on Big Data and Information Analytics, Houston
- **2018** Technical Organizing Committee of the Joint Conference of the International Society of Exposure Science and the International Society for Environmental Epidemiology (ISES-ISEE 2018)
- **2018** Book Proposal Reviewer for Elsevier
- **2017** Session Chair of the 27th Annual International Society of Exposure Science Conference
- **2016** Grant Reviewer for National Institute of Health (NIH)
- **2016** Grant Reviewer for Health Canada’s Clean Air Regulatory Agenda (CARA) Program
- **2015 and 2016** Technical Organizing Committee of International Society of Exposure Science Annual Conference

Community Service

- **2021** GIS Day Planning Committee organized by NYDOH and UAlbany
- **2020** Steering Committee Member of COVID-19 Houston Datathon
- **2016** Advisory Council Members of Air Alliance Houston

EDITORIAL BOARD

- 2022 - present Associate Editor: *Journal of Exposure Science and Environmental Epidemiology*
- 2018 - 2022 Editorial Board Member: *Environmental Research*
- 2017 - present Associate Editor/Editorial Board Member: *BMC Public Health*
- 2016 - present Editorial Board Member: *Environment International*

REVIEWER FOR

- Lancet
- Environmental Health Perspective
- Environmental Science and Technology
- Environment International
- Environmental Research
- Environmental Pollution
- Journal of Exposure Science and Environmental Epidemiology
- Science of the Total Environment
- Journal of the Air and Waste Management Association
- Geocarto International
- Plos One
- Geoinformatics & Geostatistics: An Overview
- International Journal of Environmental Research and Public Health
- Annals of the New York Academy of Sciences
- Earth-Science Reviews
- Journal of the American Statistical Association
- Journal of Environmental and Public Health
- Natural Hazards
- Air Quality, Atmosphere and Health
- International Society of Exposure Science & International Society of Environmental Epidemiology Joint Annual Conference (2008, and 2013)
- Journal of Environmental Monitoring
- Disasters
- International Journal of Biometeorology
- Indoor Air
- Environmental Health
- Journal of Cleaner Production
- Archives of Environmental and Occupational Health
- Weather, Climate and Society
- Atmosphere
- Journal of Public Health
- Health and Place
- Journal of Transport Geography
- Annals of Epidemiology

PROFESSIONAL AFFILIATIONS

- International Society of Exposure Science
- American Heart Association
- International Society for Environmental Epidemiology