

ANDER WILSON, PHD

Department of Statistics
Colorado State University
Fort Collins, CO 80523-1877

ander.wilson@colostate.edu
anderwilson.github.io
ORCID: 0000-0003-4774-3883

EDUCATION

North Carolina State University , Raleigh, NC PhD, Statistics	2014
North Carolina State University , Raleigh, NC Masters of Statistics	2011
University of Vermont , Burlington, VT Bachelor of Arts, Mathematics, <i>Cum Laude</i>	2004

EXPERIENCE

Colorado State University , Fort Collins, CO Assistant Professor, Department of Statistics Faculty Member, Partnership on Air Quality Climate and Health	2016 – Present
Harvard T. H. Chan School of Public Health , Boston, MA Postdoctoral Research Fellow, Department of Biostatistics	2014 – 2016
Mathematica Policy Research, Inc. , Cambridge, MA On-Call Statistician	2014 – 2016
U.S. Environmental Protection Agency , Chapel Hill, NC Oak Ridge Institute for Science and Education (ORISE) Fellow	2012 – 2014
U.S. Environmental Protection Agency , RTP, NC Student Volunteer Researcher, National Center for Computational Toxicology	2010 – 2012
North Carolina State University , Raleigh, NC NIH Trainee in Biostatistics and Statistical Genetics	2009 – 2012
Mathematica Policy Research, Inc. , Cambridge, MA On-Call Senior Programmer Analyst Senior Programmer Analyst Research Assistant/Programmer	2005 – 2011 2009 – 2011 2008 – 2009 2005 – 2007

Published in Peer-Reviewed Journals

- Bilsback KR, Eilenberg SR, Good N, Heck L, Johnson M, Kodros JK, Lipsky EM, L'Orange C, Pierce JR, Robinson AL, Subramanian R, Tryner J, Wilson A, and Volckens J (2018). "The Firepower Sweep Test: A Novel Approach to Cookstove Laboratory Testing". *Indoor Air*.
- Bose S, Rosa MJ, Mathilda Chiu YH, Leon Hsu HH, Di Q, Lee A, Kloog I, Wilson A, Schwartz J, Wright RO, Morgan WJ, Coull BA, and Wright RJ (2018). "Prenatal nitrate air pollution exposure and reduced child lung function: timing and fetal sex effects". *Environmental Research* 167.August, pp. 591–597.
- Brunst KJ, Sanchez-Guerra M, Chiu YHM, Wilson A, Coull BA, Kloog I, Schwartz J, Brennan KJ, Bosquet Enlow M, Wright RO, Baccarelli AA, and Wright RJ (2018). "Prenatal particulate matter exposure and mitochondrial dysfunction at the maternal-fetal interface: Effect modification by maternal lifetime trauma and child sex." *Environment international* 112.March 2018, pp. 49–58.
- Good N, Carpenter T, Anderson GB, Wilson A, Peel JL, Browning RC, and Volckens J (2018). "Development and validation of models to predict personal ventilation rate for air pollution research". *Journal of Exposure Science & Environmental Epidemiology*.
- Kioumourtzoglou MA, Raz R, Wilson A, Fluss R, Nirel R, Broday DM, Yuval, Hacker MR, McElrath TF, Grotto I, Koutrakis P, and Weisskopf MG (2018). "Traffic-Related Air Pollution and Pregnancy Loss". *Epidemiology*, p. 1.
- Lee AG, Le Grand B, Hsu HHL, Chiu YHM, Brennan KJ, Bose S, Rosa MJ, Brunst KJ, Kloog I, Wilson A, Schwartz J, Morgan W, Coull BA, Wright RO, Baccarelli AA, and Wright RJ (2018). "Prenatal fine particulate exposure associated with reduced childhood lung function and nasal epithelia GSTP1 hypermethylation: Sex-specific effects". *Respiratory Research* 19.1, p. 76.
- Wilson A, Zigler CM, Patel CJ, and Dominici F (2018). "Model-averaged confounder adjustment for estimating multivariate exposure effects with linear regression". *Biometrics*, pp. 1–11.
- Wu S, Gennings C, Wright RJ, Wilson A, Burris HH, Just AC, Braun JM, Svensson K, Zhong J, Brennan KJ, Dereix A, Cantoral A, Schnaas L, Téllez-Rojo MM, Wright RO, and Baccarelli AA (2018). "Prenatal stress, methylation in inflammation-related genes, and adiposity measures in early childhood". *Psychosomatic Medicine* 80.1, pp. 34–41.
- Bose S, Chiu YHM, Hsu HHL, Di Q, Rosa MJ, Lee A, Kloog I, Wilson A, Schwartz J, Wright RO, Cohen S, Coull BA, and Wright RJ (2017). "Prenatal Nitrate Exposure and Childhood Asthma. Influence of Maternal Prenatal Stress and Fetal Sex". *American Journal of Respiratory and Critical Care Medicine* 196.11, pp. 1396–1403.
- Chiu YHM, Hsu HHL, Wilson A, Coull BA, Pendo MP, Baccarelli A, Kloog I, Schwartz J, Wright RO, Taveras EM, and Wright RJ (2017). "Prenatal particulate air pollution exposure and body composition in urban preschool children: Examining sensitive windows and sex-specific associations". *Environmental Research* 158.March, pp. 798–805.
- Lee A, Hsu HHL, Chiu YHM, Bose S, Rosa MJ, Kloog I, Wilson A, Schwartz J, Cohen S, Coull BA, Wright RO, and Wright RJ (2017). "Prenatal fine particulate exposure and early childhood asthma: Effect of maternal stress and fetal sex". *Journal of Allergy and Clinical Immunology*.

- Liu JC, Wilson A, Mickley LJ, Dominici F, Ebisu K, Wang Y, Sulprizio MP, Peng RD, Yue X, Son JY, Anderson GB, and Bell ML (2017). “Wildfire-specific Fine Particulate Matter and Risk of Hospital Admissions in Urban and Rural Counties”. *Epidemiology* 28.1, pp. 77–85.
- Liu JC, Wilson A, Mickley LJ, Ebisu K, Sulprizio MP, Wang Y, Peng RD, Yue X, Dominici F, and Bell ML (2017). “Who Among the Elderly Is Most Vulnerable to Exposure to and Health Risks of Fine Particulate Matter From Wildfire Smoke?” *American Journal of Epidemiology* 186.6, pp. 730–735.
- Peng C, Cayir A, Sanchez-Guerra M, Di Q, Wilson A, Zhong J, Kosheleva A, Trevisi L, Colicino E, Brennan K, Dereix AE, Dai L, Coull BA, Vokonas P, Schwartz J, and Baccarelli AA (2017). “Associations of Annual Ambient Fine Particulate Matter Mass and Components with Mitochondrial DNA Abundance”. *Epidemiology* 28.6, pp. 763–770.
- Peng C, Sanchez-Guerra M, Wilson A, Mehta AJ, Zhong J, Zanobetti A, Brennan K, Dereix AE, Coull BA, Vokonas P, Schwartz J, and Baccarelli AA (2017). “Short-term effects of air temperature and mitochondrial DNA lesions within an older population”. *Environment International* 103, pp. 23–29.
- Wilson A, Chiu YHM, Hsu HHL, Wright RO, Wright RJ, and Coull BA (2017a). “Bayesian distributed lag interaction models to identify perinatal windows of vulnerability in children’s health.” *Biostatistics (Oxford, England)* 18.3, pp. 537–552. arXiv: 1612.05800.
- Wilson A, Chiu YHM, Hsu HHL, Wright RO, Wright RJ, and Coull BA (2017b). “Potential for Bias When Estimating Critical Windows for Air Pollution in Children’s Health”. *American Journal of Epidemiology* 186.11, pp. 1281–1289.
- Wilson A, Reich BJ, Nolte CG, Spero TL, Hubbell B, and Rappold AG (2017). “Climate change impacts on projections of excess mortality at 2030 using spatially varying ozone-temperature risk surfaces”. *Journal of Exposure Science and Environmental Epidemiology* 27.1, pp. 118–124.
- Zhong J, Trevisi L, Urch B, Lin X, Speck M, Coull BA, Liss G, Thompson A, Wu S, Wilson A, Koutrakis P, Silverman F, Gold DR, and Baccarelli AA (2017). “B-vitamin Supplementation Mitigates Effects of Fine Particles on Cardiac Autonomic Dysfunction and Inflammation: A Pilot Human Intervention Trial”. *Scientific Reports* 7, p. 45322.
- Colicino E, Wilson A, Frisardi MC, Prada D, Power MC, Hoxha M, Dioni L, Spiro A, Vokonas PS, Weisskopf MG, Schwartz JD, and Baccarelli AA (2016). “Telomere Length, Long-Term Black Carbon Exposure, and Cognitive Function in a Cohort of Older Men: The VA Normative Aging Study”. *Environmental Health Perspectives* 125.1.
- Wilson A, Rappold AG, Neas LM, and Reich BJ (2014). “Modeling the effect of temperature on ozone-related mortality”. *The Annals of Applied Statistics* 8.3, pp. 1728–1749. arXiv: 1412.1642.
- Wilson A and Reich BJ (2014). “Confounder selection via penalized credible regions”. *Biometrics* 70.4, pp. 852–861.
- Wilson A, Reif DM, and Reich BJ (2014). “Hierarchical dose-response modeling for high-throughput toxicity screening of environmental chemicals.” *Biometrics* 70.1, pp. 237–46.
- Briefel RR, Wilson A, Cabili C, and Hedley Dodd A (2013). “Reducing calories and added sugars by improving children’s beverage choices.” *Journal of the Academy of Nutrition and Dietetics* 113.2, pp. 269–275.

- Dodd AH, Briefel R, Cabili C, Wilson A, and Crepinsek MK (2013). “Disparities in Consumption of Sugar-Sweetened and Other Beverages by Race/Ethnicity and Obesity Status among United States Schoolchildren”. *Journal of Nutrition Education and Behavior* 45.3, pp. 240–249.
- Reif DM, Sypa M, Lock EF, Wright FA, Wilson A, Cathey T, Judson RR, and Rusyn I (2013). “ToxPi GUI: an interactive visualization tool for transparent integration of data from diverse sources of evidence”. *Bioinformatics* 29.3, pp. 402–403.
- O’Neil SS, Lake T, Merrill A, Wilson A, Mann DA, and Bartnyska LM (2010). “Racial Disparities in Hospitalizations for Ambulatory Care-Sensitive Conditions”. *American Journal of Preventive Medicine* 38.4, pp. 381–388.
- Briefel RR, Crepinsek MK, Cabili C, Wilson A, and Gleason PM (2009). “School food environments and practices affect dietary behaviors of US public school children.” *Journal of the American Dietetic Association* 109.2 Suppl, S91–107.
- Briefel RR, Wilson A, and Gleason PM (2009). “Consumption of low-nutrient, energy-dense foods and beverages at school, home, and other locations among school lunch participants and nonparticipants.” *Journal of the American Dietetic Association* 109.2 Suppl, S79–90.
- Crepinsek MK, Gordon AR, McKinney PM, Condon EM, and Wilson A (2009). “Meals offered and served in US public schools: do they meet nutrient standards?” *Journal of the American Dietetic Association* 109.2 Suppl, S31–43.
- Fox MK, Dodd AH, Wilson A, and Gleason PM (2009). “Association between school food environment and practices and body mass index of US public school children.” *Journal of the American Dietetic Association* 109.2 Suppl, S108–17.
- Fox MK, Gordon AR, Nogales R, and Wilson A (2009). “Availability and consumption of competitive foods in US public schools.” *Journal of the American Dietetic Association* 109.2 Suppl, S57–66.

Book Chapters

- Dominici A and Wilson A (2018). “Dynamics of Environmental Epidemiology”. *Handbook of Environmental and Ecological Statistics*. Ed. by AE Gelfand, M Fuentes, JA Hoeting, and RL Smith. Boca Raton, FL: Chapman & Hall/CRC. Chap. 24.

Non-Peer-Reviewed publications

- Trenholm CA, Mabli JG, Wilson A (2009). *SCHIP Children: How Long Do They Stay and Where Do They Go?* Princeton, NJ: Robert Wood Johnson Foundation.
- Gleason PM, Briefel RR, Wilson A, Dodd AH (2009). *School Meal Program Participation and Its Association with Dietary Patterns and Childhood Obesity*. Final Report submitted to U.S. Department of Agriculture Economic Research Service Food Assistance Branch. Cambridge, MA: Mathematica Policy Research.
- O’Neil S, Merrill AR, Wilson A, Lake TK (2008). *Differences in Hospitalizations for Ambulatory Care Sensitive Conditions Among Maryland Medicare Beneficiaries – 2006*. Baltimore, MD: Maryland Health Care Commission, Center for Analysis and Information Services.
- O’Neil S, Merrill A, Wilson A, Lake T (2008). *Assessment of Disparities in Potentially Avoidable Hospitalizations of Maryland Medicare Patients*. Final Report submitted to the Maryland

Health Care Commission. Cambridge, MA: Mathematica Policy Research, December.

Limpa-Amara S, Lake TK, Wilson A (2005). *Trends in Diabetes Mortality Among Medicare FFS Beneficiaries with Diabetes, 1992-2003*. Final report submitted to the Centers for Medicare & Medicaid Services and the Centers for Disease Control and Prevention. Cambridge, MA: Mathematica Policy Research.

PRESENTATIONS (RECENT AND UPCOMING)

Invited

International Society of Environmental Epidemiology (ISEE), Ottawa, Canada	2018
Virginia Tech University, Dept. of Statistics, Blacksburg, VA	2018
International Conference on Health Policy Statistics, Charleston, SC	2018
Tianjin Medical University, Dept. of Occ. & Envr. Health, Tianjin, China	2017
Intl. Symp. on Emerging Contaminants and Envr. Nanotechnology, Tianjin, China	2017
Colorado State University, Epidemiology, Fort Collins, CO	2016
NC State University, Dept. of Statistics 75 th Anniversary Symposium, Raleigh, NC	2016
Harvard T. H. Chan School of Public Health, Dept. of Biostatistics, Boston, MA	2016
New England Statistics Symposium (NESS), New Haven, CT	2016
Colorado State University, Dept. of Statistics, Fort Collins, CO	2016
VI-MSS Workshop on Environmental Statistics, Kolkata, India, <i>Poster</i>	2015
Public Health Foundation of India, New Delhi, India	2015
Biometrics Society Spring Meeting (ENAR), Baltimore, MD	2014
RAND Corporation, Santa Monica, CA	2014
National Center for Atmospheric Research, Boulder, CO	2014
University of Colorado, Dept. of Mathematical and Statistical Sciences, Denver, CO	2014
Harvard School of Public Health, Boston, Dept. of Biostatistics, MA	2014
University of North Carolina, Institute for the Environment, Chapel Hill, NC	2014
Colorado State University, Dept. of Statistics, Fort Collins, CO	2013
Atmospheric Modeling Division, U.S. Environmental Protection Agency, RTP, NC	2013

Contributed

International Society of Environmental Epidemiology (ISEE), Rome, Italy, <i>Poster</i>	2016
Biometrics Society Spring Meeting (ENAR), Austin, TX	2016
Joint Statistical Meetings (JSM), Boston, MA	2014
Graduate Research Symposium, Raleigh, NC, <i>Poster</i>	2014
International Society for Environmental Epidemiology (ISEE), Basel, Switzerland, <i>Poster</i>	2013
Joint Statistical Meetings (JSM), Montreal, QC, Canada, <i>Topic contributed</i>	2013
Biometrics Society Spring Meeting (ENAR), Orlando, FL	2013
Society of Toxicology's 51th Annual Meeting (SOT), San Francisco, CA, <i>Poster</i>	2012
STATMOS Sponsored Seminar, North Carolina State University, Raleigh, NC	2011
Society of Toxicology's 50th Annual Meeting (SOT), Washington, DC, <i>Poster</i>	2011

FUNDING

Current Funding

Southeast Wisconsin Interdisciplinary Study of Children's Health, Ecological Exposures and Social Environment (SWISCHEESE). US EPA (3/1/2018 - 2/28/2021). Role: Co-PI; PI: Magzamen. Total \$600,000.

Methods for data integration and risk assessment for environmental mixtures. NIH/NIEHS R01 (5/15/2018 - 4/30/2022). Role: CSU-PI; PI: Gennings/Coull (Ichan School of Medicine at Mount Sinai/Harvard T. H. Chan of Public Health). CSU total \$180,523.

Cookstove air pollution: Emission profiles and subclinical effects of exposure. NIH/NIEHS R01 (08/15/2014 - 05/31/2019). Role: added as co-I; PI: Peel/Volckens.

The Commuter Exposure Study: Linking Exposures, Source-Receptor Models, And Health. NIH/NIEHS R01 (01/15/2012 - 10/31/2017). Role: added as co-I; PI: Peel/Volckens.

Completed Funding

A Novel, Low-Cost Method for Assessing Personal Aerosol Exposures in Real-Time. High Plains Intermountain Center for Agricultural Health & Safety (HICAHS) pilot grant (11/1/2016 - 10/31/2017). Role: collaborator; PI: L'Orange.

TEACHING

Colorado State University

STAT 440: Bayesian Data Analysis	S17, S18, S19
STAT 501: Statistical Science	F18
STAT 540: Data Analysis and Regression	F16, F17
STAA 554: Mixed Models	S19

ADVISING & RESEARCH MENTORING

Graduate Research Advising & Research Mentoring

Lauren Heck, Statistics, in progress
Daniel Mork, Statistics, in progress

Undergraduate Research Mentoring

Freya (Ziqian) Fu, Statistics & Psychology (BS '17). Current: Statistics MS student at Duke.

PhD Committee Member

Ethan Walker, Epidemiology, in progress
Miranda Fix, Statistics, in progress
Kristen Fedak, Epidemiology, in progress
Meilin Yan, Epidemiology, in progress
Megan Benka-Coker, Epidemiology, PhD '18

SERVICE & PROFESSIONAL MEMBERSHIP

Reviewer

American Journal of Epidemiology (AJE)
Biometrics
Biostatistics
BMJ Open
Environmental Health
Environmental Health Perspectives (EHP)
Environmental International
International Journal of Epidemiology (IJE)
Journal of the Academy of Nutrition and Dietetics (JAND)
Journal of Agricultural, Biological, and Environmental Statistics (JABES)
Journal of the American Statistical Association (JASA)
Journal of the Royal Statistical Society, Series A (JRSS A)
Journal of the Royal Statistical Society, Series C (JRSS C)
PLOS ONE
Proceedings of the National Academy of Science (PNAS)
Statistical Methods in Medical Research
Statistics & Probability Letters

Departmental Service, Department of Statistics, Colorado State University

Data Science Curriculum Committee:	F16-S17
Statistics Seminar Series:	S17-S18 (chair)
Computing Committee:	F17-S18 (chair)
Doctoral Candidacy Examination Committee:	F16-S18
Search Committee:	F17-S18

Departmental Service, Department of Biostatistics, HSPH

HSPH Environmental Seminar organizer:	F14-S16
HSPH NIH/Heatwave Working Group coordinator:	F15-S16

Grant Reviewer

High Plains Intermountain Center for Agricultural Health and Safety (HICAHS) Pilot Grants:
2016, 2017, 2018

Professional Membership

Member: ASA, ENAR

Last updated: September 12, 2018