M i c h e l l e L . B e l l
Yale University, School of the Environment
195 Prospect St., New Haven CT 06511
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EDUCATION

Johns Hopkins University
　　Ph.D. in Environmental Engineering awarded 10/02.
　　M.S.E. in Environmental Management and Economics awarded 5/99.
Stanford University
　　M.S. in Environmental Engineering and Science awarded 1/94.
University of Edinburgh
　　M.Sc. Philosophy of Epistemology, Ethics and Mind awarded 10/20.
Massachusetts Institute of Technology
　　B.S. in Environmental Engineering Science, Minor in Music awarded 5/92.

WORK EXPERIENCE

Yale University
School of the Environment (formerly Forestry and Environmental Studies)　　New Haven, CT
5/15 to present, *Mary E. Pinchot Professor of Environmental Health*
7/11 to 4/15, *Professor of Environmental Health*
7/08 to 6/11, *Associate Professor of Environmental Health*
1/04 to 6/08, *Assistant Professor of Environmental Health*
Secondary appointment with the Yale School of Public Health, Environmental Health Sciences
　　Division
Secondary appointment with the Yale School of Engineering and Applied Sciences, Department
　　of Chemical and Environmental Engineering

Johns Hopkins Bloomberg School of Public Health　　Baltimore, MD
2/03 to 12/03, *Faculty – Assistant Scientist*

Chase Brexton Health Services (public health clinic)　　Baltimore, MD
10/00 to 12/03. *Volunteer, Research Assistant*

Johns Hopkins University, Dept. of Academic Advising　　Baltimore, MD
9/97 to 6/01. *Study Consultant*

Johns Hopkins University, Dept. of Geography and Environmental Engineering
9/97 to 9/98. *Research Assistant*　　Baltimore, MD

National Center for Environmental Decision-Making Research　　Knoxville, TN
6/97 to 8/97. *Intern*. Based in Oak Ridge, TN

Johns Hopkins University, Dept. of Geography and Environmental Engineering
1/97 to 6/97. *Teaching Assistant*　　Baltimore, MD

Oak Ridge National Laboratory, Environmental Sciences Division Oak Ridge, TN
6/94 to 8/96, *Environmental Research Associate* (Contractor: Lockheed Martin)
6/93 to 8/93, *Intern*

Eaton Corporation Fletcher, NC
Summers of 1988, 89, 90, and 92. *Laboratory Assistant*

MIT, Parsons Laboratory Cambridge, MA
6/91 to 12/91. *Laboratory Research Assistant*

MIT, Dept. of Urban Studies & Planning Cambridge, MA
9/89 to 1/90. *Software Design Assistant*

AWARDS AND RECOGNITION
Best Environmental Epidemiology Paper (BEEP) Award Honorable Mention (2021). Short term
   association between ozone and mortality: global two stage time series study in 406 locations in
   20 countries by Cabrera et al., *British Medical Journal* 368 (2020).
Highly Cited Researchers (2020). Identified as one of the world's most highly cited researchers
   for field and year (top 1%). https://recognition.webofscience.com/awards/highly-cited/2020/
Elected to National Academy of Medicine (2020).
Highly Cited Researchers (2019). Identified as one of the world's most highly cited researchers
   for field and year (top 1%). https://recognition.webofsciencegroup.com/awards/highly-
   cited/2019/
Elected to the Connecticut Academy of Science and Engineering (2019).
Highly Cited Researchers (2018). Identified as one of the world's most highly cited researchers
   for field and year (top 1%). https://hcr.clarivate.com/
Article "Drought and the risk of hospital admissions and mortality in older adults in western USA
   from 2000 to 2013: a retrospective study" by Berman, JD, K Ebisu, RD Peng, F Dominici,
   and ML Bell, *Lancet Planetary* Health 1(1):e17-25 selected for NIEHS Extramural Paper of
   the Month (June 2017).
Best Environmental Epidemiology Paper (BEEP) Award (2016). Gasparrini et al. Mortality risk
   attributable to high and low ambient temperature: A multicountry observational study. *Lancet*
   (2015).
Article "'Association between airborne $PM_{2.5}$ chemical constituents and birth weight—implication
   of buffer exposure assignment'" by Ebisu et al. selected for the Highlights of 2014 special
   issue for *Environmental Research Letters* (2015).
Runner-up for the Kenneth Rothman Epidemiology Prize, awarded for the best paper in
   Epidemiology, for "Lights out: Impact of the August 2003 power outage on mortality in New
   York, NY" by Anderson and Bell (2013).
Prince Albert II of Monaco – Institut Pasteur Award, for research on Environmental Changes and
   Impacts on Human Health (2012).
Article "Heatwaves in the United States: Mortality risk during heatwaves and effect modification
   by heatwave characteristics in 43 US communities" by Anderson GB, ML Bell,
   Environmental Health Perspectives selected for NIEHS Extramural Paper of the Month
   (December 2010).
Runner-up for the Kenneth Rothman Epidemiology Prize, awarded for the best paper in
   Epidemiology, for "Weather-related mortality: How heat, cold, and heat waves affect
   mortality in the United States" by Anderson and Bell (2010).
Faculty Research Award, Yale School of Forestry and Environmental Studies (2010).

Article "The relationship between air pollution and low birth weight: effects by mother's age, infant sex, co-pollutants, and pre-term births" by Bell et al. selected for the "Best of 2008" special issue for *Environmental Research Letters* (2009).

Article "Emergency hospital admissions for cardiovascular diseases and ambient levels of carbon monoxide: results for 126 U.S. urban counties, 1999-2005" by Bell et al. *Circulation* selected for NIEHS Extramural Paper of the Month (October 2009).

Article "Weather-related mortality: how heat, cold, and heat waves affect mortality in the United States" by Anderson and Bell *Epidemiology* selected for NIEHS Extramural Paper of the Month (April 2009).

Oak Ridge Institute for Science and Education (ORISE) Fellowship (2008).

Article "Coarse particulate matter air pollution and hospital admissions for cardiovascular and respiratory diseases among Medicare patients" by Peng et al. *Journal of the American Medical Association* selected for NIEHS Extramural Paper of the Month (July 2008).

NIH National Institute of Environmental Health Sciences (NIEHS) Outstanding New Environmental Scientist (ONES) Award (2006).

Health Effects Institute Walter A. Rosenblith Young Investigator Award (2004).

Air and Waste Management Association Annual Conference student poster competition, 2nd place (2002).

Environmental Protection Agency (EPA) STAR Graduate Fellowship (1998).

National Science Foundation (NSF) Graduate Fellowship (1992).

Richard Lee Russell Award for academic achievement in civil engineering at MIT (1992).

Hugh Darden Scholar for civil engineering and personal excellence at MIT (1991).

Member of Tau Beta Pi and Chi Epsilon, national engineering and civil engineering honor societies.

PUBLICATIONS

PEER-REVIEWED JOURNAL ARTICLES

292. Yang, L, J Yang, M Liu, X Sun, T Li, Y Guo, K Hu, **ML Bell**, Q Cheng, H Kan, Y Liu, H Gao, X Yao (accepted). Nonlinear effect of air pollution on adult pneumonia hospital visits in the coastal city of Qingdao, China: A time-series analysis. *Environmental Research.*

291. Chan AY, H Kim, **ML Bell** (accepted). Higher incidence of novel coronavirus (COVID-19) cases in areas with combined sewer systems, heavy precipitation, and high percentages of impervious surfaces. *Science of the Total Environment.*

290. Bravo MA, JL Warren, MC Leong, NC Deziel, RT Kimbro, **ML Bell**, ML Miranda (accepted). Where is air quality improving, and who benefits? A study of $PM_{2.5}$ and ozone over 15 years. *American Journal of Epidemiology.*

289. Peng RD, Liu JC, McCormack MC, Mickley LJ, **Bell ML** (accepted). Estimating the health effects of environmental mixtures using principal stratification. *Statistics in Medicine.*

288. Chan AY, H Kim, **ML Bell** (2022). Culex mosquitoes at stormwater control measures and combined sewer overflow outfalls after heavy rainfall. *Water* 145(1), Art. 31.

287. Yang J, M Liu, J Remais, Q Cheng, L Yang, X Sun, H Kan, Y Liu, **ML Bell**, H Gao, X Yao, Y Gao (2022). Investigating the impact of air pollution on AMI and COPD hospital admissions in the coastal city of Qingdao, China. *Frontiers of Environmental Science and Engineering* 16(5), p. 1-13.

286. Lee W, K Prifti, Hl Kim, E Kim, J Yang, J Min, JY Park, YC Kim, JP Lee, **ML Bell** (2022). Short-term exposure to air pollution and attributable risk of kidney diseases: A nationwide time-series study in South Korea. *Epidemiology* 33, p. 17-24.

285. Heo S, A Nori-Sarma, S Kim, JT Lee, **ML Bell** (2021). Do persons with low socioeconomic status have less access to greenspace? Application of accessibility index to urban parks in Seoul, Korea. *Environmental Research Letters* 16(8). Art. No. 084027.

284. Lu P, GX Xia, SL Tong, **M Bell**, SS Li, YM Guo (2021). Ambient temperature and hospitalizations for acute kidney injury in Queensland, Australia, 1995-2016. *Environmental Research Letters* 16(7), Art. No. 075007.

283. GBD 2019 Adolescent Mortality Collaborators (2021). Global, regional, and national mortality among young people aged 10-24 years, 1950-2019: A systematic analysis for the Global Burden of Disease Study 2910. *The Lancet* 398(10311), p. 1593-1618.

282. Sofiev M et al. (accepted). A global multidecadal hindcast of air quality for assessment of exposure and health effects: Data description and evaluation at 3984 locations. *Environmental Health Perspectives.*

281. Son JY, HM Choi, ML Miranda, **ML Bell** (2022). Exposure to heat during pregnancy and preterm birth in North Carolina: main effect and disparities by residential greenness, urbanicity, and socioeconomic status. *Environmental Research* 204(Pt C). Art. 112315.

280. Chen C, A Chan, F Dominici, RD Peng, B Sabath, Q Di, J Schwartz, **ML Bell** (accepted). Do temporal trends of associations between short-term exposure to fine particulate matter ($PM_{2.5}$) and risk of hospitalizations differ by sub-populations and urbanicity – a study of 968 U.S. counties and the Medicare population. *Environmental Research*.

279. Burrows K, DC Pelupessy, K Khoshnood, **ML Bell** (2021). Environmental displacement and mental wellbeing in Banjarnegara, Indonesia. *Environmental Health Perspectives* 129(1).

278. Sera F, et al. (2021). A cross-sectional analysis of meteorological factors and SARS-CoV-2 transmission in 409 cities across 26 countries. *Nature Communications* 12, Art. 5968.

277. Chan AY, JY Son, **ML Bell** (2021). Displacement of racially and ethnically minoritized groups after the installation of stormwater control measures (i.e., green infrastructure): a case study of Washington, DC. *International Journal of Environmental Research and Public Health* 18(19). Art. 10054.

276. Masselot P, F Sera, R Schneider, H Kan, E Lavigne, M Stafoggia, A Tobias, H Chen, TR Burnett, J Schwartz, A Zanobetti, **ML Bell**, BY Chen, YLL Guo, MS Ragettli, AM Vicedo-Cabrera, C Åström, B Forsberg, C Íñiguez, RM Garland, N Scovronick, J Madureira, B Nunes, C De la Cruz Valencia, MH Diaz, Y Honda, M Hashizume, CFC Ng, E Samoli, K Katsouyanni, A Schneider, S Breitner, NRI Ryti, JJK Jaakkola, M Maasikmets, H Orru, Y Guo, NV Ortega, PM Correa, S Tong, A Gasparrini (accepted). Differential mortality risks associated with $PM_{2.5}$ components: a multi-country multi-city study. *Epidemiology.*

275. GBD 2019 Under-5 Mortality Collaborators (2021). Global, regional, and national progress towards Sustainable Development Goal 3.2 for neonatal and child health: All-cause and cause-specific mortality findings from the Global Burden Disease of Study 2019. *Lancet*. 398(10303), p. 870-905.

274. Burrows K, D Pelupessy, K Khoshnood, **ML Bell** (2021). Mental wellbeing following landslides and residential displacement in Indonesia. *Social Science and Medicine – Mental Health* 1, Art. 10016.

273. Lee W, D Seo, W Myung, K Prifti, C Kang, H Jang, C Park, **ML Bell**, H Kim (2021). Association of long-term exposure to air pollution with chronic sleep deprivation in adults from 141 urban communities in South Korea: a community-level longitudinal study, 2008–2016. *Epidemiology and Psychiatric Sciences* 30(e57), p. 1-9.

272. Son JY, RL Muenich, D Schaffer-Smith, ML Miranda, **ML Bell** (2021). Exposure to concentrated animal feeding operations (CAFOs) and risk of mortality in North Carolina, USA. *Science of the Total Environment* 799, Art. 149407.

271. Chen G et al. (2021). Mortality risk attributable to wildfire-related $PM_{2.5}$ pollution: a global time series study in 749 locations. *Lancet Planetary Health* 5(9), p. E579-E587.

270. Kim H, JT Lee, KC Fong, **ML Bell** (2021). Alternative adjustment for seasonality and long-term time-trend in time-series analysis for long-term environmental exposures and disease counts. *BMC Medical Research Methodology* 21, 2.

269. Local Burden of Disease Vaccine Coverage Collaborators. Sbarra AN et al. (2021). Mapping routine measles vaccination in low- and middle-income countries. *Nature* 589(415-419).

268. **Bell ML**, KC Fong (2021). Gender differences in first/corresponding authorship in public health research submissions during the COVID-19 pandemic. *American Journal of Public Health* 111(1), p. 159-163.

267. Heo S, W Lee, **ML Bell** (2021). Suicide and associations with air pollution and ambient temperature: a systematic review and meta-analysis. *International Journal of Environmental Research and Public Health* 18, Art. 7699.

266. Ye T, S Guo, Y Xie, Z Chen, MJ Abramson, J Heyworth, S Hales, A Woodward, **M Bell**, Y Guo, S Li (2021). Health and related economic benefits associated with reduction in air pollution during COVID-19 outbreak in 367 cities in China. *Ecotoxicology and Environmental Safety* 222, Art. 112481.

265. Son JY, HM Choi, KC Fong, S Heo, CC Lim, **ML Bell** (2021). The roles of residential greenness in the association between air pollution and health: A systematic review. *Environmental Research Letters* 16(9), Art. 093001.

264. Heo S, C Chen, H Kim, B Sabath, F Dominici, JL Warren, Q Di, J Schwartz, **ML Bell** (2021). Temporal changes in associations between high temperature and hospitalizations by greenspace: analysis in the Medicare population in 40 U.S. northeast counties. *Environment International* 156, Art. 106737.

263. Zhang Y, S Smith, **ML Bell**, A Meuller, M Eckleman, S Wylie, EL Sweet, P Chen, DA Niemeier (2021). Pollution inequality 50 years after the clean air act: the need for hyperlocal data and action. *Environmental Research Letters* 6, Art. 071001.

262. Lee W, M Choi, **ML Bell**, C Kang, J Jang, I Song, Y Kim, K Ebi, H Kim (accepted). Effects of urbanization on vulnerability to heat-related mortality in urban and rural areas in South Korea: A nationwide district-level time-series study. *International Journal of Epidemiology.*

261. Chen C, JA Warrington, F Dominici, RD Peng, DC Esty, Y Wang, JF Bobb, **ML Bell** (2021). Temporal variation in association between short-term exposure to fine particulate matter and hospitalisations in older adults in the USA: A long-term time-series analysis of the US Medicare dataset. *Lancet Planetary Health* 5, p. e534-541.

260. Zhao, Q, Y Guo, T Ye, A Gasparrini, S Tong, A Overcenco, A Urban, A Schneider, A Entezari, AM Vicedo-Cabrera, A Zanobetti, A Zeka, A Tobias, B Nunes, B Alahmad, B Armstrong, B Forsberg, SC Pan, C Íñiguez, C Ameling, C De la Cruz Valencia, CC Åström, D Houthuijs, DV Dung, D Royé, E Indermitte, E Lavigne, F Mayvaneh, F Acquaotta, F de'Donato, FD Ruscio, F Sera, G Carrasco-Escobar, H Kan, H Orru, H Kim, IH Holobaca, J Kyselý, J Madureira, J Schwartz, JJK Jaakkola, K Katsouyanni, MH Diaz, MS Ragettli, M Hashizume, M Pascal, M de Sousa Zanotti Stagliorio Coélho, NV Ortega, N Ryti, N Scovronick, P Michelozzi, PM Correa, P Goodman, PHN Saldiva, R Abrutzky, S Osorio, S Rao, S Fratianni, TN Dang, V Colistro, V Huber, W Lee, X Seposo, Y Honda, YL Guo, **ML Bell**, S Li (2021). Global, regional, and national burden of mortality associated with non-optimal temperatures from 2000 to 2019: A three-stage modelling study. *Lancet Planetary Health* 5(7), p. e415-e425.

259. Kim H, A Zanobetti, **ML Bell** (2021). Temporal transition of racial/ethnic disparities in COVID-19 outcomes in 3108 counties of the United States: three phases from January to December, 2020. *Science of the Total Environment* 791, Art. 148167.

258. Burrows K, JY Son, **ML Bell** (2021). Do socioeconomic factors influence who is most likely to relocate after environmental disasters? A case study in Indonesia. *Sustainability* 13(11), Art. 6228.

257. Goldsmith L, **ML Bell** (2022). Queering environmental justice: Unequal environmental health burden on the LGBTQ+ community. *American Journal of Public Health* 112(1), p. 79-87.

256. Kim H, **ML Bell** (2021). Air pollution and COVID-19 mortality in New York City. *American Journal of Respiratory and Critical Care Medicine* 204(1), p. 97-99.

255. Wang K, Y Zhang, S Yu, DC Wong, J Pleim, R Mathur, JT Kelly, **M Bell** (2021). A comparative study of two-way and offline coupled WRF v3.4 and CMAQ v5.0.2 over the contiguous U.S.: Performance evaluation and impacts of chemistry-meteorology feedbacks on air quality. *Geoscientific Model Development.* 14, p. 7189-7221.

254. Choi HM, C Chen, JY Son, **ML Bell** (2021). Temperature-mortality relationship in North Carolina, USA: Regional and urban-rural differences. *Science of the Total Environment* 787(15), 147672.

253. Heo S, MU Desai, SR Lowe, **ML Bell** (2021). Impact of changed use of greenspace during COVID-19 pandemic on depression and anxiety. *International Journal of Environmental Research and Public Health* 18(11), 5842.

252. Fong KC, **ML Bell** (2021). Do fine particulate air pollution (PM$_{2.5}$) exposure and its attributable premature mortality differ for immigrants compared to those born in the United States? *Environmental Research* 196, 110387.

251. Qiu C, JS Ji, **ML Bell** (2021). Effect modification of greenness on temperature-mortality relationship among older adults: A case-crossover study in China. *Environmental Research* 197, 111112.

250. Clark CJ, JL Warren, N Kadan-Lottick, X Ma, **ML Bell**, JE Saiers, NC Deziel (2021). Community concern and government response: Identifying socio-economic and demographic predictors of oil and gas complaints and drinking water impairments in Pennsylvania. *Energy Research & Social Science* 76, 102070.

249. Lee W, H Kim, HM Choi, S Heo, KC Fong, J Yang, C Park, H Kim, **ML Bell** (2021). Urban environments and COVID-19 in three Eastern states of the United States. *Science of the Total Environment* 779, 146334.

248. X Meng, C Liu, R Chen, F Sera, AM Vicedo-Cabrera, A Milojevic, Y Guo, S Tong, M de Sousa Zanotti Stagliorio Coelho, PHN Saldiva, E Lavigne, PM Correa, Nv Ortega, SO Garcia, J Kyselý, A Urban, H Orru, M Maasikmets, JJK Jaakkola, N Ryti, V Huber, A Schneider, K Katsouyanni, A Analitis, M Hashizume, Y Honda, CFS Ng, B Nunes, JP Teixeira, IH Holobaca, S Fratianni, H Kim, A Tobias, C Íñiguez, B Forsberg, C Åström, MS Ragettli, YLL Guo, SC Pan, S Li, **ML Bell**, A Zanobetti, J Schwartz, T Wu, A Gasparrini, H Kan (2021). Short term associations of ambient nitrogen dioxide with daily total, cardiovascular, and respiratory mortality: A multi-location analysis in 398 cities. *British Medical Journal* 372, 534.

247. Nori-Sarma A, Thimmulappa R, Venkataraman GV, Warren JL, Berman JD, Whittaker SD, Kulick ER, Wellenius GA, Maehsh PA, **ML Bell** (2021). NO$_2$ exposure and lung function decline in a cohort of adults in Mysore, India. *Environmental Research Communications* 3, 055001.

246. Kim H, **ML Bell**, Lee JT (2021). Multi-dimensional community characteristics in linking particulate matter pollution and cause-specific mortality: 72 communities of South Korea. *Environmental Research* 196, 110989.

245. Warren JL, ML Miranda, JL Tootoo, CE Osgood, **ML Bell** (2021). Spatial distributed lag data fusion for estimating ambient air pollution. *Annals of Applied Statistics* 15(1), p. 323-342.

244. Son JY, MB Sabath, KJ Lane, ML Miranda, F Dominici, **ML Bell** (2021). Long-term exposure to PM$_{2.5}$ and mortality for the older population in North Carolina and Michigan: Effect modification by residential greenness. *Epidemiology* 32(4), p. 477-486.

243. Chen, K, S Breitner, K Wolf, M Stafoggia, F Sera, AM Vicedo-Cabrera, Y Guo, S Tong, E Lavigne, PM Correa, NV Ortega, H Kan, J Jaakkola, N Ryti, V Huber, M Scortichini, M Hashizume, Y Honda, B Nunes, J Madureira, IH Holobâc, S Fratianni, H Kim, W Lee, A Tobias, C Íñiguez, B Forsberg, C Åström, MS Ragettli, YLL Guo, BY Chen, S Li, A Milojevic, A Zanobetti, J Schwartz, **ML Bell**, A Gasparrini, A Schneider (2021). Ambient carbon monoxide and daily mortality: A global time-series study in 337 cities. *Lancet Planetary Health* 5(4), p. E191-E199.

242. Huang K, X Lee, B Stone, **M Bell**, KC Seto (2021). Persistent increases in nighttime heat stress from urban expansion despite heat island mitigation. *Journal of Geophysical Research – Atmospheres* 126(4), e2020JD033831.

241. Kelly JR, C Jang, B Timin, Q Di, J Schwartz, Y Liu, A van Donkelaar, RV Martin, V Berrocal, **ML Bell** (2021). Examining $PM_{2.5}$ concentrations and exposure using multiple models. *Environmental Research* 196, 110432.

240. Son JY, RL Muenich, D Schaffer-Smith, ML Miranda, **ML Bell** (2021). Distribution of environmental justice metrics for exposure to CAFOs in North Carolina, USA. *Environmental Research* 195, 110862.

239. Abbafati C et al. (2020). Five insights from the Global Burden of Disease Study 2019. *Lancet* 396(10258), p. 1135-1159.

238. Abbafati C et al. (2020). Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: A systematic analysis for the Global Burden of Disease Study 2019. *Lancet* 396(10258), p. 1204-1222.

237. Weins Ke et al. (2020). Mapping geographic inequalities on oral rehydration therapy coverage in low-income and middle-income countries, 2000-2017. *Lancet Global Health* 8(8), p. 1038-1060.

236. Nyaduna SD, GA Tessema, B Mullins, B Kumi-Boateng, **ML Bell**, G Pereira (2020). Ambient air pollution, extreme temperatures, and birth outcomes: A protocol for an umbrella review, systematic review and meta-analysis. *International Journal of Environmental Research and Public Health* 17(22), 8658.

235. Heo S, CC Lim, **ML Bell** (2020). Relationships between local green space and human mobility patterns during COVID-19 for Maryland and California, USA. *Sustainability* 12(22), 9401.

234. Global Burden of Disease (GBD) 2019 Demographic Collaborators (2020). Global age-sex-specific fertility, mortality, healthy life expectancy (HALE), and population estimates in 204 countries and territories, 1950-2019: A comprehensive demographic analysis for the Global Burden of Disease Study 2019. *The Lancet* 369(10258), p. 1160-1203.

233. Global Burden of Disease (GBD) 2019 Risk Factors Collaborators (2020). Global burden of 87 risk factors in 204 countries and territories, 1990-2019: A systematic analysis for the Global Burden of Disease Study 2019. *Lancet* 396(10258), p. 1135-1159.

232. Lozano R, N Fullman, . . . **ML Bell**, . . .S Zodpey, CJL Murray (2020). Measuring universal health coverage based on an index of effective coverage of health services in 204 countries and territories, 1990-2019: A systematic analysis for the Global Burden of Disease Study 2019. *The Lancet* 396(10258), p. 1250-1284.

231. Hess JJ, N Ranadive, . . . **ML Bell**, . . .Y Zhang, KL Ebi (2020). Guidelines for modeling and reporting health effects of climate change mitigation actions. *Environmental Health Perspectives* 128(1), 115001. https://doi.org/10.1289/EHP6745.

230. Xu R, P Yu, MJ Abramson, FH Johnston, JM Samet, **ML Bell,** A Haines, KL Ebi, S Li, Y Guo (2020). Wildfires, global climate change, and human health. *New England Journal of Medicine* 383(22), p. 2173-2181.

229. Deshpande A, MK Miller-Petrie, . . . **ML Bell**, . . . SI Hay, RC Reiner Jr (2020). Mapping geographical inequalities in access to drinking water and sanitation facilities in low-income and middle-income countries, 2000-17. *The Lancet Global Health* 8(9), p. e1162-e1185.

228. Gao Y, J Zhang, F Yan, LR Leung, K Luo, Y Zhang, **ML Bell** (2020). Nonlinear effect of compound extreme weather events on ozone formation over the United States. *Weather and Climate Extremes* 30, 100285.

227. Lee W, Y Kim, F Sera, A Gasparrini, R Park, HM Choi, K Prifti, **ML Bell**, R Abrutzky, Y Guo, S Tong, M de Sousa Zanotti Stagliorio Coelho, PHN Saldiva, E Lavigne, H Orru, E Indermitte, JJK Jaakkola, NRI Ryti, M Pascal, P Goodman, A Zeka, M Hashizume, Y Honda, MH Diaz, C De la Cruz Valencia, A Overcenco, B Nunes, JP Teixeira, N Scovronick, F Acquaotta, A Tobias, AM Vicedo-Cabrera, MS Ragettli, YLL Guo, BY Chen, S Li, B Armstrong, A Zanobetti, J Schwartz, H Kim (2020). Projections of excess mortality related to diurnal temperature range under climate change: A multi-country study. *Lancet Planetary Health* 4(11), p. E512-E521.

226. Schuch D, M de Fatima Andrade, Y Zhang, ED de Frietas, **ML Bell** (2020). Short-term responses of air quality to changes in emissions under the Representation Concentration Pathway 4.5 Scenario over Brazil. *Atmosphere* 11(8), 799. https://doi.org/10.3390/atmos11080799.

225. Yu J, D Yang, Y Kim, M Hashizume, A Gasparrini, B Armstrong, Y Honda, A Tobias, F Sera, AM Vicedo-Cabrera, H Kim, C Íñiguez, E Lavigne, MS Ragettli, N Scovronick, F Acquaotta, B Chen, YL Guo, M Coelho, P Saldiva A Zanobetti, J Schwartz, **ML Bell**, M Diaz, C Valencia, I Holobâcă, S Fratianni, Y Chung. Seasonality of suicide: A multi-country multi-community observational study (2020). *Epidemiology and Psychiatric Sciences* 29, e163. https://doi.org/10.1017/S2045796020000748.

224. Son JY, KC Fong, S Heo, H Kim, CC Lim, **ML Bell** (2020). Reductions in mortality resulting from reduced air pollution levels due to COVID-19 mitigation measures. *Science of the Total Environment* 744, 141012. Doi: 10.1016/j.scitotenv.2020.141012.

223. Lee W, SS Hwang, I Song, C Park, H Kim, IK Song, H Choi, K Prifti, Y Kwon, J Kim, S Oh, Y Yang, M Cha, Y Kim, **ML Bell**, H Kim (2020). COVID-19 in South Korea: epidemiological and spatiotemporal patterns of the spread and the role of aggressive diagnostic tests in the early phase. *International Journal of Epidemiology* 49(4), p. 1106-1116.

222. Zhang, Y, P Yang, Y Gao, R Leung, **ML Bell** (2020). Health and economic impacts of air pollution induced by weather extremes over the continental U.S. *Environment International* 143, Art No. 105921.

221. Hashizume M, Y Kim, CFS Ng, Y Chung, L Madaniyazi, **ML Bell**, L Guo, H Kan, Y Honda, SM Yi, H Kim, Y Nishiwaki (2020). Health effects of Asian dust: a systematic review and meta-analysis. *Environmental Health Perspectives* 128(6), 66001.

220. Reiner, Jr. RC, . . . **ML Bell** . . . (2020). Mapping geographical inequalities in childhood diarrhoeal morbidity and mortality in low-income and middle-income countries, 2000–17: analysis for the Global Burden of Disease Study 2017. *The Lancet* 395(10239), p. 1779-1801.

219. Woo SHL, JC Liu, X Yue, L Mickley, **ML Bell** (2020). Air pollution from wildfires and human health vulnerability in Alaskan communities under climate change. *Environmental Research Letters* 15(9), Article No. 094019, https://doi.org/10.1088/1748-9326-ab9270.

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COMMENTARIES, LETTERS, AND EDITORIALS

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Bobb J, R Peng, **M Bell** F Dominici (2014). Letters: Heat waves and global warming death states. *Orange County Register.* May 16, 2014.

Bell ML (2013). Comment: Temperature and risk of stroke mortality in China. Invited commentary. *Neurology* 81(12), p. 1069.

Anderson GB, JR Krall, RD Peng, **ML Bell** (2013). Response to "Equivocal evidence for confounding effects of components of particulate matter on the relationship between ozone and mortality." *American Journal of Epidemiology* 117(12), p. 1460-1462.

Gent JF, **ML Bell** (2010). Air pollution, population vulnerability, and US EPA ambient air quality standards. Invited commentary. *American Journal of Respiratory and Critical Care Medicine* 182(3), p. 296-297.

Bell ML, K Ebisu, K Belanger (2008). Air pollution and birth weight: Bell et al. respond. *Environmental Health Perspectives* 116(3), p. A106-107.

Bell ML, T Holloway (2007). Editorial: Global impacts of particulate matter air pollution. *Environmental Research Letters* 2(4), 045026.

Dominici F, RD Peng, **ML Bell**, L Pham, A McDermott, SL Zeger, JM Samet (2006). Hospital admissions and fine particulate air pollution: In reply. *Journal of the American Medical Association* 296(16), p. 1966-1967.

Samet JS, **ML Bell** (2004). Nitrogen dioxide and asthma in Australian schoolchildren. Invited commentary. *International Journal of Epidemiology* 33, p. 215-216.

Davis DL, **ML Bell**, T Fletcher (2002). A look back at the London Smog of 1952 and the half century since. Invited editorial. *Environmental Health Perspectives* 110(12), p. 734-735.

PEER-REVIEWED CONFERENCE PROCEEDINGS

Bell ML, H Ellis (2005). The impact of biogenic VOC emissions on tropospheric ozone formation in the Mid-Atlantic region of the United States. *Air Pollution XIII,* WIT Press, Southampton, UK, p. 89-95.

Bell ML, BF Hobbs, EM Elliott, H Ellis, Z Robinson (2000). An evaluation of multicriteria decision-making methods in integrated assessment of climate policy. In *Research and Practice in Multiple Criteria Decision Making: Lecture Notes in Economic and Mathematical Systems* 487, p. 228-237.

BOOK CHAPTERS

Bell ML (2019). Chap. 34. The Public Health Science of Environmental Justice. In *A Better Planet: Forty Big Ideas for a Sustainable Future.* DC Esty (Ed). Yale University Press: New Haven, CT.

Warren JL, **ML Bell** (2019). Chap. 20. Alternative Models for Estimating Air Pollution Exposures – Land Use Regression and Stochastic Human Exposure and Dose Simulation for particulate matter (SHEDS-PM). In *Handbook of Environmental and Ecological Statistics.* AE Gelfand, M Fuentes, JA Hoeting, RL Smith (Eds). Chapman & Hall/CRC Handbooks of Modern Statistical Methods: Boca Raton, FL.

Bell ML (2018). Kuwait Oil Fires (1991): A Deliberate Environmental Disaster During Wartime. Chapter 8 in *Air Pollution Episodes.* P Brimblecombe (Eds). World Scientific: New Jersey.

Gurung A, A Panday, **ML Bell** (2016). Air pollution and its health impacts in the increasingly urbanizing Kathmandu Valley of Nepal. Chap. 6 in *Reflections on the Built Environment and Associated Practices. Volume II (2016), Issues in Urban Development of the Kathmandu Valley.* Compiled by Neel Kamal Chapagain with editorial assistance from Subik Kumar Shrestha and Kishan Datta Bhatta. Published by Tribhuvan University.

Thurston GD, **ML Bell** (2014, 2021). The Human Health Co-benefits of Air Quality Improvements Associated with Climate Change Mitigation. Chap. 8 in *Global Climate Change and Public Health.* KE Pinkerton, WN Rom (Eds). Humana Press: New York, NY.

Thurston GD, **ML Bell** (2013). Aerosols, Global Climate, and the Human Health Co-Benefits of Climate Change Mitigation. Chap. 13 in *Aerosols Handbook: Measurement, Dosimetry, and Health Effects, Second Edition.* LS Ruzer, NH Harley (Eds). Taylor and Francis: Boca Rotan, FL.

Cohan D, A Digar, **ML Bell** (2010). Influence of concentration-response temporal metrics on control strategy optimization. Section 4.18 of *Air Pollution Modeling and Its Application XX*, NATO Science for Peace and Security Series – C: Environmental Security. DG Steyn, ST Rao (Eds.). Springer Publishing, p. 421-425.

Bell ML, JM Samet (2005, 2009, 2016). Air Pollution. Chap. in *Environmental Health: From Local to Global.* H Frumkin (Ed.). John Wiley & Sons, Jossey-Bass: San Francisco, CA. Winner of the 2005 Award for Excellence in Professional and Scholarly Publishing, Allied/Health Sciences category, by the Association of American Publishers.

Samet JM, **ML Bell** (2006). Air Pollution Epidemiology. In *Occupational and Environmental Medicine.* WN Rom (Ed.). Lippincott Williams & Wilkins: Philadelphia, PA.

Anderson RM, BF Hobbs, **ML Bell** (2002). Multiobjective decision making in negotiation and conflict resolution. Chap. 6 of Topic 1.40.4, "Formal Models for Conflict Resolution", KW Hipel (Ed.). In *The Encyclopedia of Life Support Systems (EOLSS).*

S̲E̲L̲E̲C̲T̲E̲D̲ ̲R̲E̲P̲O̲R̲T̲S̲

Morgenstern RD, W Harrington, JS Shih, **ML Bell** (2012). *Accountability Analysis of Title IV Phase 2 of the 1990 Clean Air Act Amendments.* Health Effects Institute: Boston, MA. Research Report No. 168. (peer-reviewed).

Bell ML (2012). *Assessment of the Health Impacts of Particulate Matter Characteristics*. Health Effects Institute: Boston, MA. Research Report No. 161 (peer-reviewed).

Adem A, **M Bell,** M Cozzens, C Dean, F Dominici, A Friedman, F Roberts, S Sain, AA Yakubu (2011). *Human Well-Being and the Natural Environment*. In Mathematical and Statistical Challenges for Sustainability, M Zoeens, FS Roberts (Eds). National Science Foundation, Center for Discrete Mathematics and Theoretical Computer Science (DIMACS): Piscataway, NJ.

National Research Council (2010). *Review of the Dept. of Defense Enhanced Particulate Matter Surveillance Program Report.* Committee for Review of the DOD's Enhanced Particulate Matter Surveillance Program Report, Board on Environmental Studies and Toxicology, Division on Earth and Life Studies. The National Academies Press: Washington, DC.

Cifuentes LA, H Jorquera, F Gaioli, M Conte-Grande, N Gouveia, D Davis, **M Bell** (2004). *Promoting Public Health Assessment in Energy and Environmental Planning.* Report to the InterAmerican Institute for Global Change Research.

PRESENTATIONS

I̲N̲V̲I̲T̲E̲D̲ ̲P̲R̲E̲S̲E̲N̲T̲A̲T̲I̲O̲N̲S̲

2022 (scheduled). University of California Berkeley, Center for Environmental and Occupational Health. Presented remotely.

2021. University of Connecticut, Graduate Program in Public Health. Storrs, CT. Presented remotely.

2021. Boston University Graduate Women in Science and Engineering. Boston, MA.

2021. Harvard University, T.H. Chan School of Public Health, Dept. of Environmental Health. Boston, MA.

2021. UN Climate Change Conference, University of Cambridge. Presented remotely.

2021. ISPE 37th International Conference on Pharmacoepidemiology and Therapeutic Risk Management. Presented remotely.

2021. Organization of Teratology Information Specialists (OTIS)/MotherToBaby Annual Education Conference. Presented remotely.

2021. Korea University Precision Public Health Symposium. Presented remotely.

2021. Brown University School of Public Health. Presented remotely.

2021. Yale Center on Climate Change and Health. Presented remotely.

2021. AAAS Annual Meeting. Presented remotely.

2020. Northeastern University, Dept. of Civil and Environmental Engineering. Presented remotely.

2020. International Society for Environmental Epidemiology (ISEE) Annual Conference. Presented remotely.

2020. Global Environmental Health Day, National Institutes for Environmental Health Studies. Presented remotely.

2020. Case Western Reserve University School of Law. Presented remotely.

2020. University of Illinois at Champaign.

2019. Royal Society, London UK.

2019. The Center for Urban and Regional Analysis (CURA) at The Ohio State University. Columbus, Ohio.

2019. International Society for Environmental Epidemiology (ISEE). Utrecht, Netherlands.

2019. Atmospheric Chemistry Gordon Research Conference. Newry, Maine.

2019. New York University School of Medicine. New York, NY.

2019. Seoul National University, School of Public Health. Seoul, Korea.

2019. Global Research Laboratory (GRL) International Symposium. Seoul, Korea.

2019. Harold and Marilyn Menkes Memorial Lectureship. Johns Hopkins Bloomberg School of Public Health. Baltimore, Maryland.

2018. International Society for Environmental Epidemiology (ISEE). Ottawa, Canada.

2018. With JC Liu. International Society for Environmental Epidemiology (ISEE). Ottawa, Canada.

2018. Arizona State University Discovery Series. ASU Biodesign Institute. Tempe, Arizona.

2018. Japan Environment and Children's Study (JECS) Workshop. Ministry of the Environment, Government of Japan. Fukushima, Japan.

2018. International Symposium on Children's Environmental Health. Japanese National Institute for Environmental Studies. Tsukuba, Japan.

2018. International Society for Environmental Epidemiology (ISEE). Ottawa, Canada.

2018. Annual International Symposium: Interdisciplinary Research for Societal Impact. Hong Kong Polytechnic University, Hong Kong.

2018. Forum for Strategic Impact for African Women Leaders. New Haven, CT.

2018. China Health Policy and Management Society 2nd Conference. New Haven, CT.

2018. Yale School of Public Health. New Haven, CT.

2017. Howard H. Baker Center for Public Policy. University of Tennessee – Knoxville. Knoxville, TN.

2016. Columbia University. Carnegie Mellon University. Pittsburgh, PA.

2016. Columbia University. Epidemiology Grand Rounds (CUEGR) 2016 Lecture Series. New York, NY.

2016. Washington University in St. Louis, School of Engineering & Applied Science. St. Louis, MO.

2016. Conference of the International Society of Environmental Epidemiology. Rome, Italy.

2016. Statistical Methods and Analysis of Environmental Health Data Workshop. SAMSI. Mumbai, India.

2016. North Carolina State University, Department of Marine, Ecological, and Atmospheric
    Sciences. Raleigh, NC.
2016. Invited keynote. North Carolina State University Global Partnership Network (UGPN)
    Workshop on Air Quality, Climate, and Health. Raleigh, NC.
2016. International Symposium on Health Risk Assessment of Climate Change and Air Pollution.
    Global Research Laboratory and Seoul National University, Graduate School of Public
    Health. Seoul, Korea.
2015. 22nd International Conference on Aerosol Science and Technology. Taiwan.
2015. Harvard University, Biostatistics Environmental Working Group, Boston, MA.
2015. Harvard University, Centennial Women Leaders in Public Health Lecture, Boston, MA.
2015. Keynote speaker. North Carolina Clean Air Conference. Raleigh, NC.
2014. The John C. and Susan S. G. Wierman Lecture in Air Quality Data Analysis. Johns
    Hopkins University, Dept. of Applied Mathematics and Statistics, Baltimore, MD.
2014. Modeling the Health Risks of Climate Change Workshop. National Academies.
    Washington, DC.
2014. Workshop on State-of-the-Science Spatiotemporal Characterization of Ambient Air
    Pollution. Atlanta, GA.
2014. Harvard University School of Public Health, Dept. of Biostatistics. Boston, MA.
2014. Yale Young Global Scholars Program. New Haven, CT.
2014. Mini Symposium on Spatial and Environmental Studies. Yale University, New Haven, CT.
2014. Geophysical Fluids Dynamics Laboratory. Princeton, NJ.
2014. University of New Haven, College of Engineering. New Haven, CT.
2013. Icahn School of Medicine at Mount Sinai. Child Health Research Seminar. New York, NY.
2013. Johns Hopkins Bloomberg School of Public Health, Environmental Health Sciences Grand
    Rounds. Baltimore, MD.
2013. International Symposium on Health Risk Assessment of Climate Change and Air Pollution.
    Global Research Laboratory (GRL) and Seoul National University, Graduate School of
    Public Health. Seoul, Korea.
2013. Fiocruz. São Paulo, Brazil.
2013. Ozone Transport Commission. New Haven, CT.
2013. University of Washington, School of Public Health. Seattle, WA.
2013. Columbia University, Mailman School of Public Health. New York, NY.
2013. Northeast Climate Consortium and University of Massachusetts at Amherst School of
    Public Affairs. Amherst, MA.
2013. Annual Meeting for Society of Toxicology. San Antonio, TX.
2013. Harvard University, School of Public Health. Boston, MA.
2012. Conference of the International Society for Environmental Epidemiology (ISEE).
    Columbia, SC.
2012. International Conference on Environmental Health. Korean Society of Environmental
    Health, Korean Society of Toxicology. Seoul, Korea.
2012. Johns Hopkins University, Environment, Energy, Sustainability, and Health Institute.
    Baltimore, MD.
2012. University of Pittsburgh, School of Public Health, Dept. of Epidemiology. Pittsburgh, PA.
2012. With RD Peng and F Dominici. American Association of Geographers Conference. New
    York, NY.
2011. Yale University, School of Public Health, Environmental Health Sciences Division. New
    Haven, CT.
2011. Atmospheric Chemistry and Health: Current Knowledge and Future Directions Workshop.
    Boston, MA.
2011. With GB Anderson. Methods for investigating associations of weather and climate with
    health - workshop. Barcelona, Spain.

2011. University of Pittsburgh, School of Public Health, Dept. of Environmental and Occupational Health. Pittsburgh, PA.

2010. University of Wisconsin, Nelson Institute for Environmental Studies and the Dept. of Civil and Environmental Engineering. Madison, WI.

2010. Air Pollution and Health: Bridging the Gap from Sources to Health Outcomes. Conference of the American Association of Aerosol Research. San Diego, CA.

2010. University of Connecticut, Environmental Engineering Program. Storrs, CT.

2010. University of New Haven, College of Engineering. New Haven, CT.

2009. New York University, School of Medicine. New York, NY.

2009. Johns Hopkins Bloomberg School of Public Health, Risk Sciences and Public Policy Institute. Baltimore, MD.

2009. Statistical and Applied Mathematical Sciences Institute. Program on Space-time Analysis for Environmental Mapping, Epidemiology and Climate Change. Research Triangle Park, NC.

2009. Uncertainty Analyses in Integrated Air Quality Planning Workshop. Atlanta, GA.

2009. [2 presentations]. Joint Statistical Meetings. Washington, DC.

2009. Poster presentation at U.S. EPA Board of Scientific Counselors (BOSC) meeting. Research Triangle Park, NC.

2009. North Carolina State University, Dept. of Statistics, Raleigh, NC.

2008. U.S. EPA Particulate Matter Center Directors' Meeting. Rochester, NY.

2008. Teleconference presentation to U.S. EPA, Research Triangle Park, NC.

2008. University of Georgia, College of Public Health. Athens, GA.

2008. Yale Risk Assessment Forum. New Haven, CT.

2008. Joint Statistical Meetings. Denver, CO.

2008. Rice University, Dept. of Civil and Environmental Engineering. Houston, TX.

2008. Duke University, Integrated Toxicology and Environmental Health Program. Durham, NC.

2008. Uncertainty Analyses in Integrated Air Quality Planning Workshop. Atlanta, GA.

2007. Testimony to the U.S. Senate Committee on Environment and Public Works, Subcommittee on Clean Air and Nuclear Safety on Mortality Effects of Ozone. Washington, DC.

2007. Wesleyan University, Dept. of Earth and Environmental Sciences. Middletown, CT.

2007. Ozone Transport Commission Annual Meeting. Providence, RI.

2007. Yale School of Medicine, Dept. of Occupational and Environmental Medicine. New Haven, CT.

2007. The National Academies, Board on Environmental Studies and Toxicology. Presentation to the NRC's Committee on Estimating Mortality Risk Reduction Benefits from Decreasing Tropospheric Ozone Exposure. Washington, DC.

2007. Princeton University. Program in Science, Technology, and Environmental Policy. Princeton, NJ.

2007. Presentation and panel discussion. New York University, Program in Global Public Health and NYU Center of Global Affairs. New York, NY.

2006. Columbia University. New York, NY.

2006. Air Quality Data in Health Effects Research. Health Effects Institute. Newton, MA.

2006. Air and Waste Management Association Annual Conference. New Orleans, LA.

2006. With DL Davis. Options for Energy Production from Non-Carbon-Emitting Sources, a Symposium. University of Wisconsin. Madison, WI.

2006. Health Effects Institute Annual Conference. San Francisco, CA.

2006. University of New Hampshire, Dept. of Earth Sciences. Durham, NH.

2006. Johns Hopkins University, Dept. of Geography and Environmental Engineering. Baltimore, MD.

2005. University of Connecticut, Environmental Engineering Program. Storrs, CT.

2005. Columbia University, Mailman School of Public Health. New York, NY.

2005. Connecticut Dept. of Environmental Protection. Hartford, CT.
2005. Yale Institute for Biospheric Studies. New Haven, CT.
2004. The Inaugural Meeting of the Connecticut Science Center Collaborative. Peabody Museum. New Haven, CT.
2004. Promoting Public Health Assessment in Energy and Environmental Planning Workshop: Key Issues in Air Pollution Science and Policy for Developing Countries. University of São Paulo School of Medicine. São Paulo, Brazil.
2004. With Q Tong. National Center for Atmospheric Research (NCAR) Summer Colloquium on Climate and Health. NCAR. Boulder, CO.
2002. With DL Davis. The Big Smoke: Fifty Years After the 1952 London Smog, Commemorative Conference. London, England.
2002. International Air Pollution and Energy/Climate Policy Collaboration Workshop. Vancouver, Canada.
1996. Center for Global Environmental Studies, Oak Ridge National Laboratory. Oak Ridge. TN.

FUNDED GRANTS

2021-2024, *Health Effects Institute* $799,999
    Australian Fires and Perinatal Health Risks
    PI: **ML Bell**
2021-2023, *Australian Research Council* (DP210102076)   (unfunded collaborator)
    Multi-Country Study on Health Effects of Bushfire Air Pollution
    PI: Yuming Guo (Monash University)
2021-2022, *Yale Women Faculty Forum* $2000
    Authorship of Scientific Publications by Gender: The COVID-19 Pandemic and Beyond
    PI: **ML Bell**
2021-2024, *Robert Wood Johnson Foundation* $303,972
    Impact of schoolyards to playgrounds renovations on academic performance and health of New York City students.
    PI: Chris C. Lim (Arizona State University)
2021, *Environmental Defense Fund* $100,000
    Tolls, Processes and Protocols Supporting Credible Measurement
    PI: Robert Dubrow / Kai Chen (subaward from Resources for the Future)
2021, *High Tide Foundation* $100,000
    Ethane Cracker Plants in the United States: Emissions and community Vulnerability
    PI: Robert Dubrow (Yale)
2020-2022, *Wellcome Trust* $635,912
    Air Pollution, Heat, and Health in Brazil under Climate Change
    PI: **ML Bell**
2020-2021, Yale Climate Change and Health Center $30,000
    Temporal Trends in the Association between Greenspace, Temperature, and Health
    Co-PI: Joshua Warren, **ML Bell**
2019, Hecht Global Health Faculty Award $49,918
    Developing an Implementation Strategy for the Deployment of the World Health Organization Non-Communicable Disease Kits for Energy Settings
    Co-PI: Saria Hassan, Marcella Nunez-Smith, **ML Bell**
2017-2022, *National Institutes of Health* (R01MD012769) $3,927,549
    Environmental Health Disparities in an Older Population
    PI: **ML Bell**
2017-2020, *Environmental Protection Agency* (CR839249) $2,000,000

Drinking Water Vulnerability and Neonatal Health Outcomes in Relation to Oil and Gas
Production in the Appalachian Basin (Pennsylvania and Ohio Water and Energy Resources
Study)
PI: Nicole Deziel (Yale)

2015-2022, *Environmental Protection Agency* (R835871) $9,999,990
Solutions for Energy AiR Climate & Health (SEARCH) Center
PI: **ML Bell**

2014-2016, *National Institutes of Health* (R21ES022585) $454,322
Vulnerability and Adaptation to Heat and Air Pollution in a Changing Climate
PI: Francesca Dominici (Harvard)

2012-2014, *National Institutes of Health* (R21ES021427) $470,640
Vulnerability to Health Effects of Wildfires under a Changing Climate in the Western U.S.
PI: **ML Bell**

2011-2016, *National Institutes of Health* (R01ES019587) $2,683,154
Effects of Fine Particle Composition on Birth Outcomes
Co-PI: **ML Bell**, Kathleen Belanger (Yale School of Public Health)

2011-2016, *National Institutes of Health* (R01ES019560) $1,808,346
Statistical Methods for Complex Environmental Health Data
PI: Roger D. Peng (Johns Hopkins University)

2011-2015, *U.S. Environmental Protection Agency* (EPA R834798) $7,997,561
Air Pollution Mixtures: Health Effects Across Life Stages
PI: Petros Koutrakis (Harvard University)

2011-2013, *National Institutes of Health* (R21ES020152) $481,764
Extreme Heat and Human Health: Characterizing Vulnerability in a Changing Climate
PI: Roger D. Peng (Johns Hopkins University)

2009-2014, *National Institutes of Health* (R01ES017416) $3,179,812
Traffic and Respiratory Morbidity in the Northeast
Co-PI: Brian Leaderer, Theodore Holford, Janneane Gent (Yale School of Public Health)

2008-2013, *National Institutes of Health* (R01ES016317) $2,984,687
Effects of Air Pollution and Traffic on Birth Outcomes
Co-PI: **ML Bell**, Kathleen Belanger (Yale School of Public Health)

2007-2012, *National Institutes of Health* (1 D43 TW 007864-01) $809,277
Research Training for Study of Air Pollution Control in China
PI: Tongzhang Zheng (Yale School of Public Health)

2007-2009, *U.S. Environmental Protection Agency* (EPA R833665) $299,770
Incorporating Uncertainty Analysis into Integrated Air Quality Planning
PI: Daniel Cohan (Rice University, Dept. of Civil and Environmental Engineering)

2006-2011, *National Institutes of Health,* Outstanding New Environmental Health Scientist
Award (ONES) (R01 ES 015028-02) $484,360
National Assessment of the Mortality and Morbidity Effects of Tropospheric Ozone
PI: **ML Bell**

2006-2011, *U.S. Environmental Protection Agency* (EPA R833863) $839,439
Spatial-Temporal Modeling and Analysis of Health Effects Associated with Source
Contributions and Speciation of Fine Particulate Matter
Co-PI: Montes Fuentes (North Carolina State University, Dept. of Statistics), Christopher
Frey (NCSU, Dept. of Civil, Construction, and Environmental Engineering), Yang Zhang
(NCSU, Marine Earth, & Atmospheric Sciences), **ML Bell**

2006-2011, *National Institutes of Health* (5R01 ES 011013-06) $2,457,823
Asthma Severity in Children and Fine Particulate Composition
PI: Brian Leaderer (Yale School of Public Health)

2006-2011, *U.S. Environmental Protection Agency* (RD-83241701) $7,993,275

Johns Hopkins Particulate Matter Research Center
PI: Jonathan M. Samet (Johns Hopkins Bloomberg School of Public Health)

2006-2009, *Health Effects Institute* (4727-RFA 04-4/06-2) $757,585
Accountability Assessment of Title IV of the Clean Air Act Amendments of 1990
PI: Richard Morgenstern (Resources for the Future)

2005-2006, *U.S. Environmental Protection Agency* (EP05C000125) $94,207
Ozone Threshold Analysis of City-Specific Variables
PI: **ML Bell**

2004-2008, *Health Effects Institute,* Walter A. Rosenblith Young Investigator Award $299,944
(4720-RFA04-2/04-16)
Assessment of the Mortality Effects of Particulate Matter Characteristics
PI: **ML Bell**

2005, *Centers for Disease Control* (U50/CCU322417) $54,584
A National Approach for Estimating Thresholds in Public Health Surveillance: A Case Study of Ozone and Mortality
PI: Francesca Dominici (Johns Hopkins Bloomberg School of Public Health)

DOCTORAL ADVISEES AND COMMITTEES

CURRENT DOCTORAL STUDENTS AND POSTDOCTORAL FELLOWS
Postdoctoral Advisor for Kelvin C. Fong, Whanhee Lee, and Hongyhok Kim
Doctoral Advisor for Rory Stewart, Hayon Michelle Choi, and Brandon Lewis (Yale School of the Environment) and Alisha Chan (Yale Environmental Engineering).
Doctoral Committee for Colby Buehler (Yale Environmental Engineering). Advisor: Drew Gentner.
Doctoral Committee for Wuyue Yu (New York University). Advisor: George Thurston.
Doctoral Dissertation Examiner for Vusi Nkosi. University of Pretoria, School of Health Systems and Public Health, Johannesburg, South Africa. Advisor: Kuku Voyi.

FORMER POSTDOCTORAL ASSOCIATES/FELLOWS (CURRENT/RECENT POSITION))
Chris C. Lim (Assistant Professor, University of Arizona, Mel & Enid Zuckerman College of Public Health)
Seulke Heo (Associate Research Scientist, Yale University, School of the Environment)
Steve Whittaker (STEM Instructor, Clarence Fitzroy Bryant College)
Jesse Berman (Assistant Professor, University of Minnesota, School of Public Health, Division of Environmental Health Sciences)
Kevin James Lane (Assistant Professor, Boston University, School of Public Health)
Keita Ebisu (California Environmental Protection Agency, Office of Environmental Health Hazard Assessment)
Gavin F. Pereira (Associate Professor, Curtin University, School of Public Health)
G. Brooke Anderson (Associate Professor, Colorado State University, Dept. of Environmental and Radiological Health Sciences)
Marta Vicarelli (Assistant Professor, University of Massachusetts – Amherst, Department of Economics)
Ayaz Hyder (Assistant Professor, The Ohio State University, College of Public Health)
Jiyoung Son (Associate Research Scientist, Yale University, School of the Environment)

GRADUATED DOCTORAL STUDENTS
Advisor for Kate Burrows (2021). "Environmental Mobility and Mental Health in Indonesia," Yale School of the Environment.

Doctoral Committee for Mostafijur Rahman (2020). "Outdoor PM$_{2.5}$ Mass and Chemical Component Associations with Daily Cardiovascular Medical Visits and Mortality in Dhaka, Bangladesh," New York University School of Medicine, Dept. of Environmental Medicine. Advisor: George D. Thurston.

Advisor for Chen Chen (2020). "Temporal Trends of Health Impacts from Air Pollution Today and under a Changing Climate," Yale School of the Environment.

Doctoral Committee for Suwadi Saikomol (2020). "Management of evaporation losses and atmospheric dispersion of volatile organic compounds from tank farms of oil refinery complex," Mahidol University, Faculty of Public Health, Department of Sanitary Engineering, Bangkok, Thailand. Advisor: Sarawut Thepanondh.

Doctoral Committee for Kangning Huang (2019). "Augmented Compound Urban Temperature Extreme (ACUTE) from Climate Change and Urban Expansion: Global Risk and Adaptation," Yale School of Forestry and Environmental Studies. Advisor: Karen Seto.

Advisor for Amruta Nori-Sarma (2019). "Temperature, Air Pollution, and Human Health Burden in Urban India," Yale School of Forestry and Environmental Studies.

Doctoral Committee for Chris C. Lim (2019). "Temperature, Air Pollution, and Mortality in the NIH-AARP Cohort," New York University School of Medicine, Dept. of Environmental Medicine. Advisor: George D. Thurston.

Advisor for Lan Jin (2018). "Air pollution and adverse birth outcomes in Lanzhou, China," Yale School of Forestry and Environmental Studies.

Advisor for Steve Whittaker (2018). "Climate Change Adaptation, Ambient Air Quality and Health in the Eastern Caribbean," Yale School of Public Health, Environmental Sciences Division.

Dissertation Reader for Elise Elliott (2017). "Advancing understanding of exposure and health impacts of unconventional oil and gas development: a community-based environmental health study in Ohio," Yale School of Public Health, Environmental Health Sciences. Advisor: Nicole Deziel.

Advisor for Anoba Gurung (2016). "Understanding Air Pollution and Human Health Burden Associated in Kathmandu Valley, Nepal, " Yale School of Forestry and Environmental Studies.

Advisor for Jia (Coco) Liu (2016). "Exposure and Health Impacts of PM2.5 from Wildfires in the Western US for the Present-day (2004-2009) and in the Future (2046-2051)," Yale School of Forestry and Environmental Studies.

Doctoral Committee for Xi Gong (2016). "Exploring Associations between Environmental Risk Factors and Low Birth Weight Using Geographic Big Data," Texas State University – San Marcos, Dept. of Geography. Advisor: Benjamin F. Zhan.

Doctoral Committee for Nan Zhao (2016). "Understanding the Role of Prenatal Exposure to Ambient Air Pollutants in Preterm Birth and Ultrasound Measured Fetal Growth in China," Yale School of Public Health, Environmental Health Sciences Division. Advisor: Yawei Zhang.

Advisor for Mercedes A. Bravo (2014). "Health Impacts of Air Pollution: Investigating Methods of Exposure Assessment and Factors Affecting Vulnerability," Yale School of Forestry and Environmental Studies.

External Examiner for Chit (Vivian) Pun (2014). "Associations of Chemical Composition and Source of Ambient Particulate Matter with Emergency Hospital Admissions in Hong Kong," The Chinese University of Hong Kong – The Jockey Club School of Public Health and Primary Care, Prince of Wales Hospital. Hong Kong.

Advisor for Keita Ebisu (2012). "Evaluating Effects of Environmental Exposures on Health Outcomes of Children," Yale School of Forestry and Environmental Studies.

External Examiner for Sarunya Sujaritpong (2014). "Health Risks from PM$_{2.5}$ and Ozone in Melbourne: Present and Projected Futures," Australian National University

Doctoral Committee for Hyung Joo Lee (2012). "Application of Satellite Remote Sensing and Spatial Clustering to Investigate Spatial Patterns of $PM_{2.5}$ in the New England Region, U.S." Harvard University, School of Public Health, Dept. of Environmental Health. Advisor: Petros Koutrakis.

Doctoral Committee for Antara Digar (2012). "Uncertainty in Regional Air Quality Modeling," Rice University, Dept. of Civil and Environmental Engineering. Advisor: Daniel S. Cohan.

Doctoral Reader for John Lanier Pearce (2011). "Linking Meteorology, Air Pollution, and Health in Melbourne, Australia." Monash University, School of Geography and Environmental Sciences, Australia. Advisor: Jason Beringer.

Doctoral Reader for Gavin F. Pereira (2011). "The influence of traffic-related air pollution on infant and child health: an application to fetal growth and asthma," University of Western Australia, School of Pediatrics and Child Health Advisor: Natasha Nassar.

Advisor for Curt DellaValle (2010). "Aeroallergen Modeling and the Effects of Aeroallergen Concentrations on Asthmatic Symptoms and ER Visits," Yale School of Forestry and Environmental Studies.

Advisor for G. Brooke Anderson (2010). "Weather-related mortality: How heat, cold, and heatwaves affect mortality in the United States," Yale Environmental Engineering Program.

Committee Member for Ji-Young Son (2010). "Prediction Approaches of Personal Exposure Using Spatial Analysis in Evaluating Air Pollution Effect on Health Outcome," Graduate School of Hanyang University, Dept. of Health Sciences, Korea. Advisor: Jong-Tae Lee.

Committee Member for Emily J. Viau (2009). "Human Pathogenic and Lung Inflammatory Aerosol Exposures Associated with the Land Application of Biosolids," Yale Environmental Engineering. Advisor: Jordan Peccia.

Committee Member for Nicholas Muller (2007). "An Integrated Economic Analysis of Air Pollution in the United States," Yale School of Forestry and Environmental Studies. Advisor: Robert Mendelsohn.

Committee Member for Kim Knowlton (2005). "Mortality in Metropolitan New York Under a Changing Climate," Columbia University, Mailman School of Public Health. Advisor: Patrick L. Kinney.

Dissertation Reader for Lixun Zhang (2011). "A Bayesian Spatio-Temporal Model for Estimating Daily Nitrogen Dioxide Levels," Yale School of Public Health, Biostatistics Division. Advisor: Theodore Holford.

Dissertation Reader for Howard Dean Hosgood (2008). "Etiology of Lung Cancer and Environmental Risk Factors in Xuanwei, China," Yale School of Public Health, Environmental Health Sciences Division. Advisor: Tongzhang Zheng.

Special Investigation Committee Member for Emily Viau (2006). "Quantitative PCR Detection in Human Adenovrisues in Aerosol Samples," Yale Environmental Engineering. Advisor: Jordan Peccia.

Special Investigation Committee Member for Emily Viau (2005). "Oligonucleotide Probe Design and Optimization/Emerging Diagnostic DNA Microarray Technology," Yale Environmental Engineering. Advisor: Jordan Peccia.

Graduate Board Oral Exam Committee for Laura E. LaRosa (2003). "Field and Laboratory Evaluation of a Refined Method for Assessing Small Airway Function," Johns Hopkins Bloomberg School of Public Health, Dept. of Environmental Health Sciences. Advisor: Timothy J. Buckley.

JOURNAL ACTIVITIES

EDITOR
Environmental Research: Health (ERH), Editor in Chief (2021 to 2024)

Environmental Research Letters (ERL), Board of Editors (2005 to 2013), Executive Board (2014 to present)
Sustainability, Editorial Board (2020 to 2022)
American Journal of Public Health, Associate Editor (2016 to 2020)
Guest editor: *ERL Focus on Energy Transitions and Health* (2020)
Environmental Health Perspectives, Associate Editor (2011 to 2016)
Epidemiology, Board of Editors (2007 to 2016)
Air Quality, Atmosphere and Health, Associate Editor (2009 to 2013)

JOURNAL REVIEWER
Advances in Science and Research; African Journal of Science and Technology; Air Quality, Atmosphere, and Health; American Journal of Epidemiology; American Journal of Respiratory and Critical Care Medicine; Archives of Environmental and Occupational Health; Atmospheric Environment; Atmospheric Pollution Research; Biomedical and Environmental Sciences; BMC Medical Research Methodology; Circulation; Climatic Change; EcoHealth; Ecological Economics; Energy for Sustainable Development; Environment International; Environmental Engineering Science; Environmental Geochemistry and Health; Environmental Health Perspectives; Environmental Research; Environmental Science and Policy; Environmental Science & Technology; Epidemiology; Geophysical Research Letters; Indoor Air; International Journal of Biometeorology; International Journal Of Environmental Health Research; International Journal of Environmental Studies; International Journal of Environmental Research and Public Health; International Journal of Health Geographics; International Journal of Sustainable Transportation; ISEE Transactions on Systems, Man, and Cybernetics; Journal of the Air and Waste Management Association; Journal of the American Medical Association (JAMA); JAMA Internal Medicine; Journal of Environmental Assessment Policy and Management; Journal of Environmental Management; Journal of Environmental and Public Health; Journal of Epidemiology and Community Health; Journal of Exposure Analysis and Environmental Epidemiology; Journal of Exposure Science and Environmental Epidemiology; Journal of Geography, Environment and Earth Science International; Journal of Geophysical Research – Atmospheres; Journal of Natural Resources Policy Research; Journal of the Royal Statistical Society – Series A; Journal of Telemedicine and Telecare; Journal of Women's Health; The Lancet; The Lancet Respiratory Medicine; Location Science; Nature Climate Change; Neurology; Occupational and Environmental Medicine; Operations Research; PLOS ONE; Proceedings of the National Academy of Sciences (PNAS); Public Health; Regulatory Toxicology and Pharmacology; Risk in Perspective, Harvard Center for Risk Analysis; Science of the Total Environment; Scientific Reports; Spatial and Spatio-Temporal Epidemiology

OTHER ACTIVITIES
Fifth National Climate Assessment (NCA5), Air Quality Chapter co-author (2021)
Clean Air Scientific Advisory Committee (CASAC). 2021 to 2024.
EPA CASAC Particulate Matter Panel, 2021.
World Health Organization (WHO) Global Air Pollution and Health – Technical Advisory Group (GAPH-TAG), Expert Working Group on Climate Change, Air Pollution, and Health, 2021.
National Academies of Science, Engineering, and Medicine Committee to Reassess the Department of Veterans Affairs Airborne Hazards and Open Burn Pit Registry, 2020 to 2022.
National Academies of Science, Engineering, and Medicine Committee: The Chemistry of Urban Wildfires, 2020 to present.
Member of NIH Study Section Systematic Injury by Environmental Exposure (SIEE), 2020 to present.
Member of Lancet Countdown: Tracking the Connections between Public Health and Climate Change, 2019 to present.

National Academies, Planning Committee for a Workshop on the Implications of the California Wildfires for Health, Communities, and Preparedness, 2019.
Global Burden of Disease Project, 2015 to present.
Johns Hopkins University Department of Environmental Health & Engineering (EHE) Advisory Committee, 2018 – 2024.
National Academies Gulf Region Co-op Expert Meeting, Arlington, VA, 2018.
National Academies, National Research Council Committee for Review of the Fourth National Climate Assessment (NCA4), 2017 to 2018.
Harvard/MIT Center EPA Air, Climate and Energy Center: Scientific Advisory Committee, 2017 to 2022
International Society of Environmental Epidemiology (ISEE) Conference Committee, 2009 to 2018.
International Society of Environmental Epidemiology (ISEE) Ethics and Philosophy Committee, 2016 to 2018.
Environment, Energy, Sustainability, and Health Institute (E^{2}SHI) Advisory Council, Johns Hopkins University, January 2013 to 2018.
Member of NIH (NIEHS) Study Section on Infectious, Reproductive, Asthma and Pulmonary Conditions (IRAP).
Adjunct Doctoral Faculty, Texas State University, Graduate College, San Marcos, TX, November 2013 to December 2016.
EPA Advisory Council on Clean Air Compliance Analysis, October 2008 to September 2014.
EPA Clean Air Scientific Advisory Committee (CASAC) Ozone Review Panel 2009 to 2016.
National Academies, National Research Council Committee for Review of the Army's Enhanced Particulate Matter Surveillance Project Report, 2009 to 2010.
American Statistical Association, Climate Change Policy Advisory Committee, Health Effects Subcommittee, 2009 to 2010.
Elected Councilor of the International Society for Environmental Epidemiology (ISEE), 2008 to 2010.
Member of the International Collaboration on Air Pollution and Pregnancy Outcomes (ICAPPO), 2007 to 2015. Member of Planning Committee.
Executive Committee of the Johns Hopkins Particulate Matter Center, 2006 to 2010.
Member of Global Burden of Disease 2005, Outdoor Air Pollution Expert Working Group, 2008 to 2013.
Adjunct Associate Professor, Johns Hopkins Bloomberg School of Public Health, Department of Epidemiology, 2005 to 2010.
External Advisory committee for NOAA Project: Climate Variability, Air Quality and Human Health: Measuring Regional Vulnerability for Improved Decision-Making, Columbia University, 2005 to 2007.

Co-organized the following workshops and meetings:
  Regional Assessment of Climate Change Impacts in the Southeast: Constituency Perspectives, Values, and Involvement Workshop. Oak Ridge National Laboratory. Knoxville, TN. July 17-20, 1995.
  International Expert Workshop on the Analysis of the Economic and Public Health Impacts of Air Pollution. Garmisch-Partenkirchen, Germany. Sep. 6, 2001.
  Workshop on Public Health Impacts of Fossil Fuels. Vancouver, Canada. Aug. 12, 2002.
  International Symposium on Socio-Economic Factors and Air Pollution Health Effects. Perth, Australia. Sep. 23, 2003.
  Promoting Public Health Assessment in Energy and Environmental Planning Workshop – Key Issues in Air Pollution Science and Policy for Developing Countries. InterAmerican

Institute for Global Change Research, University of São Paulo School of Medicine, São Paulo, Brazil. July 15, 2004.

Air Quality Data in Health Effects Research. Health Effects Institute, Newton, MA. Nov. 4-5, 2006.

Methodological Issues in Studies of Air Pollution and Perinatal Outcomes: an International Workshop. Mexico City, Mexico. Member of Planning Committee. Sep. 5, 2007.

Air Quality Monitoring and Data Analysis: Workshop to Discuss Key Issues Related to Conducting Health Research to Support the NAAQS Reviews. U.S. Environmental Protection Agency and Health Effects Institute: Research Triangle Park, NC. April 16-17, 2008.

The International Collaboration on Air Pollution and Perinatal Outcomes: Applying a Standardised Methodological Approach – Workshop to Develop the Plan for Data Re-Analysis. Pasadena, CA. Oct. 11-12, 2008.

International Society for Environmental Epidemiology Annual Conference. Dublin, Ireland. Aug. 25-29, 2009. Member of International Scientific Advisory Board for conference planning.

The International Collaboration on Air Pollution and Perinatal Outcomes: Pilot Project Workshop. Dublin, Ireland. Aug 24, 2009.

International Society of Environmental Epidemiology Annual Conference. Barcelona, Spain. Sep. 13-16, 2011. Member of International Scientific Committee.

International Society for Environmental Epidemiology Annual Conference. Columbia, SC Aug. 26-30, 2012. Member of Scientific Program Committee.

Environmental Health Conference. Basel, Switzerland. Aug. 19-23, 2013. Member of Scientific Program Committee.

International Society for Environmental Epidemiology Annual Conference. Seattle, WA. Aug. 24-28, 2014. Member International Scientific Committee.

International Society for Environmental Epidemiology Annual Conference. Sao Paulo, Brazil. Aug. 30-Sep. 3, 2015. Member of Scientific Program Committee.

Environmental Health 2021. Remote conference. 2021.

Proposal reviewer for National Institutes of Health (NIH), Centers for Disease Control (CDC), U.S. Environmental Protection Agency, European Science Foundation, Health Effects Institute (HEI), Health Canada, California Energy Commission, Israel Science Foundation, UK Medical Research Council - Molecular and Cellular Medicine Board, UK Medical Research Council – Methodology Research Programme, United Kingdom Research and Innovation (UKRI), Government of Hong Kong Special Administrative Region – Food and Health Bureau, PAC-12 Student-Athlete Health and Well-Being Grant Program, and others.

Abstract reviewer for *International Society of Environmental Epidemiology* conferences, 2008, 2009, 2011-2015, 2020. Abstract reviewer for student and/or new investigator awards for *International Society of Environmental Epidemiology* conferences, 2008, 2009, 2011-2013, and additional years. Jury for International Journal of Public Health Conference Award (2013). Conference paper reviewer for 14th *International Multiple Criteria Decision Making Conference Proceedings*, 1998.

Current or recent member: International Society for Environmental Epidemiology, American Statistical Association, American Thoracic Society, International Society for Exposure Science, Air and Waste Management Association, Society of Toxicology, American Association for the Advancement of Science, and Association for Environmental Studies and Sciences.