

Utilizing Advanced Environmental Health and Geospatial Data and Technologies to Inform Community Investment

Committee

Harvey J. Miller

Co-Chair

Harvey Miller (Co-Chair), is the Bob and Mary Reusche Chair in Geographic Information Science, Professor of Geography, Courtesy Professor of City and Regional Planning and Director of the Center for Urban and Regional Analysis at The Ohio State University. His research and teaching activities include geospatial data analytics applied to questions and challenges facing sustainable mobility, equitable and resilient communities, and the relationships between human mobility and health. Previously, Dr. Miller served as a member and chair of the NASEM Mapping Science Committee, co-chair of the Geographical and Geospatial Sciences Committee and member of the Board on Earth Sciences and Resources. He serves on the Regional Data Advisory Committee of the Mid-Ohio Regional Planning Commission in Columbus, Ohio, and is the president of the University Consortium for Geographic Information Science, a not-for-profit organization that creates and supports communities of practice for geographic information science research, education, and policy in higher education and allied institutions in the public and private sectors. Dr. Miller is an elected Fellow of the American Association of Geographers and the American Association for the Advancement of Science. He has a PhD in Geography from The Ohio State University.

Eric Tate

Co-Chair

Eric Tate (Co-Chair) is a Professor in the Center for Policy Research on Energy and the Environment, in the School of Public and International Affairs at Princeton University. His research and teaching examine intersections of environmental hazards and society, primarily using geospatial models of flood hazards, vulnerability, and risk. His research focuses on themes of social vulnerability indicators, flood adaptation, and uncertainty analysis. He currently serves on the Boards of Directors of the Anthropocene Alliance and the Gulf Environmental Protection and Stewardship Board at the National Academies of Sciences and Engineering, & Medicine; on the Resilient America Roundtable of the National Academies; and was a co-author of the Adaptation chapter of the Fifth National Climate Assessment. Dr. Tate earned a PhD in Geography from the University of South Carolina, an M.S. in Environmental & Water Resources Engineering from the University of Texas, and a B.S. in Environmental Engineering from Rice University.

Susan Anenberg

Member

Susan Anenberg is an Associate Professor of Environmental and Occupational Health and of Global Health at the George Washington University (GW) Milken Institute School of Public Health. She is also the Director of the GW Climate and Health Institute. Dr. Anenberg's research focuses on the health implications of air pollution and climate change, from local to global scales. Previously, Dr. Anenberg was a Co-Founder at Environmental Health Analytics, LLC, the Deputy Managing Director for Recommendations at the U.S. Chemical Safety Board, an environmental scientist at the U.S. Environmental Protection Agency (EPA), and a senior advisor for clean cookstove initiatives at the U.S. State Department. She received her PhD in Environmental Science & Engineering, Environmental Policy from the University of North Carolina. Dr. Anenberg currently serves on the U.S. Environmental Protection Agency's Science Advisory Board and Clean Air Act Advisory Committee, the World Health Organization's Global Air Pollution and Health Technical Advisory Group, and as President of the GeoHealth section of the American Geophysical Union. She has written public comments to EPA on the importance of including environmental justice analysis in regulatory impact analyses and has chaired an EPA Science Advisory Board committee providing advice to EPA on including distributional analyses in air quality regulations. Dr. Anenberg currently serves on the NASEM Committee to Advise the U.S. Global Change Research Program.

Lauren Bennett

Member

Lauren Bennett is the Group Product Engineering Lead and Program Manager of Spatial Analysis and Science at Esri. In her 15 years at Esri has also worked as a solution engineer for the Federal Sciences team, as well as a lead product engineer on the Spatial Statistics software development team. Dr. Bennett's research has focused on spatial statistics and spatiotemporal analysis, especially their application to human geography problems including public health, social equity, and urban planning. Dr. Bennett received a BA in Geography from McGill University, an MS in Geographic and Cartographic Science from George Mason University, and her PhD in Information Systems and Technology from Claremont Graduate University.

Jayajit Chakraborty

Member

Jayajit Chakraborty is a Professor and Mellichamp Chair in Racial Environmental Justice at the Bren School of Environmental Science and Management at the University of California, Santa Barbara. He currently serves as a member of the U.S. Environmental Protection Agency (EPA) Science Advisory Board, Work Group for Review of Science Supporting EPA Decisions, and the EPA Environmental Justice Science Committee. He is chairing the Scientific Review Panel for the EPA's EJScreen Mapping and Screening Tool and serving as a member of the EPA Environmental Justice Science and Analysis Review Panel. Dr. Chakraborty's research and outreach activities encompass a wide range of concerns related to the social dimensions of climate and environmental change, with an emphasis on environmental justice and community vulnerability to hazards and disasters. He is particularly interested in applying geospatial tools and spatial statistical techniques for analyzing environmental and social injustices. Dr. Chakraborty has published 4 books and more than 120 articles/chapters, including The Routledge Handbook of Environmental Justice and a chapter for the US Government's Fifth National Climate Assessment (NCA5). He has been a principal/co-principal investigator for over 30 sponsored projects, which include grants from the EPA, National Science Foundation, National Aeronautics and Space Administration, US Department of Transportation, US Department of Treasury, and other agencies. Dr. Chakraborty has a Ph.D. in Geography and M.S. in Urban and Regional Planning, both from the University of Iowa.

Ibraheem Karaye

Member

Ibraheem Karaye is Assistant Professor of Population Health and Director of the Health Science Program at Hofstra University. His research broadly focuses on the physical, mental, and environmental health impacts of disasters and mass trauma on socially vulnerable populations, including racial and ethnic minorities and older adults. He also examines health disparities and the distribution of health outcomes globally and within the United States. Dr. Karaye uses large secondary data sets and novel statistical and spatial analytic methods to study social variables. His publication "The impact of social vulnerability on COVID-19 in the US: an analysis of spatially varying relationships" was recognized as a finalist for the 2020 Article of the Year by the American Journal of Preventive Medicine. He currently serves as an Academic Editor for the journal, PLOS ONE. Dr. Karaye received his medical degree from Bayero University Kano in Nigeria and holds a Master of Public Health degree in epidemiology and a doctorate in public health (epidemiology and environmental health) from Texas A&M University.

Marcos Luna

Member

Marcos Luna is a Professor of Geography and Sustainability and Coordinator of the graduate Geo-Information Science program at Salem State University in Salem, Massachusetts, USA. His research focus is on environmental justice and applications of geospatial analytic techniques to social and environmental inequities, particularly around energy and climate change. He has published research on the inequity of natural gas leaks, urban noise, transit efficiency and equity, energy, air pollution, and environmental policy. Dr. Luna holds a MA in Geography from the California State University, Los Angeles and PhD in Urban Affairs and Public Policy from the University of Delaware. In addition to academic research, he works with community organizations and policy makers on issues including residential housing and segregation, transportation equity, voter mapping and outreach, and climate change adaptation. He is a member of the Board of Directors for GreenRoots, Inc., an environmental justice organization based in Chelsea, Massachusetts, and he is a governor-appointed member of the Massachusetts Environmental Justice Advisory Council, which is charged with (re)assessing the appropriateness of the state's definition of "environmental justice communities".

Bhramar Mukherjee

Member

Bhramar Mukherjee, NAM is the University of Michigan (UM) John D. Kalbfleisch Collegiate Professor and Chair, Department of Biostatistics; Professor, Department of Epidemiology, Professor, Global Public Health, UM School of Public Health; Research Professor and Core Faculty Member, Michigan Institute of Data Science; and founding director of the UM Summer Institute on Big Data. She is also the Associate Director for Quantitative Data Sciences, UM Rogel Cancer Center, and the Associate Workgroup Director for Cohort Development for UM Precision Health. Her research interests include statistical methods for analysis of electronic health records, studies of gene-environment interaction, and analysis of multiple pollutants and she collaborates in research related to cancer, cardiovascular diseases, reproductive health, exposure science and environmental epidemiology. Dr. Mukherjee is a fellow of the American Statistical Association and the American Association for the Advancement of Science and is the recipient of many awards for scholarship, service, and teaching. Dr. Mukherjee has a M.S. in applied statistics and data analysis from the Indian Statistical Institute, an M.S. in mathematical statistics from Purdue University, and a Ph.D. in statistics from Purdue University. She serves on the NASEM Committee on Applied and Theoretical Statistics and has served on NASEM committees on the Reassessment of the Department of Veterans Affairs Airborne Hazards and Open Burn Pit Registry and on the Rising Midlife Mortality Rates and Socioeconomic Disparities.

Kathleen Segerson

Member

Kathleen Segerson, NAS, is a Board of Trustees Distinguished Professor of Economics at the University of Connecticut. Her research focuses on the incentive effects of alternative environmental policy instruments, including applications in the following areas: groundwater contamination, hazardous waste management, land use regulation, climate change and nonpoint pollution from agriculture. In addition, she has worked on valuing ecosystem services and the protection of marine species. Dr. Segerson is a member of the National Academy of Sciences, and a fellow of the Association of Environmental and Resource Economists (AERE) and of the American Agricultural Economics Association (AAEA). Dr. Segerson holds a PhD from Cornell University and a BA from Dartmouth College. She has or is currently serving on a number of advisory boards, including the U.S. Environmental Protection Agency's Science Advisory Board (SAB) and the Committee on Valuing the Protection of Ecological Systems and Services (CVPESS), the National Academy of Science Advisory Committee for the U.S. Global Change Research Program (USGCRP) and Review Panel on the National Climate Assessment, the NASEM Board on Agriculture and Natural Resources (BANR), the U.S. National Member Organization of the International Institute of Applied Systems Analysis (IIASA), and the Advisory Board of the Beijer Institute of Ecological Economics in Stockholm.

Monica E. Unseld

Member

Monica E. Unseld is the founder and Executive Director of the nonprofit Until Justice Data Partners, utilizing her experience as a subject matter expert in environmental and public health and believes that science should be accessible to all. The organization partners with marginalized communities nationwide and internationally to apply research methods to environmental and social justice issues, through her specializations in endocrine disruption, environmental signaling and public health. Prior to her nonprofit work, she was an Assistant Professor and worked at a data think tank in Louisville, KY. She has almost 15 years of volunteer environmental justice work experience as subject matter expert in science and general research methodology, working with predominantly Black- and Brown-led groups and coalitions to help normalize the use of research and data. In December 2022, she was named a Union of Concerned Science, Science Defender for her efforts to democratize data. She obtained her doctorate in biology in 2008 from the University of Louisville and her Masters in Public Health in 2018 from Benedictine University.

Walker Wieland

Member

Walker Wieland is an Environmental Program Manager with the Office of Environmental Health Hazard Assessment (OEHHA), at the California Environmental Protection Agency. Mr. Wieland is leading the development of CalHeatScore, an extreme heat ranking system for California. Mr. Wieland has 12 years of experience in planning and conducting research studies to characterize the distribution of environmental pollutants or sources of pollution to support the development of screening cumulative impact analysis. He is co-author of each version of CalEnviroScreen, California's pioneering environmental justice screening tool. He has held multiple leadership positions throughout state government in geographic information systems (GIS) and open data and has formerly received certification as a GIS professional. Mr. Wieland is an award-winning public speaker and routinely provides training to agencies on considering cumulative impacts and environmental justice mapping in their policies and programs. He also has consulted with agencies across the United States and internationally in implementing their own environmental health screening tools. Mr. Wieland received his Bachelor of Arts in Environmental Studies from California State University, Sacramento, and his Associate of Science in Geographic Information Systems from American River College.

Sammantha L. Magsino

Staff Officer