Leveraging Advances in Remote Geospatial Technologies to Inform Precision Environmental Health Decisions - A Workshop

Committee

Susan Anenberg

Chair

Susan Anenberg is an Associate Professor of Environmental and Occupational Health and of Global Health at the George Washington University Milken Institute School of Public Health. Dr. Anenberg studies the health implications of air pollution and climate change. She has used satellite remote sensing, atmospheric modeling, and mobile monitoring to assess air pollution health risks at global, national, urban, and sub-urban scales. Her current work includes estimating inequity in air pollution health risks within cities and developing decision-support tools to integrate air quality, public health, and greenhouse gas mitigation. She is a member of the NASA Health and Air Quality Applied Sciences Team and Secretary of the American Geophysical Union's GeoHealth section. Dr. Anenberg has been a Co-Founder and Partner 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, and a senior advisor for clean cookstove initiatives at the U.S. State Department. Her research has been published in top academic journals such as Science, Nature, and Lancet Planetary Health. She has also led or contributed to many science-policy reports on air quality and climate change published by U.S. Environmental Protection Agency, World Bank, World Health Organization, United Nations Environment Programme, and others. She received her B.A. in Biology and Environmental Sciences from Northwestern University and her M.S. and Ph.D. in Environmental Science and Engineering and Environmental Policy from the University of North Carolina.

Weihsueh A. Chiu

Member

Weihsueh A. Chiu is a professor in the Department of Veterinary Integrative Biosciences at the Texas A&M University. His research focuses on the development of quantitative, data-driven approaches for understanding and predicting the human health effects of environmental chemicals. Specifically, his research applies computational and statistical methods to transform data into knowledge used to protect public health. He also has an interest in approaches to estimate the variability in individual susceptibility to environmental exposures, so as to better protect sensitive subpopulations. Dr. Chiu currently serves on the National Academies' standing committee on Use of Emerging Science for Environmental Health Decisions. His previous service on National Academies committees includes the Committee on Endocrine-Related Low Dose Toxicity and the Committee on Predictive-Toxicology Approaches for Military Assessments of Acute Exposures. He received a Ph.D. in physics from Princeton University.

Yuxia Cui

Member

Yuxia Cui, Ph.D., is a health scientist administrator at the National Institute of Environmental Health Sciences (NIEHS). Dr. Cui oversees the exposure science and the exposome grant portfolio that is focused on emerging technologies towards improved exposure and risk assessment in environmental health research. These include sensor technologies, omics-based approaches, computational and informatics-based methodologies, as well as other innovative approaches to enable an integrated view and better understanding of the exposome. Cui currently serves as the program officer for the laboratory network of the Human Health Exposure Analysis Resource (HHEAR). She is also a member of the NIH Common Fund Metabolomics Program leadership team and oversees the day-to-day operations of the Program. Cui received training in molecular toxicology and transcriptomics and received her doctorate in Environmental Toxicology from Duke University.

Kevin C. Elliott

Member

Kevin C. Elliott, Ph.D. is Professor at Michigan State University with joint appointments in Lyman Briggs College, the Department of Fisheries and Wildlife, and the Department of Philosophy. He received his Ph.D. in History and Philosophy of Science from the University of Notre Dame. His research lies at the intersection of the philosophy of science and practical ethics, with an emphasis on critically examining the ways in which ethical and social values influence science and technology. Much of his work has focused on policy-relevant areas of research on environmental pollution. Since 2014, he has been serving as a member of the Advisory Council for the National Institute of Environmental Health Sciences, and he is the Program Chair for the 2018 Biennial Meeting of the Philosophy of Science Association. He has authored a wide range of articles and book chapters and has published two books with Oxford University Press: “Is a Little Pollution Good for You? Incorporating Societal Values in Environmental Research” (2011) and “A Tapestry of Values: An Introduction to Values in Science” (2017). He has co-edited two other books: “Exploring Inductive Risk: Case Studies of Values in Science” (with Ted Richards, Oxford University Press, 2017) and “Current Controversies in Values and Science” (with Dan Steel, Routledge Press, 2017).

Jing Li

Member

Jing Li is an associate professor of Geospatial Science at the University of Denver. Previously, Dr. Li received her Ph.D. in Earth Systems and Geoinformation Sciences at George Mason University in 2012 where she performed GIS analysis on multiple data sources to investigate sociological problems and designed and implemented geospatial data models for 3D spatial-temporal data. Her areas of research expertise are spatiotemporal modeling and analysis, multidimensional geovisualization, and high-performance geo-computation. The over-arching goal of her research is to develop novel methods to address fundamental challenges in big-data driven applications within the geosciences, by: 1) providing effective analytical models and visualization algorithms to facilitate the understanding of complex geographic processes ingrained in big data, and 2) providing efficient data processing capabilities to enable time critical applications. She has contributed to more than 50 publications including peer-reviewed journal articles and book chapters and funding for her work has been provided by federal geospatial agencies such as the U.S. Geological Survey as well as leading IT companies such as Microsoft and Amazon. Currently, her research focuses on developing AI models to quantify and predict the community spread dynamics of COVID-19 to support better implementation of mitigation measures at fine spatiotemporal levels.

Sacoby M. Wilson

Member

Dr. Wilson is an Associate Professor with the Maryland Institute for Applied Environmental Health and Department of Epidemiology and Biostatistics in the University of Maryland, College Park School of Public Health. Dr. Wilson has 15 years of experience as an environmental health scientist in the areas of exposure science, environmental justice, environmental health disparities, community-engaged research including crowd science and community-based participatory research, water quality analysis, air pollution studies, built environment, industrial animal production, climate change, community resiliency, and sustainability. Dr. Wilson directs the Community Engagement, Environmental Justice and Health (CEEJH) laboratory that is focused on providing technical assistance and research support to communities fighting against environmental injustice and environmental health disparities in the DMV region and across the nation. He has worked on environmental justice issues including environmental racism with community-based organizations through community-university environmental health and justice partnerships in South Carolina and North Carolina including the Low-Country Alliance for Model Communities (LAMC), in North Charleston, South Carolina; the West End Revitalization Association (WERA) in Mebane, NC; and the Graniteville Community Coalition (GCC) in Graniteville, SC. Dr. Wilson received his B.S. degree in Biology/Ecotoxicology with a minor in Environmental Science from Alabama Agricultural and Mechanical University, M.S. degree in Environmental Health from University of North Carolina-Chapel Hill and his Ph.D. in Environmental Sciences and Engineering from University of North Carolina-Chapel Hill.