Advancing Risk Communication with Decision-Makers for Extreme Tropical Cyclones: Learning from Extreme and Unprecedented Weather Events -- A Workshop

Committee

Ann Bostrom

Chair

Ann Bostrom (Chair) is the Weyerhaeuser endowed Professor in Environmental Policy at the Evans School of Public Policy and Governance, University of Washington. Until 2007 she was Professor of Public Policy and Associate Dean for Research of the Ivan Allen College of Liberal Arts at Georgia Institute of Technology, and co-directed the Decision, Risk and Management Science Program at the National Science Foundation (NSF) from 1999 to 2001. She studies risk perceptions, risk communication, and mental models of hazards: how people understand and make decisions under uncertainty about, for example, climate change, extreme weather, and earthquakes. Bostrom currently co-directs the NSF-funded Cascadia Coastlines and Peoples Hazards Research Hub and co-leads risk communication in the NSF Artificial Intelligence (AI) Institute for research on Trustworthy AI in Weather, Climate and Coastal Oceanography. Bostrom previously served as the task team co-lead for the National Oceanic and Atmospheric Administration’s Science Advisory Board “Priorities for weather research” report. She is also a Fellow and former President of the Society for Risk Analysis, and recipient of its Chauncey Starr and Distinguished Educator Award. She is also a Fellow of the American Association for the Advancement of Science and an elected member of the Board of Directors of the Washington State Academy of Sciences. Bostrom received a Ph.D. in policy analysis from Carnegie Mellon University. She also received an M.B.A. from Western Washington University and a B.A. in English from the University of Washington. She co-chaired the National Academies of Sciences, Engineering, and Medicine consensus report on Integrating Social and Behavioral Sciences Within the Weather Enterprise and contributed to Communicating Science Effectively: A Research Agenda.

Dereka Carroll-Smith

Member

Dereka Carroll-Smith is a Postdoctoral Research Associate for the National Institute of Standards and Technology-Professional Research Experience Program at the University of Maryland College Park and a research meteorologist for the National Wind Impacts Reduction Program. Carroll-Smith also holds a joint appointment as a Program Coordinator and Adjunct Professor in the Department of Chemistry, Physics, and Atmospheric Sciences at Jackson State University, and as a Scientific Visitor at the National Center of Atmospheric Research (NCAR), where she conducts interdisciplinary research focusing on secondary tropical cyclone hazards, climate change, and associated societal impacts. While in graduate school, she received the David M. Knox endowment fellowship and the National Science Foundation Graduate Research Fellowship which allowed her the freedom to explore her interdisciplinary interests. Carroll-Smith is a member of the American Meteorological Society and serves on the steering committee for the Significant Opportunities in Atmospheric Research and Science program at NCAR and served as co-rapporteur of the tropical cyclone tornado section for the World Meteorological Organization's 10th workshop on Tropical Cyclones. Carroll-Smith received a B.S. in meteorology from Jackson State University, an M.S. in atmospheric science from Purdue University, and a Ph.D. in atmospheric science from the University of Illinois Urbana-Champaign.

Brad R. Colman

Member

Brad R. Colman is currently serving as President of the American Meteorological Society (AMS). Prior to this role he served as Director of Weather Strategy for Bayer/The Climate Corporation where he oversaw and guided the design and execution of the Bayer Enterprise weather programs. Before joining Bayer/Climate, Colman worked on a new Microsoft consumer weather service team to serve weather information across the entire Microsoft ecosystem. Previously, Colman had a diverse career with the National Oceanic and Atmospheric Administration (NOAA) where he worked at The National Weather Service's forecast office in Seattle, Washington; NOAA's Environmental Research Laboratory; and was the Acting Director of NOAA's Meteorological Development Laboratory. Colman is a member and Fellow of the AMS, a member of the Washington State Academy of Sciences, and is currently co-chair of NOAA's Science Advisory Board's Environmental Information Services Working Group. Colman received a B.S. in Earth sciences and mathematics from Montana State University and an Sc.D. in atmospheric sciences from the Massachusetts Institute of Technology. He currently serves on the National Academy of Sciences, Engineering, and Medicine's Roundtable on Macroeconomics and Climate Change and the Board on Atmospheric Sciences and Climate.

William C. Fugate

Member

W. Craig Fugate provides senior level advice and consultation in disaster management and resiliency policy through Craig Fugate Consulting LLC. Previously, he served as the Administrator of the Federal Emergency Management Agency (FEMA) and the Florida Emergency Management Director from 2001 to 2009. Fugate led FEMA through multiple record-breaking disaster years and oversaw the federal government's response to major events such as the Joplin and Moore Tornadoes, Hurricane Sandy, Hurricane Matthew, and the 2016 Louisiana flooding. He successfully managed the devastating effects of the 2004 and 2005 Florida hurricane seasons (Charley, Frances, Ivan, Jeanne, Dennis, Katrina, and Wilma). Fugate holds a certificate as a paramedic from Santa Fe College in Gainesville Florida. He also serves as a member of the National Academies of Sciences, Engineering, and Medicine's Gulf Research Program Division Committee.

Michael K. Lindell

Member

Michael Lindell is an Emeritus Professor, Texas A&M University; Affiliate Professor, University of Washington Department of Urban Design and Planning; Affiliate Professor, Boise State University Department of Geosciences; and Affiliate Professor, Oregon State University School of Civil and Construction Engineering, and currently serves as a consultant on two hurricane warning and evacuation research projects funded by the National Science Foundation and U.S. Army Corps of Engineers. He has conducted emergency management research and provided technical services to 40 different organizations in the public and private sectors and conducted research on topics ranging from surveys of disaster warning response to the development of an evacuation management decision support system. He also conducted a series of hurricane evacuation planning studies for the Texas Division of Emergency Management during his term as the Director of the Texas A&M University Hazard Reduction & Recovery Center. He has received awards from the International Sociological Association and the Human Factors and Ergonomics Society for his development of the Protective Action Decision Model, which summarizes research on human response to disaster warnings. Lindell received a Ph.D. in social psychology at the University of Colorado, Boulder, while working on the first NSF-funded Assessment of Research on Natural Hazards.

Andrea B. Schumacher

Member

Andrea Schumacher is a Project Scientist in the Weather Risks and Decisions in Society research group at the National Center for Atmospheric Research (NCAR) in Boulder, Colorado. She works in the interdisciplinary space between atmospheric and social science, and her most recent research focuses on how information use, risk perceptions, and behavioral responses evolve in the days prior to a landfalling hurricane. Previously she was a Research Associate at the Cooperative Institute for Research in the Atmosphere at Colorado State University, where she was the Lead of the Societal Impacts of Weather and Climate Team, tropical cyclone (TC) forecast product developer and satellite liaison. She has collaborated extensively with operational TC forecasters in the National Weather Service, especially on the topic of communicating TC wind hazards and probabilities to a variety of decision makers. Her work on the National Hurricane Center TC wind speed probability product earned her an Outstanding Achievement Award in Meteorology from the National Hurricane Conference and a Leadership Award from the Louisiana Emergency Preparedness Association. Schumacher received an M.S. in atmospheric science from Colorado State University.

J. Marshall Shepherd

Member

Marshall Shepherd is the Georgia Athletic Association Distinguished Professor of Geography and Atmospheric Sciences at the University of Georgia and Director of its Atmospheric Sciences Program. Prior to academia, he spent 12 years as a scientist at the National Aeronautics and Space Administration Goddard Space Flight Center and was Deputy Project Scientist of the Global Precipitation Measurement Mission. Shepherd is the host of The Weather Channel’s Weather Geeks Podcast, a senior contributor to Forbes Magazine, and has three TEDx talks on climate science and communication. Shepherd is a recipient of a Presidential Early Career Award for Scientists and Engineers, the Captain Planet Foundation Protector of the Earth Award, the 2019 AGU Climate Communication Prize, the 2020 Mani L. Bhaumik Award for Public Engagement with Science, and the 2018 American Meteorological Society (AMS) Helmut Landsberg Award. He is an elected member of the National Academy of Sciences, National Academy of Engineering, and the American Academy of Arts and Sciences and was the 2013 President of AMS. Shepherd received a B.S., M.S. and Ph.D. from Florida State University. He currently serves as a member of the National Academies of Sciences, Engineering, and Medicine’s Board on Atmospheric Sciences and Climate.

Jeanette Sutton

Member

Jeannette Sutton is currently an Associate Professor in the Department of Emergency Preparedness and Homeland Security at the University at Albany where she directs the Emergency and Risk Communication Message Testing Lab. Sutton has led research associated with natural, technological, and human induced phenomena, with a focus on alerts and warnings over short messaging channels. She served for six years as the primary social scientist on the National Institute of Standards and Technology National Construction Safety Team Advisory Committee. Sutton received a Ph.D. from the University of Colorado Boulder and completed her postdoctoral training at the Natural Hazards Center. She previously served as cochair of the National Academies of Sciences, Engineering, and Medicine’s workshop on Public Response to Alerts and Warnings on Mobile Devices.