Workshop on Earth System Predictability Research and Development

Committee

James W. Hurrell

Chair

James (Jim) Hurrell joined Colorado State University faculty in September 2018 as the Scott Presidential Chair in Environmental Science and Engineering and a professor in the Department of Atmospheric Science. Dr. Hurrell is a former director of the National Center for Atmospheric Research (NCAR) in Boulder, Colorado, where he was a Senior Scientist in the Climate and Global Dynamics Laboratory (CGD). He is also the former Chief Scientist of Community Climate Projects in CGD, which includes the Community Earth System Model, and a former director of CGD and the NCAR Earth System Laboratory. Dr. Hurrell's research has centered on empirical and modeling studies and diagnostic analyses to better understand climate, climate variability and climate change. He has authored or co-authored more than 100 peer-reviewed journal articles and book chapters, as well as dozens of other planning documents, workshop papers and editorials. Dr. Hurrell has been extensively involved in the World Climate Research Programme (WCRP) on Climate Variability and Predictability (CLIVAR), including roles as co-chair of the Scientific Steering Group of both U.S. and International CLIVAR, Chair of the Scientific Organizing Committee for the WCRP Open Science Conference (2011), and membership on several other CLIVAR panels. He is currently a member of the Joint Scientific Committee of WCRP. Dr. Hurrell has served on several National Academies panels, and he has provided briefings and testimonies to both the U.S. Senate and the House of Representatives on climate change science. He attended the April 2020 Roundtable on Earth System Predictability Research and Development, and moderated one of the panels.

Brad R. Colman

Member

Brad R. Colman is the Director of Weather Strategy for The Climate Corporation. In this role, he oversees and guides the design and execution of the Bayer & Climate Enterprise weather programs. The program spans across global weather stations, data acquisition and validation, data repository architecture and dissemination, and domain expertise. Central to this effort is Dr. Colman's close collaboration with The Climate Corporation's Weather Science Team (a team of statisticians, machine learners, and atmospheric scientists), which develops unique weather, climate, and decision support information for the global agricultural industry. Previously, Dr. Colman worked for nearly two years on a Microsoft team chartered to grow a new Microsoft consumer weather service to serve the entire Microsoft ecosystem. Prior to joining the private sector, Dr. Colman enjoyed a long and diverse career with NOAA where he worked at The National Weather Service's forecast office in Seattle, Washington; NOAA's Environmental Research Laboratory in Boulder, Colorado; and was the Acting Director of NOAA's Meteorological Development Laboratory in Silver Spring, Maryland. Dr. Colman is an Affiliate Associate Professor in Atmospheric Sciences at the University of Washington. Dr. Colman holds a Sc.D. in Atmospheric Sciences from the Massachusetts Institute of Technology and a B.S. in Earth Sciences and Mathematics from Montana State University. He is a member and Fellow of the American Meteorological Society, and has served in a number of different roles within the Society. Dr. Colman is 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. He attended and facilitated a breakout group at the April 2020 Roundtable on Earth System Predictability Research and Development.

Scott C. Doney

Member

Scott Doney is the first Joe D. and Helen J. Kington Professor in Environmental Change at the University of Virginia. His expertise spans oceanography, climate and biogeochemistry, with particular emphasis on the application of numerical models and data analysis methods to global-scale questions. Much of his research focuses on how the global carbon cycle and ocean ecology respond to natural and human-driven climate change. He is the author of nearly 300 peer-reviewed research publications and co-author of a textbook on data analysis and modeling methods for the marine sciences. Dr. Doney was the inaugural chair of the U.S. Ocean Carbon and Biogeochemistry Program, a convening lead author for the Oceans and Marine Resources chapter of the 2014 U.S. National Climate Assessment, member of a number of National Academies committees, and served on both the NSF Geosciences and NSF Environmental Research and Education Advisory Committees. He is the past Director of the Ocean and Climate Change Institute and Chair of Marine Chemistry and Geochemistry Department at the Woods Hole Oceanographic Institution (WHOI). He was awarded the James B. Macelwane Medal from the American Geophysical Union in 2000, WHOI Ocean and Climate Change Institute Fellow in 2003, an Aldo Leopold Leadership Fellow in 2004, the WHOI W. Van Alan Clark Sr. Chair in 2007, a AAAS Fellow in 2010, and the Huntsman Award for Excellence in Marine Science in 2013 from the Royal Society of Canada. Dr. Doney attended and was a panelist at the April 2020 Roundtable on Earth System Predictability Research and Development.

Jenni-Louise Evans

Member

Jenni L. Evans is the director of the Pennsylvania State University's Institute for Computational and Data Sciences, professor of meteorology, and research fellow in Penn State's Earth and Environmental Systems Institute. Dr. Evans and her team employ high performance computing for detailed dynamical modeling of tropical cyclones and extratropical events; ensemble forecasts and advanced statistical analyses of these storms; and studies of climate change impacts in the tropics and beyond. In her recent research, she has employed a variety of novel statistical methodologies for physically-based partitioning of ensemble forecasts of tropical cyclones, with the goal of advancing tropical cyclone forecast skill and fundamental understanding of these storms. Dr. Evans is a fellow and past president of the American Meteorological Society, and fellow of the American Association for the Advancement of Science. She has served on the U.S. Science Steering Committee for the World Meteorological Organization THORPEX Pacific Asian Regional Campaign, the U.S. Weather Research Program Science Steering Committee, the advisory board for the NOAA/NSF Developmental Testbed Center (for operational and research numerical models), the NSF Advisory Group for EarthCube, and as editor of AMS Monthly Weather Review. Dr. Evans received a B.Sc. (honors) and a Ph.D. from Monash University in applied mathematics. She attended and facilitated a breakout group at the April 2020 Roundtable on Earth System Predictability Research and Development.

Jeanine A. Jones

Member

Jeanine A. Jones is a principal engineer and interstate resources manager at the California Department of Water Resources. She received her M.S. in civil engineering from the California State University, Sacramento, and is a registered civil engineer in California and Nevada. Ms. Jones was responsible for preparation of the 1998 update of the California Water Plan and the 2000 Governor's Advisory Drought Planning Panel report. She also participated in negotiations for the 2003 Colorado River Quantification Settlement Agreement and related agreements with relevant states and local agencies, and currently participates in the Colorado River Basin States negotiations over drought and shortage management. Her statewide planning and drought management responsibilities included actions to inform the public about California drought vulnerability and to mitigate its effects. Such actions require the collection and analysis of regional data on parameters of interest to the Climate Change Science Program, including land use, water use, water supply, and surface and groundwater hydrology. Ms. Jones has served on the Colorado River Board of California and on a variety of committees of the Western States Water Council. She was also a Governor's liaison to the Western Water Policy Review Advisory Commission. She attended the April 2020 Roundtable on Earth System Predictability Research and Development.

Gabriele Pfister

Member

Gabriele Pfister is Scientist III and Deputy Director of the National Center for Atmospheric Research (NCAR) Atmospheric Chemistry Observations and Modeling (ACOM) Laboratory. Currently she also serves as the Laboratory’s Acting Director. Her general research is in studying the composition of the troposphere using satellite and in-situ observations (e.g., aircraft and ground-based measurements taken during field campaigns) in conjunction with regional and global atmospheric models to explore air pollution on global, regional and local scales. She serves as a science advisor for the South Coast Air Quality Management Plan Scientific Technical Modeling Peer Review Group, is a member of the International Steering Committee of the WMO/GAW and IGAC sponsored Monitoring, Analysis, and Prediction of Air Quality (MAP-AQ) Project, and has been selected as Member of the Tropospheric Ozone Assessment Report (TOAR-II) Steering Committee with the term starting July 2022. Gabriele was Co-PI on the State of Colorado and NSF/NCAR Front Range Photochemical Experiment that took place in summer 2014. Dr. Pfister received her Ph.D. in Meteorology and Geophysics from Karl-Franzens University in Graz, Austria.

Kelly Oskvig

Staff Officer

Kelly Oskvig is a Senior Program Officer for the Division of Earth and Life Sciences' Ocean Studies Board where she applies her experiences in scientific program management, water quality, and physical oceanography to advance the
board's priorities in ocean conservation issues. Kelly starting working for the Academies' in the Gulf Research Program leading the Safer Offshore Energy Systems initiative and the Understanding Gulf Ocean Systems program. Prior to the Academies, Kelly worked for the Integrated Ocean Drilling Program in Washington, DC. Kelly also spent much of her early career in Houston, Texas, working for the oil and gas industry as both a geotechnical engineer and
a physical oceanographer. She has a Bachelors' degree in Civil Engineering from the University of Texas at Austin and
a Masters' degree from Texas A&M in Geosciences.