

Board on Atmospheric Sciences and Climate

Committee

Brad R. Colman

Chair

Brad R. Colman served as Director of Weather Strategy for Bayer/The Climate Corporation (retired 2022) where he oversaw and guided the design and execution of the Bayer global enterprise weather programs. Most recently, Colman served as President of the American Meteorological Society (AMS; 2023). Before joining Bayer/Climate, Colman worked on a new Microsoft consumer weather service team to consolidate and 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 in Silver Spring, Maryland. Colman is a member and Fellow of the AMS, a member of the Washington State Academy of Sciences, co-chair of NOAA's Science Advisory Board's Environmental Information Services Working Group, and a member of NOAA's Science Advisory Board. 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 workshop planning Committee on Advancing Risk Communication with Decision-Makers for Extreme Tropical Cyclones.

Elizabeth A. Barnes

Member

Dr. Elizabeth (Libby) Barnes is the Dalton Family Chair in Environmental Data Science & Sustainability and Professor of Computing & Data Sciences and of Earth & Environment at Boston University. Her group's research focuses on understanding Earth system variability, predictability, and change across time and space, with an emphasis on developing and implementing artificial intelligence tools in a way that mimics scientific human reasoning to improve intrinsic interpretability. An overarching research goal of her group is to responsibly harness AI to anticipate human-Earth system futures in support of a thriving society in the decades ahead. She is a Fellow of both the American Geophysical Union (AGU) and the American Meteorological Society (AMS) and was awarded the Presidential Early Career Award for Scientists and Engineers (PECASE) by President Biden in January of 2025. Libby joined the BU faculty in 2025. Prior to coming to BU she was a Professor of Atmospheric Science at Colorado State University from 2013-2025. She earned dual B.S. degrees (Honors) in Physics and Mathematics from the University of Minnesota in 2007, and her Ph.D. in Atmospheric Science from the University of Washington in 2012. She also spent a year as a NOAA Climate & Global Change Fellow at the Lamont-Doherty Earth Observatory of Columbia University from 2012-2013.

Minghui Diao

Member

Minghui Diao is an Associate Professor of Meteorology and Climate Science at San Jose State University (SJSU). Her research focuses on cloud and aerosol processes based on aircraft in-situ measurements, remote sensing observations, and climate model simulations. In addition, her group examines the impacts of climate change and air pollution on communities in California and supports the decision-making activities of stakeholders using high-resolution climate model simulations. Diao is the recipient of the Lawrence Livermore National Laboratory Faculty Mini-Sabbatical Fellowship, SJSU Research Foundation Early Career Investigator Award, National Center for Atmospheric Research Advanced Study Program Postdoctoral Fellowship, National Aeronautics and Space Administration Earth and Space Science Fellowship, and the Princeton Francis Upton Fellowship. Diao received a B.S. in environmental sciences from Peking University and a Ph.D. in civil and environmental engineering from Princeton University. She previously served on the National Academies of Sciences, Engineering, and Medicine's Committee on Technology Developments to Advance Antarctic Research: A Workshop.

Neil Donahue

Member

Neil Donahue is the Thomas Lord University Professor of Chemistry in the Departments of Chemistry, Chemical Engineering, and Engineering and Public Policy at Carnegie Mellon University, where he has been on the faculty since 2000. Prior to that, he spent a decade as a research scientist at Harvard University studying gas-phase radical molecule reaction kinetics of reactions important to stratospheric and tropospheric chemistry. Donahue studies oxidation chemistry in Earth's atmosphere, recently emphasizing the interactions between organic oxidation mechanisms and thermodynamics of partitioning between the gas and condensed phases that drive formation and growth of atmospheric aerosols. He currently studies aerosol nucleation and growth as part of the Cosmics Leaving Outdoor Droplets collaboration at European Organization for Nuclear Research. Donahue has received the Pittsburgh, Esselen, and Creative Advances in Environmental Science and Technology awards from the American Chemical Society as well as the David Sinclair award for sustained excellence from the American Association for Aerosol Research (AAAR) and the Charney lectureship from the American Geophysical Union (AGU). He is a fellow of AAAR and AGU. Donahue received an A.B. in physics from Brown University and a Ph.D. in meteorology from the Massachusetts Institute of Technology.

Lesley-Ann Dupigny-Giroux

Member

Lesley-Ann L. Dupigny-Giroux is a Distinguished Professor of Climatology in the Department of Geography & Geosciences, the Vermont State Climatologist since 1997, and the President of the American Association of State Climatologists from 2020-2022. In 2020, she was appointed by the Vermont House of Representatives to the Vermont Climate Council as the member with expertise in climate change science. An applied climatologist by training, Dupigny-Giroux's research interests intersect a number of interdisciplinary fields including hydroclimatic natural hazards and climate literacy, geospatial climate and land-surface processes, all within the context of our changing climate. She is an expert in floods, droughts and severe weather and the ways in which these affect the landscape and peoples of Vermont and the US Northeast. A Fellow of both the American Association of Geographers as well as the American Meteorological Society, Dupigny-Giroux was invited by the White House Office of Science and Technology Policy Program to be a presenter on the "Climate Science Leading the Way" panel at the COP26 meeting in Glasgow, Scotland in 2021. She has contributed to all five National Climate Assessments (NCAs), serving as the lead author for the Northeast Chapter of NCA4, and is an author on the national Water chapter of NCA5. Dupigny-Giroux received a B.Sc. in physical geography and development studies from the University of Toronto and an M.Sc. in climatology and hydrology and Ph.D. in climatology and geographic information systems from McGill University. She currently serves on the National Academies of Sciences, Engineering, and Medicine's Committee to Advise the U.S. Global Change Research Program.

Kevin Gurney

Member

Kevin Gurney is a professor in the School of Informatics, Computing, and Cyber Systems at Northern Arizona University. Prior to NAU, Gurney was an Associate Professor at Arizona State University and Assistant/Associate Professor at Purdue University. He is also co-founder of Crosswalk Labs, a company aimed at providing greenhouse gas emissions data to governments, businesses, and civic society. Gurney is trained as an atmospheric scientist, ecologist and public policy expert currently working in the areas of carbon cycle science, climate science, and climate science policy. The emphasis of his research over the past two decades has included inverse estimation of greenhouse gas (GHG) fluxes, bottom-up GHG flux estimation, urban carbon dioxide dynamics, and climate policy. Gurney is an Intergovernmental Panel on Climate Change lead author, an National Science Foundation CAREER award recipient, Sigma Xi Young Scientist recipient, and a Fulbright scholar. Gurney received a B.A. in physics and M.P.P. in public policy from University of California, Berkeley, an M.S. in meteorology from Massachusetts Institute of Technology, and a Ph.D. in ecology from Colorado State University. He previously served on the National Academies of Sciences, Engineering, and Medicine's Committee on Development of a Framework for Evaluating Global Greenhouse Gas Emissions Information for Decision Making.

Mary H. Hayden

Member

Mary H. Hayden is a Research Professor at the University of Colorado's Lyda Hill Institute for Human Resilience and Adjunct Faculty at the Colorado School of Public Health. Dr. Hayden's research interests include a range of interdisciplinary topics focused on the integration of the physical and social sciences in the study of climate-sensitive health issues. She founded the NSF NCAR Weather, Climate, and Health Program, was the Lead Author on the Human Health chapter of the 5th National Climate Assessment (NCA5) and a contributing author on the 4th NCA, the IPCC, and the USGCRP Climate and Health Assessment. She was a founding member of the Environment and Health board, American Meteorological Society, a member of the scientific advisory committee, Border Infectious Diseases Program (CDC), served on the Global Health Scientific Committee, American Society of Tropical Medicine and Hygiene, and was a member of the Board on Environmental Change and Society at the National Academies of Science, Engineering, and Medicine. Dr. Hayden's scientific training includes a B.A. equivalent degree in Islamic Studies from the University of Heidelberg, Germany, a B.A. in German (minor in meteorology) from Metropolitan State University, Denver, a M.A. in geography (climatology) from the University of Colorado, Boulder, and a Ph.D. in Health and Behavioral Sciences from the University of Colorado, Denver.

Zhanqing Li

Member

Zhanqing Li is a distinguished university professor of Atmospheric and Oceanic Science at the University of Maryland. He was previously a research scientist at Natural Resource Canada. His research interests include remote sensing, atmospheric physics and chemistry, climate, and the environment with a focus on aerosols, clouds, the radiation budget, precipitation, biomass burning, and air pollution. Li is a fellow of the American Meteorological Society, American Geophysical Union (AGU), and American Association for the Advancement of Science. His awards include AGU's Kaufman Award, Humboldt Research Award of Germany, and the Head of Public Service Award of Canada. He has served on numerous committees including the Atmospheric Observation Panel for Climate of the World Meteorological Organization, the Atmospheric Chemistry Committee and Satellite Meteorological Committee of AMS, and an award committee of the AGU's Atmospheric Science Section. Li received a Ph.D. from McGill University.

Andrea Lopez Lang

Member

Andrea Lopez Lang is currently an Associate Professor in the Department of Atmospheric and Oceanic Sciences at the University of Wisconsin-Madison. Prior to joining the faculty, Andrea spent 12 years on the faculty at the Department of Atmospheric and Environmental Sciences at the State University of New York at Albany. Her research expertise spans synoptic to large-scale atmospheric dynamics on the weather to seasonal timescales, where she explores these timescales in the context of variability in the troposphere and stratosphere. Beyond research, she is committed to bridging the gap between student academic experiences and the breadth of careers opportunities for atmospheric scientists. Lang was in the inaugural 2018 class of the American Meteorological Society's (AMS) Early Career Leadership Academy and was the recipient of a 2008 Ford Foundation Fellowship. She's served on the Council of the AMS and as Chair of its Board of Enterprise Economic Development. Lang received a B.S., M.S., and Ph.D. in atmospheric and oceanic sciences from the University of Wisconsin-Madison.

Amy McGovern

Member

Amy McGovern is the Lloyd G. and Joyce Austin Presidential Professor in the School of Meteorology and the School of Computer Science at the University of Oklahoma. She is also the Director of the National Science Foundation Artificial Intelligence (AI) Institute for Research on Trustworthy AI in Weather, Climate, and Coastal Oceanography (AI2ES). McGovern has worked in the intersection of artificial intelligence and meteorology since 2005. She became a fellow of the American Meteorological Society in 2021. McGovern received a B.S. in math and computer science from Carnegie Mellon University, and an M.S. and Ph.D. in computer science from the University of Massachusetts. She previously served on the National Academies of Sciences, Engineering and Medicine Committee on Machine Learning and Artificial Intelligence to Advance Earth System Science: Opportunities and Challenges - A Workshop.

Jonathan A. Patz

Member

Jonathan Patz (NAM) is the Vilas Distinguished Achievement Professor and John P. Holton Chair of Health and the Environment and, from 2011-2022, served as the inaugural director of the Global Health Institute at the University of Wisconsin-Madison. His faculty appointments are in the Nelson Institute for Environmental Studies, Center for Sustainability and the Global Environment, and the Department of Population Health Sciences in the School of Medicine and Public Health. Patz co-chaired the health report for the first Congressionally mandated U.S. National Assessment on Climate Change and for 15 years, served as a lead author for the United Nations Intergovernmental Panel on Climate Change—the organization that shared the 2007 Nobel Peace Prize. Some of his other awards include: the Aldo Leopold Leadership Fellows Award; the shared Zayed International Prize for the Environment; the Fulbright Scholarship; the American Public Health Association's Homer Calver Award for environmental health leadership; Case Western School of Medicine Alumni Special Recognition award; Johns Hopkins Society of Scholars; Chanchlani Global Health Research Award; and he is an elected member of the National Academy of Medicine. Patz earned medical boards in both Environmental & Occupational Medicine and in Family Medicine. He received his M.D. from Case Western Reserve University and his M.P.H. from Johns Hopkins University. Patz has served on numerous National Academies of Sciences, Engineering, and Medicine Committees, including the Committee on Accelerating Decarbonization in the United States: Technology, Policy, and Societal Dimensions.

Bernadette W. Placky

Member

Bernadette Woods Placky is a meteorologist, climate science communicator, and network builder with more than 25 years of experience translating complex science into stories that move people and institutions to act. She is a leading expert on the connections between weather and climate change. Most recently, Bernadette served as Vice President of Engagement and Chief Meteorologist at Climate Central where she built and led Climate Matters, an innovative climate journalism and communication program. Through convenings, data analysis, content creation, and sustained engagement, she grew and supported a network of more than 3,000 media professionals across the United States and internationally. Bernadette also cultivated partnerships with media organizations, nonprofits, academic institutions, and government agencies, and represented Climate Central at major global platforms including UN Climate Conferences, Aspen Ideas: Climate, and Climate Week NYC. Before Climate Central, Bernadette spent more than a decade as a TV meteorologist, earning an Emmy for Best Weathercaster. She is a Fellow of the American Meteorological Society, earned the Certified Broadcast Meteorologist seal, and was elected to its Council. She serves on the National Academies Board on Atmospheric Science and Climate, as an advisor for C-Change Conversations, the Watershed Institute's Advisory Board, and on the Princeton Wrestling Club Board. Bernadette graduated from Penn State University with a BS in Meteorology and a minor in French.

Kevin Reed

Member

Kevin Reed is a Professor in the School of Marine and Atmospheric Sciences at Stony Brook University where he leads the Climate Extremes Modeling Group, which focuses on investigating how societally-relevant extreme events, such as hurricanes, may change in the coming decades. This research aids in advancing scientific understanding of the impacts of climate change, as well as developing new methodologies to better translate state-of-the-art science for climate adaptation applications and policies. Reed is also the Interim Director of Academic, Research, and Commercialization Programs at the New York Climate Exchange, a new non-profit focused on open exchange and collaboration that empowers sustainable solutions to climate change for New York City and the world. He leads the strategic direction and facilitates the co-development of academic, research, and community programs with a diverse set of academic, industry, and community partners. Reed received a B.S. in physics and M.S. and Ph.D. in atmospheric science from the University of Michigan, where he also completed a Graduate Certificate in Science, Technology, and Public Policy.

Aradhna Tripati

Member

Aradhna Tripati is a Professor in the Institute of the Environment and Sustainability; Department of Earth, Planetary, and Space Sciences; Department of Atmospheric and Oceanic Sciences; and California Nanosystems Institute, and is the founder and director of the Center for Diverse Leadership in Science at the University of California, Los Angeles. She is an American geoscientist, climate scientist, and advocate for inclusive diversity, equity, justice, and belonging. Her research includes advancing new chemical tracers for the study of environmental processes and studying the history of climate change and Earth systems. She is recognized for her innovative research on climate change and clumped isotope geochemistry, including chemical tracer development, the evolution of atmospheric carbon dioxide levels and the impacts on temperature, the water cycle, glaciers and ice sheets, and ocean acidity. She is a Fellow of the Geochemical Society, European Association of Geochemistry, and Geological Society of America, and received a Presidential Early Career Award in Science and Engineering under President Obama. She held the Chair International D'Excellence in Stable isotopes and paleoceanography, was a Distinguished Lecturer at the National Science Foundation, and received the American Geophysical Union Presidential Citation for No Time for Silence Contributing Author, led by Vernon Morris. Tripati received a Ph.D. in Earth sciences from the University of California, Santa Cruz. She is a member of the U.S. National Committee for the International Union for Quaternary Research.