

Education for Thriving in a Changing Climate

Committee

Eric J. Jolly

Chair

ERIC J. JOLLY (Chair), is the President and CEO of the Saint Paul & Minnesota Foundation (retired) – an organization working to create an equitable, just and vibrant Minnesota where all communities and people thrive. Dr. Jolly is a cognitive psychologist with a background that also includes engineering and mathematics. Previously, as vice president and senior scientist at Education Development Center, he led technical assistance for NSF's office of system reform for STEM (formerly SMET) education. As president of the Science Museum of Minnesota he led both a significant science education center and the nation's largest exhibit construction group, bringing groundbreaking science programming to major museums around the nation. He has previously served as a member of the Mathematical Sciences Education Board, Committee for Equal Opportunities in Science and Engineering, chaired AAAS's EHR division, as well as chair or service to numerous panels for the National Science Foundation and the National Academies. He is a member of several academic honor societies, a senior member of IEEE, life fellow of AAAS, life appointee to the Hendrickson Institute for Ethical Leadership, life member of SACNAS, and recipient of two honorary doctorates and numerous scholarly awards.

Arun Agrawal

Member

ARUN AGRAWAL (NAS), is the Pulte Family Professor of Development Policy at the Keough School of Global Affairs and Director of the Just Transformations to Sustainability Initiative at the University of Notre Dame. His research focuses on sustainability, the political economy of institutional change, environmental governance, and transformative change. An elected member of the U.S. National Academy of Sciences, Dr. Agrawal has conducted fieldwork in over 20 countries across Asia, Africa, and Latin America, supported by organizations such as the NSF, MacArthur Foundation, and Ford Foundation. Dr. Agrawal's work has been published in prestigious journals like Science, PNAS, and American Political Science Review. He serves on the editorial board of PNAS and co-chaired the Transformative Change Assessment for the Intergovernmental Platform on Biodiversity and Ecosystem Services (2021–24). He holds a Ph.D. in Political Science from Duke University and an MBA in Management from the Indian Institute of Management.

Reginald Archer

Member

REGINALD ARCHER, is an Associate Professor of Applied GIS in the Department of Environmental Science at Tennessee State University (TSU). He holds a B.S. in Surveying and Mapping and an M.S. in Civil Engineering from the University of Florida, along with a Ph.D. in Geography from UCSB, earned in 2013. Since joining TSU in 2015, Dr. Archer has directed the Geospatial Graduate Certificate program and the Geospatial Research and Analysis Lab. His research focuses on the human-environment nexus, utilizing GIS and remote sensing for environmental and climate justice, sustainable food systems, and precision agriculture. Dr. Archer co-leads the HBCU Environmental Justice Technical Collaborative and is Director of the Environmental Special interest group of the National Society of Black Engineers (NSBE). He serves on the EPA Science Advisory Board for the EJ Screen tool and the Tennessee Mapping Advisory Committee. Additionally, he is the immediate Past-President of the National Association of Geoscience Teachers.

K.C. Busch

Member

K. C. BUSCH, is an Associate Professor of STEM Education at North Carolina State University, specializing in science learning and affiliated with the Leadership in Public Science interdisciplinary cluster. Dr. Busch has investigated the language used to teach about climate change in educational settings, and how that framing affects youth perception of the problem and their capacity for creating solutions. Her current research, funded through an NSF CAREER award, is exploring how scientific information and social relationships are used in communities to make decisions about climate change adaptation. She was recognized for her research contributions as a recipient of NARST's Early Career Research Award in 2024. Prior to her university position, Dr. Busch taught secondary school science for twelve years. She also has two years of informal environmental education experience in Africa with the Peace Corps and in Nevada with the National Park Service. She holds a Ph.D. in science education from Stanford University (2016), an M.A. in science education from the University of Texas in Austin (2012), and a B.S. in ecology from Iowa State University (1994).

Noah Weeth Feinstein

Member

NOAH WEETH FEINSTEIN, is Professor of Curriculum & Instruction and Community & Environmental Sociology at the University of Wisconsin-Madison, and Emeritus Director of the Holtz Center for Science & Technology Studies. He studies how people make sense of science in their personal, social, and political lives, and how educational systems such as schools and museums can help. Professor Weeth Feinstein is best known for his work on the competent outsider approach to science literacy but has also written extensively about sustainability education and equity in informal science learning. His current theoretical work addresses the social nature of public engagement with science, while his empirical and engaged scholarship focuses on youth-centered and community-based climate change adaptation, resilience, and transformation. He received his AB in Biology from Harvard University and his MS (in Biological Sciences) and Ph.D. (in Science Education) from Stanford University. He previously served on the consensus committee for the 2016 BOSE/NRC report on Science Literacy.

Maya M. Garcia

Member

MAYA M. GARCIA, is the Chief Program Officer at Beyond100K, leading efforts to end the STEM teacher shortage in the U.S. by diversifying and retaining the STEM teacher workforce. She ensures that students have access to STEM learning experiences that promote belonging. Ms. Garcia previously served for over 10 years as a state science supervisor. Her career began as a middle school science teacher and department chair in Washington, D.C. In 2010, as a Fulbright Distinguished Teacher, she studied community-driven approaches to increase STEM access in South Africa. She has held leadership roles in the District of Columbia Office of the State Superintendent of Education (OSSE), where she led the adoption of the Next Generation Science Standards (NGSS) and launched the DC STEM Network. She also led STEM standards implementation at the Colorado Department of Education and contributed to the state's Environmental Education Plan. Nationally, Ms. Garcia has served on the National Academies Board on Science Education and as President-Elect of the Council of State Science Supervisors. She holds degrees in Neuroscience and Behavior, Secondary Science Teaching, and is pursuing a doctorate in Leadership for Educational Equity at the University of Colorado, Denver.

Joseph Henderson

Member

JOSEPH A. HENDERSON, is currently a Lecturer at the University of Vermont and formerly served as an Associate Professor of Social Sciences at Paul Smith's College. An anthropologist of environmental and science education, his research explores how sociocultural, political, and geographic factors influence climate change education. He completed a Ph.D. at the University of Rochester, focusing on science learning, sustainability education, and educational policy, and conducted post-doctoral work at the University of Delaware in climate change education. Dr. Henderson's current research investigates how global educational systems implement climate change programs. As part of the MECCE Project, he studies climate change educational policy in federated governance systems. He co-edited *Teaching Climate Change in the United States*, a collection celebrating diverse climate change education programs. He is certified as an earth science teacher and has taught at both the middle and high school levels, and also has been an environmental educator in the informal education sector. Dr. Henderson has published broadly in environmental and science education journals and serves as an elected public school board official in Upstate New York.

Henderson is currently leading a pilot research project with funding from the Rosa Luxemburg Foundation, which has made public statements about civic education related to climate change.

Joseph Kahne

Member

JOSEPH KAHNE, is the Dutton Presidential Professor for Education Policy and Politics and Co-Director of the Civic Engagement Research Group (CERG) at the University of California, Riverside. Professor Kahne's research and school reform work focus on ways that educational practices and policies can promote young people's capacities for informed and effective engagement with societal issues as well as equitable civic outcomes and access to supports. Kahne is a member of the Equity in Civics Initiative and is a member of the Steering Committee and Chair of the Research Task Force for the Educating for American Democracy Initiative. Professor Kahne was Chair of the MacArthur Foundation's Youth and Participatory Politics Research Network. Kahne was also a member of the American Academy of Arts and Sciences Commission on the Practice of Democratic Citizenship and of the National Academy of Education's Initiative on Civic Discourse and Reasoning. He was previously a social studies teacher in a New York City public school. Kahne was elected to the National Academy of Education and is a Fellow of the American Educational Research Association. Kahne received his Masters in Political Science and his Ph.D. in Education from Stanford University.

Anna Lees

Member

ANNA LEES (Little Traverse Bay Bands of Odawa Indians, descendant), is the Ballmer Endowed Professor for Equity and Early Learning at the University of Washington – Seattle in the College of Education's Learning Sciences and Human Development program. Previously, she was a faculty member in teacher education at Western Washington University. Her work focuses on Indigenous early learning, educator development, and the design of learning environments that support just and sustainable futures. She partners with Indigenous communities to support land- and water-based education in both school and intergenerational settings, using qualitative and community-based participatory methods to examine educator learning and child development. Her scholarship has been supported by the National Science Foundation, the Spencer Foundation, and the Foundation for Child Development, and recognized in journals such as the Journal of Teacher Education and Journal of Early Childhood Teacher Education. She currently serves as editor of the Tribal College and University Research Journal. Lees holds an Ed.D. in Curriculum & Instruction from Loyola University Chicago, an M.A. in Elementary Reading & Literacy from Marygrove College, and a B.A. in Elementary Education from Spring Arbor University.

Martha Monroe

Member

MARTHA C. MONROE, is professor emerita in environmental education at the University of Florida's School of Forest, Fisheries, and Geomatics Sciences. Her position as Professor and Extension Specialist enables her to explore public perceptions of current environmental issues and develop effective educational programs to engage youth and adults in their resolution. Her recent Extension projects focused on community action projects with 4-H youth clubs and senior centers, as well as deliberative discussions with adults on community issues. Her work in climate change education included the development and testing of a module for high school science teachers on forest and climate change, research on climate hope, and synthesizing effective educational strategies. Monroe received her PhD from the University of Michigan.

Daniel Oerther

Member

DANIEL B. OERTHER, is a professor of environmental health engineering at the Missouri University of Science and Technology and a professor of nursing at Duquesne University. He is also the executive director of the American Academy of Environmental Engineers and Scientists. Previously, he was the professor and head of the department of civil and environmental engineering at the University of Cincinnati where he was a co-investigator on a \$2M NSF-funded GK-12 fellows project, "Building STEM Cincinnati City". A pioneer in convergence research, Dr. Oerther is known for redefining environmental engineering to address planetary health, partnering with disadvantaged communities, and promoting interprofessional education between nurses and engineers. A three-time Fulbright awardee and former Jefferson Science Fellow at the U.S. Department of State, he is a lifetime honorary Fellow of the American Academy of Nursing and a Diplomate Laureate of the American Academy of Sanitarians. Dr. Oerther holds a B.A. in biology, a B.S. in environmental engineering from Northwestern University, and a doctorate in environmental engineering from the University of Illinois. He is a Certified Environmental Health Specialist, licensed Professional Engineer, and Board Certified in Environmental Engineering and Environmental Science.

Rajul Pandya

Member

RAJUL PANDYA, is the Fulton Presidential Professor of Practice at Arizona State University's Mary Lou Fulton Teachers College and Executive Director of the Global Futures Education Alliance at the Julie Ann Wrigley Global Futures Laboratory. Formerly, he served as Vice-President of Community Science and founding Director of the Thriving Earth Exchange at the American Geophysical Union. Dr. Pandya's work focuses on participatory science and science education, emphasizing community involvement in scientific discovery and how universities can support community priorities for sustainability. He is a member of advisory boards for the Anthropocene Alliance, Community and College Partners Program, Cornell Lab of Ornithology, ISET International, and the Aspen Institute for Global Change. He also serves on the Scientific Advisory Council of the American Red Cross and the NSF Advisory Committee on Environmental Research and Education. Dr. Pandya contributes to the National Academies on several committees, including the Standing Committee on Science Communication and the Resilient America Roundtable. He earned his Ph.D. in Atmospheric Science from the University of Washington and a B.S. in Physics from the University of Illinois.

Leigh F. Peake

Member

LEIGH F. PEAKE, joined GMRI in 2014 as Chief Education Officer, leading the organization's work with educators and youth across Maine and the Northeast. Prior to GMRI, she had a successful career in educational publishing, including fifteen years at Heinemann Publishing, where she led a team to develop professional resources for teachers. She also served as President of Corwin, Sr. VP at SAGE Publications, and Director of New Enterprise Initiatives at Education Development Center (EDC). Ms. Peake is passionate about climate change education, aiming to foster youth development in science and mathematics. She is dedicated to supporting educators and enhancing collaboration between teachers and researchers. As Principal Investigator on numerous federal awards, she has advanced STEM education and supported the creation of GMRI's Learning Sciences Lab. She has chaired the Gordon Research Conference on Visualization in Science and Education and served on the NAS Workshop Committee for Foundations of Data Science for Students in Grades K-12 (NAS 2023). A former middle school math teacher with a family of educators, she is an alumna of Smith College and holds a Master's degree from Brandeis University.

Alison Rellinger

Member

ALLISON N. RELINGER, is an extension specialist with dual appointments at Mississippi State University and the Mississippi-Alabama Sea Grant, where she leads a coastal climate resilience program. Prior to her extension work, she was a high school biology and environmental science educator at the Alabama School of Math and Science. Dr. Rellinger specializes in communicating climate science to learners of all ages, developing lessons for formal and informal educators, and delivering climate education through outreach events, summer camps, and classroom collaborations. She received the 2022 EPA Gulf Guardian Award for Youth Environmental Education for creating the "Sea-Level Rise in the Classroom" program for educators in Mississippi and Alabama. Dr. Rellinger holds a Ph.D. and M.S. in Marine Sciences from the University of South Alabama and a B.A. in Biology from St. Mary's College of Maryland.

Asli Sezen-Barrie

Member

ASLI SEZEN-BARRIE, is the Stacey Nicholas Endowed Chair of Environmental and Climate Change Education at the University of California, Irvine, and faculty advisor for the Environmental and Climate Change Literacy Projects (ECCLPs), focused on justice-oriented partnerships across the UC-CSU systems. Previously, she was a program director at the NSF's Division of Research on Learning, co-leading the Discovery Research preK-12 program. Dr. Sezen-Barrie is the Chief Editor of the forthcoming Handbook of Climate Change Research for Transdisciplinary Science Education and lead author of Data Stories of Climate Change Impacts: Towards Justice-Oriented Education and Action. Her research explores inclusive, transdisciplinary practices in science and engineering education, particularly in addressing environmental challenges like extreme weather, wildfires, and ocean acidification. Her work also emphasizes justice-oriented approaches to climate change mitigation and adaptation, with a focus on youth and educators. She earned her Ph.D. in Science and Math Education from the Pennsylvania State University.

Alicia Wilson-Ahlstrom

Member

ALICIA WILSON-AHLSTROM, is Vice President of Learning and Innovation at Children's Funding Project. Previously, she held successive staff roles at the High/Scope Educational Research Foundation and Forum for Youth Investment, and served ten years as a consultant in strategy, learning co-design, and evidence-based policy development for informal learning settings and out-of-school time with foundations and community partnerships, including the William T. Grant Foundation, Wallace Foundation, Grantmakers for Education, the Forward Promise Initiative for Black boys, and the Interagency Working Group for Federal Youth Programs. While at High/Scope Educational Research Foundation, she served as faculty and later lead trainer for its Institute for IDEAS, an extended residential educational program, led to the development of the Youth Program Quality Intervention, an intervention based on the active, participatory educational approach which has been instituted in 4000 afterschool programs. Her board and service work has included service to the American Institutes for Research, the Center for Information & Research on Civic Engagement at Tufts, and the National Science Foundation INCLUDES Initiative. Ms. Wilson-Ahlstrom holds a Master of Social Work and a Master of Public Policy from University of Michigan, and an Executive Master of Business Administration from Quantic School of Business and Technology.

Elizabeth Cady

Staff Officer

Dr. Elizabeth T. Cady is a Senior Program Officer with the Board on Science Education (BOSE) in the Division of Behavioral and Social Sciences and Education (DBASSE) at the National Academies of Sciences, Engineering, and Medicine. She conducts studies, workshops, and other projects focused on equitable, inclusive, and effective STEM education at all levels. From 2006-2023 she worked in the National Academy of Engineering (NAE) Program Office working on projects focused on equitable and inclusive engineering education and related research at the precollege and higher education levels. She earned M.S. and Ph.D. degrees in Cognitive and Human Factors Psychology from Kansas State University and a B.A. in psychobiology and political science from Wheaton College in Massachusetts.