

The National Academies of **SCIENCES • ENGINEERING • MEDICINE**

Fall 2020 Sustainability Webinar Series: Urban Sustainability

Tuesday, November 24, 2020
(All times are Eastern Time)

- 11:00 am **Welcome Remarks**
David Dzombak (NAE), Carnegie Mellon University; Chair, National Academies Roundtable on Science and Technology for Sustainability
- 11:05 am **Presentations: Urban Sustainability**
- Nancy Grimm (NAS), Arizona State University (Academic Perspective)
 - Scott Hutchins, U.S. Department of Agriculture (National Perspective)
 - Miguel Román, Universities Space Research Association (Nongovernmental Perspective)
- 11:45 am **Q&A and Discussion**
Moderator: David Dzombak (NAE), Carnegie Mellon University and Roundtable Chair
- 12:00 pm **Adjourn**

Speaker Biographical Information

DAVID DZOMBAK (NAE) (Roundtable Chair) is the Hamerschlag University Professor and Head of the Department of Civil and Environmental Engineering at Carnegie Mellon University. The emphasis of his research and teaching is on water resources and water quality engineering, and energy-environment issues. Dr. Dzombak is a member of the National Academy of Engineering, a registered Professional Engineer in Pennsylvania, a Board Certified Environmental Engineer, and a Diplomate Water Resources Engineer. His professional service activity has included the U.S. Environmental Protection Agency (EPA) Science Advisory Board (2002-2016); the U.S. Department of Defense (DOD) Strategic Environmental Research and Development Science Advisory Board (2013-2016); the EPA National Advisory Council for Environmental Policy and Technology, Environmental Technology Subcommittee (2004-2008); the National Research Council (various committees, boards, and roundtables, 2000-present); Editorial Advisory Board for Sustainable Chemistry & Engineering (2012-2016); Associate Editor of Environmental Science & Technology (2005-2012); chair of committees for the American Academy of Environmental Engineers and Scientists, American Society of Civil Engineers, Association of Environmental Engineering and Science Professors, and Water Environment Federation; and advisory committees for the Commonwealth of Pennsylvania and many other organizations. Dr. Dzombak received his Ph.D. in Civil Engineering from the Massachusetts Institute of Technology in 1986. He also holds an M.S. in Civil Engineering (1981) and a B.S. in Civil Engineering (1980) from Carnegie Mellon, and a B.A. in Mathematics from Saint Vincent College (1980).

NANCY GRIMM (NAS) is the Virginia M. Ullman Professor of Ecology, Regents Professor, and a Distinguished Sustainability Scientist at Arizona State University, where she earned her Ph.D. in 1985 and her M.S. in 1980. Her B.A. is from Hampshire College in Massachusetts. She has been a faculty member in the School of Life Sciences (and its previous incarnations) since 1997, is an affiliate of the School of Sustainability, and has held visiting or adjunct appointments at the Center for Advanced

Studies in Blanes, Spain, the National Center for Ecological Analysis and Synthesis, and the University of New Mexico. She was President and is fellow of the Ecological Society of America and the Society for Freshwater Science, and is fellow of the American Association for the Advancement of Science and the American Geophysical Union (AGU). She has served as a National Science Foundation's program director, a staff scientist and lead author for the National Climate Assessment, and is currently an editor of AGU's Earth's Future. International and national advisory board service includes the Margalef Prize Selection Committee, the National Research Council's Standing Committees to Advise the U.S. Global Change Research Program and on Hydrological Sciences, and the Advisory Committee for the Australian CRC for Water Sensitive Cities, among many others. Dr. Grimm studies the interaction of climate variation and change, human activities, and ecosystems. As the founding director of the interdisciplinary Central Arizona-Phoenix Long-Term Ecological Research program, she brought together earth, life, and social scientists to develop new frameworks for understanding urban social-ecological-technological systems (SETS). She currently co-directs the Urban Resilience to Extremes Sustainability Research Network, for which the SETS framing is central.

SCOTT HUTCHINS is the Deputy Under Secretary for the U.S. Department of Agriculture's (USDA's) Research, Education, and Economics mission area which is comprised of the Agricultural Research Service, Economic Research Service, National Agricultural Statistics Service, and the National Institute of Food and Agriculture. Together these agencies cut across every USDA department and have unique federal leadership responsibility to advance agricultural research, extension, and education. Dr. Hutchins was sworn-in by Secretary Perdue on January 29, 2019. After nearly 32 years, he retired from Corteva Agriscience™ where he held many roles in Program Management, Human Resources, Six Sigma, R&D Portfolio Management, and Global Administration. In addition, he is a Board-Certified Entomologist, Adjunct Professor of entomology at the University of Nebraska-Lincoln, Past President of the Entomological Society of America (ESA), and Fellow of the ESA. Dr. Hutchins received a B.S. in entomology from Auburn University, an M.S. in entomology from Mississippi State University, and a Ph.D. in entomology from Iowa State University.

MIGUEL ROMÁN is the founding director of The Earth from Space Institute (EfSI) - an independent program of Universities Space Research Association (USRA) dedicated to supporting the development of long-term strategies for reducing disaster risk and promoting community resilience, using the unique vantage point of Space. Román currently serves as NASA's Terra, Aqua, and Suomi NPP's Land discipline leader, helping manage a worldwide team of investigators in charge of generating long-term data records from the Moderate Resolution Imaging Spectroradiometer (MODIS) and the Visible Infrared Imaging Radiometer Suite (VIIRS); two of the largest and most comprehensive instrument suites ever launched to systematically monitor our planet's vital signs. Before joining USRA, Román served for ten years as a civil servant scientist at NASA's Goddard Space Flight Center, where he pioneered the iconic Black Marble - a suite of satellite products that provide daily global views of Earth at night, with an emphasis on tracking the signatures of recovery across vulnerable communities affected by major disasters. Román, who continues to serve in the role of Black Marble team leader, has also led international activities under the Committee on Earth Observation Satellites (CEOS) and the Group on Earth Observations (GEO). President Barack Obama named him a recipient of the Presidential Early Career Award for Scientists and Engineers (PECASE), the highest honor bestowed by the United States government on researchers beginning their independent careers. His writings have been featured in numerous news outlets, including NPR, The Washington Post, NBC, The Economist, Telemundo, Smithsonian Magazine, and BBC World News. Dr. Román received his Ph.D. in Geography from Boston University, his M.Eng. in Systems Engineering from Cornell University, and his B.S. in Electrical Engineering from the University of Puerto Rico at Mayagüez.