

# Sustainable Infrastructures for Life Science Communication – A Workshop

## Participants

### Day 1: December 9, 2013

#### Session 1: Background and Vision

*Kenneth S. Ramos*<sup>†</sup> (session moderator) is Distinguished University Scholar and Professor of Biochemistry and Molecular Biology and Director of the Center for Environmental Genomics and Integrative Biology. He is a leading expert in the study of gene-environment interactions and personalized medicine. His research program integrates diverse approaches ranging from molecular genetics to population-based public health studies. Ongoing preclinical work in his laboratory focuses on the study of repetitive genetic elements in the mammalian genome and their role in genome plasticity and disease. Current clinical studies focus on the characterization of diagnostic and prognostic biomarkers for chronic disease and cancer to advance personalized and preventive medicine. In addition to his research, Ken has long standing interests in community outreach and engagement in the environmental health sciences. He completed a B.S. in Pharmaceutical Sciences and Chemistry (Magna Cum Laude) at the University of Puerto Rico, a PhD in Biochemical Pharmacology at the University of Texas at Austin, an M.D. degree with postgraduate training in Internal Medicine at the University of Louisville Health Sciences Center and Affiliated Hospitals.

*May Berenbaum*<sup>†</sup> has been on the faculty of the Department of Entomology at the University of Illinois at Urbana-Champaign since 1980; served as head of the department since 1992; and has held the Swanlund Chair of Entomology since 1996. Her research focuses on insect chemical ecology and practical application of ecological principles toward sustainable management practices. In addition to her research, May is devoted to public engagement in science; she has authored numerous magazine articles, as well as six books, about insects for the general public and has founded several outreach and citizen-science activities, including the UIUC Insect Fear Film Festival, Beespotter, and the UI Pollinarium. May was elected to the National Academy of Sciences (NAS) in 1994, and currently chairs the NAS Koshland Science Museum Advisory Board, co-chairs the NAS Roundtable on Public Interfaces of the Life Sciences, and serves on the advisory board for the NAS Division on Earth and Life Studies. She has chaired both the National Research Council Board on Agriculture and Natural Resources and the Committee on the Status of Pollinators in North America and has testified before Congress on issues relating to honey bee health and pollinator decline. In 2009, she received the AAAS Public Engagement with Science Award in recognition of her public communication efforts and in 2011 she received the Tyler Prize for Environmental Achievement.

*Brooke Smith*<sup>†</sup> is the Executive Director of COMPASS, a nonprofit helping scientist's find their voice and their science find its audience. Originally founded in 1999 to support ocean scientists, COMPASS now supports a broader scope of scientists working at the interface of the human and natural environment. Ms. Smith's career focuses on being a practitioner of science communications, a sustainability leader, and a nonprofit executive. Her experiences are in ocean and environmental science, state and federal environmental policy, environmental consulting, connecting science to policy and management and nonprofit management. Brooke leads COMPASS in vision, strategy, fundraising and administration. She received her MS from Oregon State University's College of Oceanic and Atmospheric Sciences, and her bachelor's degree from Duke University. She holds a courtesy faculty appointment at Oregon State University, serves on the National Board of Directors of the Surfrider Foundation and the Board of Directors of Portland's locally based Forest Park Conservancy, and she was recently a Donella Meadows Leadership Fellow. She lives in Portland OR with her husband and their 2 daughters.

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### Session 2: Life Scientists Engaged

*David Ewing Duncan*<sup>†</sup> (session moderator) is an award-winning, best-selling author, a journalist, and a television, radio and film producer and correspondent. His most recent books are *When I'm 164: The New Science of Radical Life Extension*, and *What Happens If It Succeeds*. He also wrote *Experimental Man: What One Man's Body Reveals about His Future, Your Health, and Our Toxic World*. David is a correspondent for *The Atlantic* and the chief correspondent for NPR Talk's *Biotech Nation*, he also writes for *The New York Times*, *Fortune*, *Wired*, *National Geographic*, *Discover* and many other publications. David is also the founding director of the Center of Life Science Policy at UC Berkeley, and has been a commentator on NPR's *Morning Edition* and a contributing editor for *Wired*, *Discover* and *Conde Nast Portfolio*. David is a former special correspondent and producer for ABC's *Nightline* and a correspondent for NOVA's *ScienceNOW!* The recipient of numerous awards, including *Magazine Story of the Year* from the American Association for the Advancement of Science, David's work has appeared twice in *The Best American Science and Nature Writing*. Duncan is a member of the San Francisco Writers' Grotto, a workspace co-operative that also includes Po Bronson, Caroline Paul and Tom Barbash, among others. He is the founder and former director of The BioAgenda Institute for Life Science Policy, a San Francisco-based nonprofit think-tank that held summits, panels and discussions, and sponsored white papers on important issues in the life sciences between 2003 and 2007. In 2011, he launched The Personalized Health Project, sponsored by The Ewing Marion Kauffman Foundation. He regularly lectures at Singularity University.

*Daniel A. Colón Ramos* is an associate professor at Yale University, where he directs a lab to study the development of the nervous system. His research focuses on how neurons choose specific connections in the developing animal as they assemble into a functioning brain, and how these connections change during behavior and learning. His scientific work has been recognized with a number of awards, including the Sloan Research Fellowship for "outstanding promise." Daniel is also the co-founder of *Ciencia Puerto Rico*, a non-profit organization that promotes scientific research and education, particularly among Hispanics. In 2011, his outreach and scientific work were recognized by the American Association for the Advancement of Science (AAAS) with the "Early Career Award for Public Engagement with Science." Daniel was born and raised in Puerto Rico. He studied Biology at Harvard University and obtained his PhD from Duke University in molecular biology and genetics.

*Craig McClain* is the Assistant Director of Science for the National Evolutionary Synthesis Center (NESCent). NESCent was created to facilitate synthetic research to address fundamental questions in evolutionary science. Craig's research focuses mainly on marine systems and particularly the biology of body size, biodiversity, and energy flow focusing often on the deep sea. He has conducted oceanographic research for 15 years and published over 40 papers in the area. He has participated in dozens of expeditions taking him to the Antarctic and the most remote regions of the Pacific and Atlantic. Craig is also the founder and chief editor of *Deep-Sea News*, a popular ocean themed blog, rated the number one ocean blog on the web and winner of numerous awards. Craig's popular writing has been featured in *Cosmos*, *Science Illustrated*, *American Scientist*, *Wired*, *Mental Floss*, and the *Open Lab: The Best Science Writing on the Web*.

*Nalini Nadkarni* is a forest ecologist and a science communicator. She was a faculty member at The Evergreen State College for 20 years, and in 2011, joined the University of Utah as a Professor of Biology and Director of the Center for Science and Mathematics Education. Her research concerns the ecological roles of canopy-dwelling biota in forest ecosystems. She has published over 100 scientific articles and four scholarly books. Nalini is also deeply interested in public engagement of science, and has given two TED talks, and has been highlighted in magazines such as *National Geographic*, *Glamour*, and *Playboy Magazine*. She created the "Research Ambassador Program" to train scientists to engage the public in

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non-traditional venues, such as pre-schools, churches, and sports stadiums. In 2005, she co-founded the Sustainability in Prisons Project, which brings science and nature to incarcerated men and women. The prisons project is now being expanded to a national level. Nalini has received many awards for her research and public engagement work, including a Guggenheim Fellowship, an Aldo Leopold Leadership Fellowship, the 2011 National Science Foundation Public Service Award, and the 2012 AAAS for Public Engagement in Science. She received her B.S. degree from Brown University, and her PhD from University of Washington.

### Session 3: Frictions and Momentum

*Bruce V. Lewenstein*<sup>†</sup> (session moderator) is Professor of Science Communication in the Departments of Communication and of Science & Technology Studies at Cornell University, Ithaca, New York, USA. He works primarily on the history of public communication of science, with excursions into other areas of science communication (such as informal science education). Bruce has also been active in international activities that contribute to education and research on public communication of science and technology, especially in the developing world. In general, he tries to document the ways that public communication of science is fundamental to the process of producing reliable knowledge about the natural world. From 1998 to 2003, Lewenstein was editor of the journal *Public Understanding of Science*. He was co-chair of a U.S. National Research Council study, *Learning Science in Informal Environments: People, Places, and Pursuits* (2009). In 2012, he was the first Presidential Fellow at the Chemical Heritage Foundation (Philadelphia), where he worked on issues of public engagement. He was elected a Fellow of the AAAS in 2002, and in 2011 served as chair of the AAAS's section on societal implications of science and engineering.

*Dominique Brossard* is professor and chair in the Department of Life Sciences Communication at the University of Wisconsin-Madison. She also leads the Societal Implications of Nanotechnology group in the NSF-funded Nanoscale Science and Engineering center. Dominique's research focuses on the intersection between science, media and policy, with an emphasis on public opinion dynamics in the context of controversial scientific innovations, such as biotechnology, stem cell research, nanotechnology and nuclear energy. She is also interested in understanding the role of values in shaping public attitudes, and in cross-cultural analysis of these processes, with a special emphasis on the online environment.

*Ms. Kathryn Foxhall* has been a reporter focusing on health and health policy issues in Washington for about 37 years. She was previously editor of *The Nation's Health*, the newspaper of the American Public Health Association (1978-1992). Kathryn has also reported for newsletters on reimbursement and on substance abuse, as well as for the magazine of the American Psychological Association. She has been a freelance reporter for 12 years, writing for health care trade publications.

*Diane Harley* is the director of the Higher Education in the Digital Age project at the Center for Studies in Higher Education (CSHE) at the University of California, Berkeley. At CSHE, she has created and directed research initiatives focusing on the policy implications of integrating information and communication technologies into complex academic environments. Diane is a biosocial anthropologist with a PhD in anthropology from UC Berkeley; her approach emphasizes the concurrent analysis of social, economic, and academic costs and benefits of new media in scholarship. She is currently serving as Chair of the UC Academic Senate Blue Ribbon Panel on Evaluation of the University of California Online Instruction Pilot Project (OIPP) and UC Online. Diane has also developed multimedia education programs and managed partnerships with the California and Florida departments of education, the Metropolitan Museum of Art, the National Science Foundation, ABC News Interactive, and various universities, publishers, and software developers. Her publications and presentations span the fields of

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higher education policy, scholarly communication, educational technology, biological anthropology, and the evolution of human and nonhuman primate biosocial behavior.

*Philip Needleman* joined the faculty at Washington University Medical School (St Louis) in 1967 and served as Chairman of the Department of Pharmacology from 1976 to 1989. During that time, he was selected Basic Science Teacher of the Year five times. Needleman left academia in 1989 to become Chief Scientist Officer of Monsanto, and later became President of Research and Development of the Searle Pharmaceutical Company and Senior Executive Vice President and Chief Scientist of the Pharmacia Corporation after the Monsanto-Searle merger. In 2004, Phil returned to academia as Associate Dean for Special Projects at Washington University Medical School. He was elected to the National Academy of Sciences in 1987 and the Institute of Medicine in 1993. At the NAS, Phil chaired the Pharmacology-Physiology section (2001-2004) and currently serves on the advisory board for the NAS Division on Earth and Life Studies. In 2009 he became interim President of the Donald Danforth Plant Sciences Center and after that, in 2011, he served as interim President and Chief Executive Office of the Saint Louis Science Center. He is Research Advisor to the President at Ben-Gurion University (Israel), and helped create the National Institute for Biotechnology in the Negev.

*Sonny Ramaswamy* was appointed to serve as director of the USDA's National Institute of Food and Agriculture (NIFA) on May 7, 2012. As part of USDA's Research, Education, and Extension mission, he oversees NIFA awards funds for a wide range of extramural research, education, and extension projects that address the needs of farmers, ranchers, and agricultural producers. Prior to joining NIFA, Sonny served as dean of Oregon State University's (OSU) College of Agricultural Sciences and director of the Oregon Agricultural Experiment Station. He provided overall leadership for the college's academic programs at the Corvallis campus and OSU programs at Eastern Oregon University in La Grande, for-credit extended education, informal education through the Agricultural Sciences and Natural Resources Extension Program, and research at OSU's main campus and 11 branch experiment stations throughout the state. He received a Bachelor of Science in agriculture and a Master of Science in entomology from the University of Agricultural Sciences, Bangalore, India, and his doctorate in entomology from Rutgers University. He is also a graduate of the University of Nebraska's New Academic Chair's Program and Harvard University's Management Development Program.

### **Session 4: How Do We Connect Life Scientists to Public Interfaces?**

*Matthew Nisbet*<sup>†</sup> (session moderator) is Associate Professor of Communication and co-Director of the Center for Social Media at American University, Washington, D.C. As a social scientist, Matthew studies the role of media and communication in policy-making and public affairs, focusing on debates over science, the environment, and public health. Since 2002, he has authored more than 70 peer-reviewed studies, scholarly book chapters, and monographs. Among awards and recognition, Matthew has been a Visiting Shorenstein Center Fellow on Press, Politics, and Public Policy at Harvard University's Kennedy School of Government, a Health Policy Investigator at the Robert Wood Johnson Foundation, a Google Science Communication Fellow, and an Osher Fellow at The Exploratorium science center. In 2011, the editors at the journal *Nature* recommended his research as “essential reading for anyone with a passing interest in the climate change debate,” and the *New Republic* highlighted his work as a “fascinating dissection of the shortcomings of climate activism.” A frequently invited speaker, Matthew has given lectures on more than three dozen college campuses worldwide and at many other scholarly and professional venues. His consulting experience includes research and analysis on behalf of the National Academy of Sciences, the Howard Hughes Medical Institute, the Corporation for Public Broadcasting, the Centers for Disease Control, and other public and private sector clients.

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*Donald F. Boesch* is a professor of marine science and President of the University of Maryland Center for Environmental Science, which operates four research laboratories throughout the state. He also serves as Vice Chancellor for Environmental Sustainability for the University System of Maryland. Don's research focuses on estuarine and coastal ecosystems in the Mid-Atlantic region, Gulf of Mexico, Australia and China. He is one of the nation's most recognized and experienced experts in the application of science to policies for the protection, sustainable use and restoration of coastal ecosystems and for adaptation to global climate change. He has been an official advisor to Federal agencies, the Chesapeake Bay Program, and four Maryland governors as a member of the Governor's Bay Cabinet. He was one of seven members appointed by President Obama to the National Commission on the BP Deepwater Horizon Oil Spill. Don currently serves on the Advisory Group for the Gulf of Mexico Program at that National Academy of Sciences. He holds a B.S. in biology from Tulane University and a PhD in oceanography from the College of William and Mary.

*Rick Borchelt*<sup>†</sup> is Director of Communications and Public Affairs at the US Department of Energy's (DOE) Office of Science. He has had a varied career in science communications and public policy, including stints as media relations director for the National Academy of Sciences; press secretary for the U.S. House of Representatives Committee on Science, Space and Technology under the chairmanship of the late Rep. George E. Brown, Jr.; special assistant for public affairs in the Executive Office of The President during the Clinton Administration; director of communications and public affairs at The Whitehead Institute for Biomedical Research at MIT; Special Assistant for Public Affairs to the director of the National Cancer Institute at the National Institutes of Health; and communications director for the research, education, and economics mission area of US Department of Agriculture (USDA). Rick has been active in science writing throughout his career. He was an elected member of the boards of both the Council for the Advancement of Science Writing and the National Association of Science Writers, and president of the DC Science Writers Association. He serves on the National Academy of Sciences Roundtable on Public Interfaces in the Life Sciences, and previously served on the National Academy of Engineering committee on Developing Effective Messages for Improving Public Understanding of Engineering. Rick is an amateur naturalist, and has done graduate work in insect systematics,

*Chad English* directs COMPASS' work to build constructive dialogue between scientists and the policy and management communities. In this capacity, Chad designs venues and opportunities to bring scientists and policymakers together for conversations that drive new thinking and new approaches to natural resource policy. He also organizes and runs communications workshops and trainings that help researchers find the core relevance of their work and share that effectively with policy and management communities. Prior to his transition to policy work, Chad received his PhD from Scripps Institution of Oceanography studying how the coastal ocean responds to upwelling winds. He first came to Washington, D.C. to serve a John A. Knauss Marine Policy Fellowship in the Senate Commerce Committee on Commerce, Science and Transportation. Following his fellowship, Chad worked for the House Committee on Science on ocean science, natural resource management, science and technology policy and other issues. Chad also has a Bachelor's degree in Physics from the University of California at Santa Cruz, and worked at the U.S. Geological Survey where he supported operational models of the San Francisco Bay to aid navigation, commerce, and recreation.

*Daniel Sarewitz* is co-Director of the Consortium for Science, Policy & Outcomes (CSPO) and Associate Director of the Center for Nanotechnology in Society at Arizona State University. He focuses on revealing the connections between science policy decisions, scientific research and social outcomes. How does the distribution of the social benefits of science relate to the way that we organize scientific inquiry? What accounts for the highly uneven advance of know-how related to solving human problems? How do the interactions between scientific uncertainty and human values influence decision making? How does technological innovation influence politics? And how can improved insight into such questions contribute

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to improved real-world practice? From 1989 to 1993, Daniel worked on research and development policy issues as a staff member in the U.S. House of Representatives, and principal speech writer for Committee Chairman George E. Brown, Jr. He received a doctorate in geological sciences from Cornell University in 1986. His published work includes *Frontiers of Illusion: Science, Technology, and the Politics of Progress*, (Temple University Press, 1996), *Living with the Genie: Essays on Technology and the Quest for Human Mastery* (Island Press, 2003) and *Prediction: Science, Decision-Making, and the Future of Nature* (Island Press, 2000).

*Jack Schultz* is Professor and Director of the Christopher S. Bond Life Sciences Center (LSC) at the University of Missouri. BLSC has been supported continuously by the National Science Foundation for 35 years to investigate the bases of interactions between plants and insect herbivores. Frustrated by the inability of community, physiological, and evolutionary ecology to construct effective generalizations and develop predictive theory, Jack's research has moved in an increasingly mechanistic direction. His lab's motivation is to understand various ecological and evolutionary phenomena and why the world looks and acts the way it does, but they focus on underlying mechanisms to explain patterns they see in the environment. As Director of Bond LSC, Jack integrates the research of 40 investigators from 12 academic departments and manages a substantive outreach program. The Bond LSC's Life Science and Society Program promotes and spotlights the intersections between science and society that matter to all of the 'publics'. Jack also leads a Howard Hughes Medical Institute (HHMI) training grant that teaches students, faculty and journalists to communicate science to broad audiences. This effort has grown into emerging science communication programs on the University of Missouri's campus.

*Erika Shugart* is Director of Communications and Strategic Marketing at the American Society for Microbiology. Between 2003 and 2013, she oversaw the development of new digital media exhibitions, online experiences and programs as Deputy Director of the Marian Koshland Science Museum of the National Academy of Sciences. Prior to joining the museum staff, Erika directed the National Academy of Sciences' Office on Public Understanding of Science, managing several projects including the article series *Beyond Discovery*. Erika began her career at the National Research Council as an intern with the Board on Biology. Erika also worked at the Office of Policy Analysis at the National Institute of Allergy and Infectious Diseases, NIH. She received her PhD in biology from the University of Virginia. Erika has been recognized as a leader in the field of informal science education. In 2010, she was elected as a Fellow of the American Association for the Advancement of Science for distinguished contributions and leadership in public understanding and engagement in science. She was a Noyce Leadership Fellow from 2012 – 2013.

## Response

*Dietram Scheufele*<sup>†</sup> is the John E. Ross Professor in Science Communication in the Department of Life Sciences Communication at the University of Wisconsin, Madison, and Co-PI of the Center for Nanotechnology in Society at Arizona State University. His research focuses on shaping public attitudes toward science and technology, with a recent emphasis on the role that social media and other emerging modes of communication play in society. Dietram has published extensively in the areas of public opinion, political communication, and public attitudes towards emerging technologies, including nanotechnology, synthetic biology, stem cell research, nuclear energy, and genetically modified organisms. He is listed by Microsoft Academic Search as one of the ten most cited researchers in the communication discipline. Dietram is co-chair of the NAS Roundtable on Public Interfaces of the Life Sciences, and served on the planning committee's for both NAS Sackler Colloquiums on the Science of Science Communication. He has served on many other committees and advisory panels, including the National Conference of Lawyers and Scientists, the Nanotechnology Technical Advisory Group to the

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U.S. President's Council of Advisors on Science and Technology, and the National Academy of Engineering Committee on Developing Effective Messages for Improving Public Understanding of Engineering. Dietram has received multiple research and teaching awards and is an elected member of American Association for the Advancement of Science and the Wisconsin Academy of Sciences, Arts & Letters. He received both his MA Journalism and Mass Communications and his PhD in Mass Communications from the University of Wisconsin-Madison.

### **Day 2: December 9, 2013**

#### **Recap of Day 1**

*Rick Borchelt*<sup>†</sup> is Director of Communications and Public Affairs at the US Department of Energy's (DOE) Office of Science. A more detailed biography of Rick is provided above under [Session 4](#).

*Bruce V. Lewenstein*<sup>†</sup> (session moderator) is Professor of Science Communication in the Departments of Communication and of Science & Technology Studies at Cornell University, Ithaca, New York, USA. A more detailed biography of Bruce is provided above under [Session 3](#).

#### **Session 5: Who is paying for this?**

*David Malakoff* (session moderator) is a Deputy New Editor at *Science Magazine*. David specializes in coverage of science policy, energy and the environment. A native of Washington, D.C., he has spent more than 25 years reporting on how scientists influence government policy, and how government policy shapes science. In addition to reporting for *Science*, David has worked as an editor and correspondent on NPR's Science Desk, for *Conservation Magazine*, and as a freelance journalist for numerous outlets.

*John Burris* is President of the Burroughs Wellcome Fund. He is the former president of Beloit College. Prior to his appointment at Beloit in 2000, John served for eight years as director and CEO of the Marine Biological Laboratory (MBL) in Woods Hole, Mass. From 1984 to 1992 he was at the National Research Council of the National Academy of Sciences where he served as the Executive Director of the Commission on Life Sciences. A native of Wisconsin, John received an A.B. in biology from Harvard University, attended the University of Wisconsin-Madison in an M.D.-Ph.D. program, and received a Ph.D. in marine biology from the Scripps Institution of Oceanography at the University of California-San Diego. As a professor of biology at the Pennsylvania State University from 1976 to 1985, he held an adjunct appointment there until going to Beloit. John's research interests were in the areas of marine and terrestrial plant physiology and ecology. He has served as president of the American Institute of Biological Sciences and is or has been a member of a number of distinguished scientific boards and advisory committees including the Grass Foundation, the Stazione Zoologica "Anton Dohrn" in Naples, Italy, the American Association for the Advancement of Science, and the Radiation Effects Research Foundation in Hiroshima, Japan. He has also served as a consultant to the National Conference of Catholic Bishops' Committee on Science and Human Values.

*Kei Koizumi* is Assistant Director for Federal Research and Development at the White House Office of Science and Technology Policy (OSTP). Before joining OSTP in 2009, he served as the Director of the R&D Budget and Policy Program at the American Association for the Advancement of Science (AAAS). He received his M.A. from the Center for International Science, Technology, and Public Policy program

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at George Washington University, and received his B.A. in Political Science and Economics from Boston University. Kei is a Fellow of the American Association for the Advancement of Science.

*Kai N. Lee* leads the Science subprogram in Conservation & Science at the David & Lucile Packard Foundation. The science subprogram provides support for science that informs decision making in the near term, advancing the strategies guiding the conservation activities of the Foundation. He also provides program support and liaison for the Monterey Bay Aquarium Research Institute, the Center for Ocean Solutions, and the Aldo Leopold Leadership Program. Prior to joining the Packard Foundation, Kai taught at Williams College and is currently the Rosenberg Professor of Environmental Studies, emeritus. He also directed the Center for Environmental Studies at Williams, and taught at the University of Washington in Seattle. He is the author of *Compass and Gyroscope* (1993) and coauthor of *Our Common Journey* (NRC, 1999) and *Humans in the Landscape* (W.W. Norton, 2012). He is a National Associate of the National Research Council of the National Academy of Sciences (NAS). Kai was a White House Fellow and represented the state of Washington as a member of the Northwest Power Planning Council. He was appointed in 2009 to the Science Advisory Board of the U.S. Environmental Protection Agency and served until 2011, when he became vice-chair of the Committee to Advise the U.S. Global Change Research Program at the National Research Council. Kai also served as vice-chair of the NAS panel that wrote *Informing Decisions in a Changing Climate* (2009). He holds a Ph.D. in Physics from Princeton University and an A.B., magna cum laude in Physics, from Columbia University.

*Dennis Schatz* is the Senior Vice President for Strategic Programs at the Pacific Science Center in Seattle, Washington. He is currently on temporary assignment as Program Director and acting Lifelong Learning Cluster Coordinator in the Division of Research in Learning in Formal and Informal Settings of the National Science Foundation (NSF). At NSF, Dennis works to identify opportunities for large NSF research investments in informal science (ISE), including raising awareness about ISE in the broad scientific community, improving the quality of evaluation for education and outreach activities, and facilitating collaborations between science organizations and informal STEM. At the Pacific Science Center, he co-directed the Washington State Leadership and Assistance for Science Education Reform, a program to implement a quality k-12 science program in all 295 school districts in Washington State. Dennis also was Principle Investigator for Portal to the Public, an initiative to develop programs that engage scientists in working with public audiences. He is the author of 21 science books for children that have sold almost 2 million copies worldwide and have been translated into 23 languages. Prior to his career in science education, Schatz was a research solar astronomer at the Lawrence Hall of Science at the University of California, Berkeley. He has received numerous honors and awards, including the 2009 Faraday Science Communicator Award, and the 2005 National Science Teachers Association lifetime achievement award for Distinguished Service to Science Education.

*Alan Slobodin* is Chief Investigative Counsel for Oversight and Investigations at the House Energy and Commerce Committee, and has continuously worked on oversight and Investigations since joining the Committee staff in 1995. As an oversight counsel, Alan has worked investigations involving public health, with a particular focus on the Food and Drug Administration (FDA) and the National Institutes of Health (NIH).

*Amanda Stanley* is the Conservation Science Program Officer at the Wilburforce Foundation. She directs the Foundation's efforts to increase the science capacity of regional programs and grantees while keeping an eye to important opportunities that cut across all Wilburforce funding regions. Amanda received her PhD in Biology from the University of Washington and her BS in Wildlife Biology from the University of Montana. Amanda is also Chair of the Board of Directors of the Emily Hall Tremaine Foundation in New Haven, Connecticut.



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### Session 6: Building Sustainable Infrastructures for Life Science Communication

*Brooke Smith*<sup>†</sup> (session moderator) is the Executive Director of COMPASS, a nonprofit helping scientist's find their voice and their science find its audience. A more detailed biography of Brooke is provided above under [Session 1](#).

*David Ewing Duncan*<sup>†</sup> (session moderator) is an award-winning, best-selling author, a journalist, and a television, radio and film producer and correspondent. A more detailed biography of Brooke is provided above under [Session 2](#).

#### The Ideas Wall – Summary and Reflection on Major Themes

*William Provine*<sup>†</sup> is the Director of Science & Technology External Affairs at DuPont. William is responsible for defining strategic direction for DuPont's Science and Technology programs with external collaborators and stakeholders including federal governments, other companies, universities, and the public sector at large. External to DuPont, William currently serves on advisory boards for a number of science centers at Oak Ridge National Lab, UC Berkeley/Lawrence Berkeley Lab, University of Delaware, University of Wisconsin, and Michigan State University. He is also a founding member of the World Council on Industrial Biotechnology and the International Council on Nanotechnology. William was nominated, appointed and currently serves on the Department of Commerce/Bureau of Industry and Security's Emerging Technology and Research Technical Advisory Committee, the US DOE/USDA Biomass R&D Technical Advisory Committee, and a temporary scientific working group of the Organization for the Prohibition of Chemical Weapons on the convergence of biology and chemistry. He joined DuPont in 1992 and has served in a variety of research, marketing, business development, and operations leadership roles including oversight for commercialization efforts. He also has managed key strategic collaborations around the world for DuPont with companies, universities, government agencies, and non-profit organizations. William received a PhD in Chemical Engineering from the University of Delaware.

*Amanda Stanley* is the Conservation Science Program Officer at the Wilburforce Foundation. A more detailed biography of Brooke is provided above under [Session 5](#).

#### Where Do We Go from Here?

*Andrew A. Rosenberg* is director of the Center for Science and Democracy at the Union of Concerned Scientists (UCS). He has more than 25 years of experience in government service and academic and non-profit leadership. He is the author of scores of peer-reviewed studies and reports on fisheries and ocean management and has published on the intersection between science and policy making. Andrew came to UCS from Conservation International, where he served for two years as the organization's senior vice president for science and knowledge. Previously, he served as the northeast regional administrator of the National Marine Fisheries Service at the National Oceanic and Atmospheric Administration, where he negotiated recovery plans for New England and mid-Atlantic fishery resources, endangered species protections and habitat conservation programs. He later became deputy director of the service. Andrew is also the convening lead author of the oceans chapter of the U.S. Climate Impacts Advisory Panel. He is a member of the National Academy of Sciences' Ocean Studies Board and the U.S. Commission on Ocean Policy. He is a professor of natural resources and the environment at the University of New Hampshire, where he previously served as dean of the College of Life Sciences and Agriculture.

*Erika Shugart* is Director of Communications and Strategic Marketing at the American Society for Microbiology. A more detailed biography of Brooke is provided above under [Session 4](#).