

Overview/Abstract: This workshop would expand on an already established network of relationships between faculty at Stony Brook, Pratt, NYU to develop concrete plans for a system of experiential stations in NYC that promote and expand the emotional connection of residents with the built and natural environments in which they live, and to the science that allows them to act on that connection. The primary mission of The New York Climate Exchange (NYCE), of which Stony Brook University is the anchor institution, is to develop social, natural and physical urban infrastructure that is resilient to the challenges posed by a changing world. A growing body of experience with building such infrastructure indicates that top-down implementation of policy often results in strong push-back from local communities. Scoping sessions run by the University Corporation of Atmospheric Research (UCAR) to define the National Science Foundation's (NSF) Coasts and People (CoPe) program in 2017 reached a consensus that the most significant barrier to effective protection of coastal environments was not the science, but the buy-in by human communities bearing the brunt of change and responsible for implementing solutions. Such buy-in was hampered by a sense that science was alien, as well as by the fragmentation of interests and governance within affected communities.

This experience informed multiple large SBU proposals addressing how to build public personal investment in scientifically grounded solutions. Many of these proposals failed in part because a standing relationship between SBU researchers and affected communities did not exist or were compromised by the limited time, resources or skill available to establish legitimate relationships with key actors in affected communities. Eventually this problem helped justify the Collaborative for the Earth (C4E), which in part was intended to facilitate links between natural science, social science and artistic disciplines, and to begin linking the campus to the external community. The C4E then facilitated a Collaboration among SBU, Pratt and NYU faculty that has already resulted in one meeting of scientists and humanists through the Common Ground on the Water workshop (01-Feb-2025). This workshop worked to develop a common language around invasive species and the meaning of restoration and connection to nature in an urban setting.

The proposed workshop will build on this experience by exploring two tracks that develop a series of experiential platforms for connecting NYC residents meaningfully to the various environments in which they live. First, we will leverage expertise among partners within the Institute of Advanced Computing Science (IACS) and the Engineering School to develop a biophysical sensor network at several locations within NYC, including Governors Island, which residents can interact with to produce images and sounds via AI software. This step will involve expertise at NYU (Farzad Mahootian) and a NYC public engineer (Rasheik Barber) as well as other SBU units like IACS, SoMAS and Ecology and Evolution (E&E). Second, we will engage with artists, social scientists and science communicators at the Alan Alda Center for Science Communication to determine the ways that output from such a sensor network can be used to improve the degree of connection residents feel to their living and non-living environments. This group will also explore parallel forms of more directly engaged artistic or experiential interaction that does not entail a computational interface. The contributors to this effort include Linda O'Keefe in Art at Stony Brook, Donna Bilak of Pratt and RISD, Nicolette Sipperly as a plant scientist/artist from E&E, and Carlos Ariza Morantes as a scientist and restoration ecologist, and members of the Alan Alda Center for Communicating Science.