

**Hoch Cunningham Environmental Lectures
Fall 2019**

| Fall 2019 - Hoch Cunningham Environmental Lectures | | |
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*This talk will be live-streamed but NOT recorded

September 5, 2019

12:00-1:00pm | Coolidge Room, [Ballou Hall](#)

INAUGURAL HOCH CUNNINGHAM ENVIRONMENTAL LECTURE
Coolidge Room, Ballou Hall

The Elephant in the Room: Talking about Climate Change

Tamar Haspel, science journalist

How did climate change become such a charged issue? It's gone from being an obscure field of study to a badge of identity, all in the last decade or so. We're not going to be able to de-escalate until we understand how we got here in the first place. To do that, we have to figure out how humans make decisions -- and take a long, hard look in the mirror.

[Tamar Haspel](#) is a journalist who has been on the food and science beat for the best part of two decades. She writes the James Beard award-winning Washington Post column, [Unearthed](#), which covers food supply issues: biotech, pesticides, food additives, organics, nutrition, food policy among other subjects. She also contributes to National Geographic, Discover, Cooking Light, Edible Cape Cod, and other publications. Haspel is knee-deep in the public food conversation, and speaks frequently at venues where the debates about our food supply play out, including the National Academy of Sciences, food- and ag-related conferences, and SXSW. She is also an oyster farmer, growing over 300,000 oysters a year off Cape Cod.



September 12, 2019

12:00-1:00pm | Multi-purpose Room, [Curtis Hall](#)

Offshore Wind and the Transition to Renewables

Eric Hines, Department of Civil and Environmental Engineering, Tufts University

Over the next 30 years, the US must expand and modernize its power grid while retiring half of its existing power plants and transitioning to a low-carbon energy system. Along the nation's coastlines, offshore wind will play a major role in this transition. The U.S. offshore wind energy resource offers capacity that exceeds our nation's demand several times over. Currently, things are moving so fast that drastic shifts can be observed on the timescale of just one or two years. This introduction to and update on U.S. offshore wind energy will help attendees navigate and interpret what they are hearing in the popular press related to energy in New England, the U.S. and abroad.

[Eric M. Hines](#), Ph.D., P.E., F.SEI has over 20 years of experience as a structural engineer designing innovative infrastructure and large-scale testing programs. Dr. Hines designed the Wind Technology Testing Center in Charlestown, MA and advised the Massachusetts Clean Energy Center on the development of the New Bedford Marine Commerce Terminal. As a Professor of Practice at Tufts University, he has led the POWER-US convening initiative and directs the Tufts University Offshore Wind Engineering Graduate Program. Formerly a partner of LeMessurier Consultants in Boston, Dr. Hines has over 70 publications and numerous awards related to systems design, industry-driven research and higher education. Dr. Hines completed his Ph.D. at the University of California, San Diego after studying the relationship between engineering and public policy as an undergraduate at Princeton University and as a Fulbright Fellow in Germany.



September 19, 2019

12:00-1:00pm | Multi-purpose Room, [Curtis Hall](#)

**Integrating Tropical Conservation and Civic Engagement to Create Change:
a Case Study from Ecuador**

Jordan Karubian, Department of Ecology & Evolutionary Biology, Tulane University

This talk will provide a case study of developing and conducting community-engaged research. The work in Ecuador, now in its 18th year, has had its share of successes- including establishing a reserve and providing significant training, employment, and educational opportunities for locals - but also many failures and learning experiences. Attempting to achieve real world conservation gains while balancing the demands of a tenure-track faculty position also presents a series of challenges and opportunities. The speaker will speak candidly about these and related topics, with the goal of encouraging and informing students and others interested in pursuing a similar path.

[Jordan Karubian](#) is an Associate Professor in the Department of Ecology & Evolutionary Biology at Tulane University and a founding member of [FCAT](#), an Ecuadorian NGO. After completing his doctoral work at University of Chicago, Jordan lived in Ecuador for five years developing a distinctive model for community-engaged participatory research. His efforts have been recognized and supported by the *Fulbright Fellowship Program*; 'Ernest A. Lynton Award for the Scholarship of Engagement for Early Career Faculty'; and the 'Excellence in Tropical Biology and Conservation Award' from the Association for Tropical Biology and Conservation.



September 26, 2019

12:00-1:00pm | Multi-purpose Room, [Curtis Hall](#)

Can You Hear Me Here?: Understanding and Protecting Underwater Soundscapes in US National Marine Sanctuaries

Leila Hatch, US National Oceanic and Atmospheric Administration (NOAA)

Sound travels further and faster underwater than it does in air, and many marine animals, from zooplankton to crabs to fish to whales, are known to detect sound as a means of environmental surveillance. Additionally, many of these animals produce sounds themselves, contributing to the total "soundscape" of marine places and serving communication functions that sustain biologically central behaviors such as feeding, selection of mates, avoidance of predators and protection of young. This talk will discuss how and why the US National Oceanic and Atmospheric Administration (NOAA) studies underwater acoustics, particularly in protected areas such as National Marine Sanctuaries. We will listen to sounds representing the diversity of animals, physical processes and, increasingly, human activities that make up the sonic world in these special places. Highlighting NOAA's [Ocean Noise Strategy](#) we will discuss efforts within US government and internationally that are seeking to reduce these impacts.

Dr. Leila Hatch is a marine ecologist working for the US National Oceanic and Atmospheric Administration (NOAA) and based at Stellwagen Bank National Marine Sanctuary, a marine protected area managed by NOAA off the coast of Massachusetts. Dr. Hatch studies the ways that animals use sound underwater, and the impacts of noise produced by human activities on marine environments. Dr. Hatch began working for NOAA in 2006 after serving as a fellow with the US House of Representatives' Resources Committee. She received a BS from Yale College and a PhD from Cornell University, both in Ecology and Evolutionary Biology. Her doctoral work used molecular



genetic and acoustic tools to identify population boundaries among northern hemisphere fin whales. Along the way she participated in research programs off the coasts of Australia, Madagascar, Hawaii, California, and Massachusetts studying potential impacts from a variety of human activities (e.g., whale-watching, vessel traffic, military sonars, active acoustic research sources) on whale and dolphin populations.

October 3, 2019

12:00-1:00pm | Multi-purpose Room, [Curtis Hall](#)

Yankton Sioux Sacred Water Bundle Project

Stephen Lester, Science Director, Center for Health, Environment and Justice
Kyle Monahan, Senior Data Science Specialist, Tufts University

The Yankton Sioux tribe in South Dakota are developing a long-range project to define and understand water quality on their reservation, in partnership with the Center for Health, Environment and Justice. The tribe wants to develop a co-management plan for the Missouri River Bioregional (MRB) watershed that will restore traditional Native practices of water and land management. To realize this goal, an inventory is needed of the plants, wildlife, water, aquatic life, and cultural and ceremonial sites. An important part of this effort is to define the water quality in the Missouri River Bioregion with an initial focus on the approximately 150 mile stretch of the Missouri River between Lower Brule Reservation and the city of Yankton. At this stage we have collected a selection of databases. In this talk, key methodologies and important considerations for collection of geospatial and hydrological data will be discussed.

Dr. Stephen Lester received his first Master's of Science, in Toxicology, from Harvard University, and his second Master's of Science, in Environmental Health, from New York University. He received his Bachelor's of Science in Biology from American University. Dr. Lester has served on numerous scientific advisory and peer review committees including those of the Natural Resource Council of the National Academy of Sciences, the National Institutes of Environmental Health Sciences, and the Congressional Office of Technology Assessment.



[Kyle Monahan](#) enjoys using statistical and GIS tools to analyze complex systems through data analysis and visualization, map design, code scripting, and environmental sampling. Kyle received a dual B.S. in Environmental Science and Psychology from Rensselaer Polytechnic Institute in 2012, an M.S. in Environmental Science and Engineering from Clarkson University in 2014, and most recently an M.S. in Civil and Environmental Engineering from Tufts University in 2016. His research has taken him from developing contaminant chronologies for the Hudson River, to identifying microfossils in sediment from extreme weather events, to designing low-cost water filters. Kyle has aimed to share these experiences in water and sustainable development by co-teaching various courses at Harvard Extension since 2014. He is a Senior Data Science Specialist at Tufts University, providing statistical consulting, data visualization and high-performance computing (HPC) support.



October 10, 2019

12:00-1:00pm | Multi-purpose Room, [Curtis Hall](#)

Ecosystem Responses to Climate Change

Jeff Dukes, Purdue University

Jeff Dukes and his research group seek to address environmental challenges through ecological research and outreach. Their research currently focuses on three themes: understanding how ecosystems respond to climate and atmospheric change, understanding and minimizing the impacts of invasive species on ecosystems, and exploring the ecological consequences of switching our energy supply from fossil fuels to biofuels. Dukes has a particular interest in understanding how changes in climate and the atmosphere will affect the success and impact of invasive species.

Dukes directs the [Boston-Area Climate Experiment](#) (BACE), which characterizes ecosystem responses to gradients of climate change. Dukes also leads the [INTERFACE](#) research coordination network, which brings together experimentalists and modelers from around the world to advance global environmental change research. Dukes has appointments in the Departments of Forestry and Natural Resources and Biological Sciences at Purdue, and an adjunct appointment in the Department of Biology at the University of Massachusetts Boston.



October 17, 2019

12:00-1:00pm | Room 745B, [Dowling Hall](#)

Moral Disruption: Power of Youth to Make Lasting Change

Saya Ameli Habani, Sunrise Movement

According to the UN's IPCC report, we only have 11 years left to solve the climate crisis, the urgency of which has given rise to a new youth-powered movement determined to ensure this deadline is met by the U.S. government. The Sunrise Movement has been at the forefront of the fight to unite the interwoven complexities of climate justice and a widespread economic shift towards sustainability. The movement that hosted a sit-in at Nancy Pelosi's office alongside Alexandria Ocasio Cortez when she first proposed the Green New Deal on Nov. 24th, 2018, has since empowered and mobilized thousands and thousands of youth to take action. This talk will discuss the emerging shift in our political atmosphere as we move away from a passive approach to solving the climate crisis and towards an ambitious plan to secure a green future, while elucidating how the Sunrise Movement has been instrumental in initiating a diverse campaign led by young people, normally left unheard in politics, towards a national transformation of the U.S. economy.

Saya Ameli Hajebi became an environmental activist soon after she stepped off the long plane ride from her birthplace in Tehran, Iran. After experiencing pollution so extreme that her school was often cancelled due to the exposure risk, she was determined to put a stop to climate change alongside her peers. After establishing a composting system at her High School and expanding the program to local elementary schools with the Brookline High School Environmental Action Club, she joined the Sunrise Movement. She has since helped organize a number of Youth Climate Strikes outside the MA statehouse, and co-leads the local press/media team at the Sunrise Boston Hub. She is also a national Spokesperson and trainer for the Sunrise Movement, and has represented Sunrise on various media outlets including *the Guardian*, *Al Jazeera*, *Univision News* and *Buzzfeed News*.



October 24, 2019

12:00-1:00pm | Multi-purpose Room, [Curtis Hall](#)

Sculpture Made in Response to Environmental Concerns

Nancy Selvage, artist

Nancy Selvage engages herself and others in an exploratory process by altering and concentrating the experience of space and substance in her sculptural installations. This artwork is often created in response to environmental concerns. Her illustrated presentation will explore the expressive development and impact of these concerns on her art practice. Included will be a preview of the art project she is designing for the new Green Line Extension station at College Avenue/Tufts.

[Nancy Selvage](#) is an artist and educator with an MFA from Tufts University. In her former role as Director of the Ceramics Arts Program at Harvard University, Selvage lectured widely on ceramics and sustainability. As an honorary professor at Tohoku University, Japan, she contributed an art/science perspective to a variety of interdisciplinary, international conferences. Her sculpture has been supported by awards from the National Endowment for the Arts, the New England Foundation for the Arts, and the Massachusetts Cultural Council.



Her public sculptures and murals have been commissioned for the City of Lowell, the MBTA College Avenue station at Tufts, the Dana Farber Cancer Institute, Bristol Community College, the Keene State College Science Building, the City of Cambridge, the National Park Service's Grand Canyon Visitor Center, and the North Carolina Zoo. Selvage is a member of Boston Sculptors Gallery.

October 31, 2019

12:00-1:00pm | Multi-purpose Room, [Curtis Hall](#)

Problems and Possibilities in Agroecology: an Historical Perspective from Lesotho, Southern Africa

Chris Conz, Department of History, Tufts University

James Machobane was a visionary farmer who sought environmental justice by promoting intensive, ecologically sustainable agriculture to improve food systems in Lesotho. Taking an historical approach, this presentation explores Machobane's motivations, innovations, and objectives to show the possibilities and problems of combating, through agricultural reform, the systemic injustices created by dispossession, colonialism, and the political-economy of migrant labor in the 1950s and 60s. This story, and the various social tensions within it, offers comment on development discourses and on other agroecological systems now being advocated in our era of industrial agriculture, climate change, and intensifying drought in southern Africa.

[Dr. Chris Conz](#) teaches African History at Tufts University. He completed his Ph.D. in history at Boston University in 2017, where he developed his research interests in environmental history in southern Africa, especially the intersections of knowledge, agriculture, health, and development in Lesotho. His current book project is titled *Environmental History in a Small Place: Ecological Change, Development, and the Politics of Science in Lesotho*. He has published articles in *Agricultural History*, *Environment & History*, and the *Journal of Southern African Studies*.



November 7, 2019

12:00-1:00pm | Multi-purpose Room, [Curtis Hall](#)

Upstream Emissions from the Production and Transport of Fuels

Anjuliee Mittelman, Environmental Engineer at USDOT/Volpe

The Volpe Center is working with the U.S. Environmental Protection Agency to develop an upstream emissions modelling tool, which will support future rulemakings for mobile sources (highway, rail, and marine). Upstream emissions occur during the production and transport of fuels used in transportation. Upstream sources include petroleum refineries and biorefineries, storage depots and fuel blending terminals, and the trucks, rail lines, and barges used to transport biofuel crops, crude, and finished fuels. The upstream component can be a significant portion of the impact of a new heavy-duty truck emissions standard, for example. This work shows the importance of considering emissions along the entire lifecycle of a fuel, from the field/well to tailpipe.

[Dr. Anjuliee Mittelman](#) joined the U.S. Department of Transportation's Volpe Center as an environmental engineer in 2015. She provides technical and policy support to federal and state agencies on air quality and water quality issues. Her recent work has focused on developing tools to assess the emissions benefits of alternative fuel vehicles and bicycle-pedestrian infrastructure and quantifying emissions from the production and transport of biofuels. Dr. Mittelman also works on air pollution and drinking water contamination stemming from the use of firefighting foams by the Federal Aviation Administration. Her PhD research at Tufts University focused on contaminant fate and transport in groundwater and drinking water treatment systems, with an emphasis on the environmental and public health implications of nanotechnology



November 14, 2019

12:00-1:00pm | Multi-purpose Room, [Curtis Hall](#)

Disasters, Resilience, and the Environment

Keely Maxwell, General Anthropologist in the U.S. Environmental Protection Agency's

Earthquakes, extreme weather, oil spills, biosecurity incidents, and industrial accidents are some of the many types of disasters that pose risks to human health and environment. Communities experiencing ongoing social and environmental vulnerabilities may be at greater risks of harm from disasters. Resilience to disasters is heralded as a way for communities to reduce these risks and recover quickly if a natural or anthropogenic disaster does strike. Yet what does resilience look like on the ground? How can communities tell if measures they are taking are actually reducing vulnerability and improving resilience? This talk discusses the connections among disasters, resilience, society, and the environment, including the role that the U.S. Environmental Protection Agency's plays.

Dr. [Keely Maxwell](#) is a General Anthropologist in the U.S. Environmental Protection Agency's (EPA) Office of Research and Development. An environmental anthropologist and ecologist by training, she first came to EPA as a AAAS Science & Technology Policy Fellow. She is the principal investigator for two research projects: community resilience to disasters, and the social science of environmental cleanups. She also served as a chapter lead for the Built Environment, Urban Systems, and Cities chapter of the Fourth National Climate Assessment. Dr. Maxwell has a Ph.D. and M.F.S. from the Yale School of Forestry and Environmental Studies



November 21, 2019

12:00-1:00pm | Multi-purpose Room, [Curtis Hall](#)

Artist Talk: Metaphor, Meaning, Antarctica, and the Anthropocene (Oh my!)

Georgie Friedman, Artist

Can visual and experiential metaphors in contemporary art encourage people to contemplate or connect with our planet and changing climate? As a part of the 60th anniversary of the Antarctic Treaty, video installation artist Georgie Friedman will present highlights from the last decade of her art practice and share art and her experiences from her 2017 SMFA/Tufts Artist Traveling Fellowship to Antarctica. Friedman investigates our complex relationships with our changing planet, and her pieces focus on the power of hurricanes, blizzards, polar ice melt, and raising sea levels in relationship to human fragility – and the irony of our culpability in their growing strength. She has traveled to five continents to film for her projects, and utilizes video, sound, sculpture, existing architecture, and the physics of light, all in order to create new experiences for viewers.

[Georgie Friedman](#) earned her M.F.A. from the School of the Museum of Fine Arts/Tufts University ('08), and her B.A. from the University of California, Santa Cruz ('96). She is currently based in Boston and has lived, worked and exhibited nationally and internationally. Her most recent solo exhibition, [Georgie Friedman: Fragments of Antarctica](#), was on view at the Museum of Fine Arts, Boston from April – September 2019. She has been awarded Mass Cultural Council grants in Sculpture/Installation and Film/Video, and has created over fifteen short and long-term video-based public art pieces. In 2016 Friedman was an Artist-in-Residence with the City of Boston and created a site-specific, public art project: *Altering the City, Video Landscape – Traces of Wind and Water* in Dorchester, MA.



Other notable public art installations and exhibits include: The Geneva International Film Festival (Switzerland); The Cleveland Museum of Art (OH); Muratcentoventidue Artecontemporanea (Bari, Italy); Georgetown University (DC); Boston City Hall – exterior (MA); Burlington City Arts (VT); Union College (NY); Lesley University College of Art and Design (MA); deCordova Sculpture Park & Museum (MA); College of the Holy Cross (MA); Shelburne Museum (VT); Transylvania University (KY); and The Armory Center for the Arts (CA). Friedman's work has been featured in *The Boston Globe*, *The Washington Post*, *The New York Times Magazine*, *NPR*, *CBS News*, *The Atlantic*, *Orion Magazine*, among many others. Currently she is Part-Time Faculty in the Art, Art History and Film Department at Boston College and a Visiting Lecturer in the Film/Video Department at Massachusetts College of Art and Design.

December 5, 2019

12:00-1:00pm | Multi-purpose Room, [Curtis Hall](#)

Climate Change and Coffee: What Will We Be Drinking in Thirty Years?

Kim Elena Ionescu, Chief Sustainability Officer, Specialty Coffee Association

Are you a coffee drinker? If so, you're in good company – coffee is the most popular beverage (besides water) in the United States. And while it's easier than ever for coffee lovers to find a good cup of coffee in unlikely places (think: airports), coffee farming is becoming increasingly difficult: chronically low market prices in coffee-producing countries, the rising cost of farming inputs like fertilizer, and labor scarcity are all taking a toll on growers worldwide and prompting many farmers to leave coffee altogether. Certifications (like fair trade), producing-country institutions, and popular press articles have succeeded in raising some awareness of these threats to coffee's future, but our focus on immediate economic needs risks may lead us to underestimate the role of climate change as a contributing factor to the obvious instability, as well as a complicating factor to any solutions that fail to consider its current and potential impacts.

In her role as Chief Sustainability Officer of the Specialty Coffee Association (SCA), a membership association for the coffee industry worldwide, Kim Elena Ionescu raises awareness, develops strategy, and leads action to address the social, environmental, and economic challenges facing the coffee industry. Prior to joining the SCA in 2015, Kim spent a decade buying coffee and directing sustainability for Counter Culture Coffee, a roasting company based in Durham, North Carolina, where she resides with her husband and two daughters. Kim graduated from Tufts University in 2003 with a BA in English and Spanish and promptly began working in a coffee shop to support herself while she looked for a “career-path job”, never suspecting that a career in coffee awaited her.

