

# 7<sup>th</sup> Annual Summer School on Sustainable Climate Risk Management

## Participant Directory

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**Olumide Aborisade** (olumide.aborisade@ttu.edu)

Olumide is a Graduate Research Assistant and completing his PhD at the Department of Agricultural and Applied Economics at Texas Tech University in Lubbock, Texas. His dissertation examines the effect of participation in entrepreneurial activities on the food security status of farming households in Nigeria. Prior to pursuing his PhD, he completed a Masters in Environmental and Natural Resource Economics from the University of Birmingham, United Kingdom in 2012. He earned his Bachelors in Agricultural Economics and Extension from Ladoké Akintola University of Technology, Ogbomoso, Oyo State, Nigeria in 2009. Olumide is an applied economist and his research interests include but not limited to climate change, migration, food security, rural development, agribusiness, and entrepreneurship. He was born in Nigeria and speaks Yoruba fluently.



**Ali Ahmadalipour** (aahmada@ua.edu)

Ali Ahmadalipour is currently a postdoctoral research associate at the Center for Complex Hydrosystems Research of the University of Alabama. His research experience encompasses a variety of subjects, including but not limited to climate change impact and risk assessment, land surface and hydrologic modeling, satellite remote sensing, and vulnerability and risk analysis. Ali graduated his PhD in 2017 and he has (co-)authored 22 peer-reviewed publications thus far. He has a strong hold on computational process-based hydro-climatology, and he is especially experienced in large-scale quantitative analyses. For more information about Ali, please visit <http://ali.people.ua.edu/>.



**Salvi Asefi-Najafabady** (sva5694@psu.edu)

Salvi is an atmospheric scientist. Her work has covered a wide range of areas including: application of Earth System modeling for climate change to inform conservation planning of the countries bordering the Great Lakes of Africa, development of a Fossil Fuel Data Assimilation system (FFDAS) to generate a global high-resolution inventory of CO<sub>2</sub> emissions from fossil fuel combustion, assessing impacts of drought on the Amazon and African tropical forests using microwave satellite observations, developing an algorithm for remote sensing of cloud base height and mapping the 3-dimensional wind field of mesoscale circulations induced by heterogeneous lake-land surfaces using radar observation and Regional Atmospheric Modeling System (RAMS). Salvi also has many years of experience working as an environmental journalist and providing volunteering services in environmental NGOs as an environmental activist. Her interest is in connecting Earth and Human System sciences to create practical information for conservation planning and decision-making and this has been the focus of her recent years of research. Salvi's current work at the Pennsylvania State University involves development of metrics and tools for application-relevant characterization of climate data products to inform climate risk management systems.



**Kayode Atoba** (kayodeatoba@tamu.edu)

Kayode is postdoctoral research scientist with the Center for Texas Beaches and Shores and the Institute for Sustainable Communities at Texas A&M University. He holds a Ph.D. in Urban and Regional Science, a master's degree in Geographic Information Systems, and a bachelor's degree in Urban and Regional Planning. Atoba's research focuses on using quantitative and geospatial methodologies to identify the interactions between the built environment and natural hazards. His research evaluates the socio-ecological and institutional factors responsible for the changing dynamics of flood hazard impacts in high risk areas, while also drawing on the broader theory of hazard resiliency to propose best mitigation and adaptation strategies. Atoba is a mentor and alumnus of the William Averette Anderson Fund, the first interdisciplinary organization in the United States focused on increasing the number of underrepresented persons in the field of disaster research and planning.



**Liana Banelos** (lbanuelos@mapc.org)

Liana is a Transportation Planner for the Metropolitan Area Planning Council, Metro Boston's regional planning agency. She performs research and analysis to support the agency's smart-growth oriented policies, such as the implementation of bus rapid transit lanes, reductions in parking requirements, and land use development strategies that promote densification and mobility. Prior to joining MAPC, Liana graduated from MIT with her Bachelors of Science in Urban Planning and Masters of City Planning (2018) with a focus on climate change adaptation. Her thesis – which examined the institutionalization of climate resiliency practices in transportation agencies across the US – is reflective of her interest in risk perception, communication, and prioritization, as well as transit's vital role in curbing emissions and continuing to connect people with resources despite climate change impacts. When not thinking about these things, Liana enjoys hiking, rock climbing, and writing short stories.



**Bernie Bastien-Olvera** (bastien@ucdavis.edu)

Bernie is PhD candidate in Geography at University of California, Davis. He has a BSc in atmospheric science from the National Autonomous University of Mexico and a MSc in climate change from University College London. Bernardo is interested in how the interactions between ecology and climate inform human well-being through use and non-use values of nature, and how this can be included in integrated assessment models. He hosts the climate change video-blog Planeteando.



**Genie Bey** (genie.bey@noaa.gov)

Genie is a Knauss Marine Policy Fellow with NOAA's Office of Education. As a Knauss Fellow, Genie works to advance NOAA's mission of science, service, and stewardship through education, and helps to coordinate a nation-wide Environmental Literacy Program which provides grant funding for science education projects that seek to increase community resilience to environmental hazards. Genie completed her Master's degree at California State University in Long Beach, California, where she studied Human-Environmental Geography. Grounded in social-ecological resilience theory, her thesis research examined the potential for utilizing ecosystem-based adaptation methods, such as green infrastructure, to reduce current environmental burdens and projected climate impacts in two coastal communities with unevenly distributed biophysical and social vulnerabilities in Long Beach, California. This work analyzed citizen perception of the spatial distribution of environmental hazards, and aimed to increase community engagement and education around projected place-based climate challenges. Genie is passionate about the intersection of environmental justice and climate adaptation planning, and aims to elevate social equity in climate policy. Genie is an alumna of the Switzer Environmental Fellowship and the CSULB Graduate Research Fellowship, and graduated with honors from the University of Utah with a B.S. in Environmental and Sustainability Studies, and B.S. in Urban Planning and Ecology.



**Saumya Bhatnagar** (bhatnasa@mail.uc.edu)

Saumya is a graduate student in Statistics at University of Cincinnati. She grew up in India, where she completed her Masters in Mathematics. Saumya is currently developing a deep learning-based statistical framework for quantifying parametric uncertainties and model structural errors in computer models in a highly-automated fashion. Outside of work, she enjoys hiking, baking and solving puzzles.



**Pamela Braff** (phbraff@psu.edu)

Pamela is a Coastal Climate Extension Specialist at Penn State with the Mid-Atlantic Regional Integrated Sciences and Assessments program. She provides tailored, decision-relevant information on the implications of climate variability and change to coastal communities and stakeholders throughout the Chesapeake Bay region. Pamela also studies the impacts of climate change on coastal ecosystems and communities. Her research is motivated by community needs, focusing on community resilience to climate change and sea level rise. Pamela received an M.S. in Forest Resources and Environmental Conservation from Virginia Tech, and is a PhD candidate at the Virginia Institute of Marine Science.



**Tanea Coronato** (tanea.co@gmail.com)

Tanea is a PhD student in Atmospheric and Oceanic Sciences at the University of Buenos Aires. She graduated from National University of Rosario (UNR) as a Licenciada in Physics (in the Argentine higher education system, a “Licenciatura” is a five-year programme of study comparable to a BSc + MSc). She holds a fellowship from the National Council of Research of Argentina (CONICET) to pursue her doctoral studies and developed the first part of her research at the Research Center for the Sea and the Atmosphere (CIMA/CONICET-UBA) while the final stage of her research is being held at Physics’ Institute Rosario (IFIR/CONICET-UNR). Her thesis focuses on understanding the physical mechanisms associated with the frequent occurrence of heat waves in central-northern Argentina and the impacts of these events on the energy performance of dwellings built by the government of Santa Fe province (Argentina). She also serves as a Graduate Teaching Assistant at the National University of Rosario. She is particularly interested in the possible applications of science for the benefit of society and hopes her interdisciplinary research will generate useful information for the design of public policies.



**David Cullmer** (drc5607@psu.edu)

David is the Sustainable Operations Analyst for the Sustainability Institute at Penn State University. Within this role, he facilitates data collection and research to effectively support the Sustainable Operations Council for all decision-making. David received a Bachelor’s degree in both Mathematics and Philosophy from Mercyhurst University. Recently, he graduated from Indiana University where he earned a Master’s in Environmental Science and a Master’s in Public Affairs from the O’Neil School of Public and Environmental Affairs. In his free time, David loves to brew beer, is an avid cyclist, and maybe reads too many detective novels.



**Piyush Dahal** (piyush@smallearth.org.np)

Piyush has more than five years’ experience in geo-informatics, water resource management and climate change and is skilled in hydro-meteorological monitoring and data analysis, the use of remote sensing and simulation models. He has been doing research on mountain climate and hydrology since 2013. Piyush holds a Masters’ degree in Environmental Science from Tribhuvan University, Nepal and is now working as research coordinator in The Small Earth Nepal, a research institute based in Kathmandu. He is currently leading couple of research projects related to extreme events and mountain hydrology. Piyush worked in the Nepal as well as in other developing countries in South Asia. He has co-(authored) six scientific papers and have presented eight research papers in international conferences. Now Piyush has set his primary long-run goal in his profession to work on better understanding the climate and water system in context of recent global change and increasing pressure on existing water supplies and to provide easy access information to the end-user community for the planning of sustainable water resources management.



**Ellie Davis** (eleanord@email.sc.edu)

Ellie is pursuing her PhD in Geography at the University of South Carolina. Her research focuses on the impacts of repetitive flooding on small businesses and local food systems. To address this web of interactions, she uses a mixed methods approach integrating remote sensing, GIS, surveys, and interviews. In addition to her research, Ellie is the President of the Geography Graduate Student Association, Co-Chair of the Provost Advisory Council on Women's Issues' Graduate Student Subcommittee, and an ESIP Community Fellow with the Agriculture and Climate Cluster. In her spare time, she enjoys spending time with her family (including two rambunctious cats and one silly dog) and fighting her squash plants for control of her garden (a losing battle).



**Vandhna Devi** (d.vandhna@gmail.com)

Vandhna is a doctoral researcher at the University of Toulouse III and the University of the South Pacific. Her thesis is based on developing a statistical downscaling model for island sea levels in the southwest Pacific. Vandhna's research interests focus primarily on the tropical Pacific, spanning areas such as climate model evaluation, downscaling, ENSO effects, and sea level rise. Vandhna hails from the Fiji islands and is passionate about integrating scientific knowledge and community-level adaptation to climate change in the Pacific.



**Lisa Dilling** (lisa.dilling@colorado.edu)

Lisa is Director of the Western Water Assessment and Associate Professor of Environmental Studies at the University of Colorado Boulder. The Western Water Assessment is a NOAA Regional Integrated Sciences and Assessment that studies and facilitates the use of climate information in decision making in the Intermountain West. Her scholarship focuses on decision making, the use of information, and science policy, to understand how we can best manage climate and weather risks. Her research topics include drought and urban water management, climate adaptation in cities and on public lands, carbon management, and geoengineering governance. She holds a PhD in biology from the University of California Santa Barbara.



**Flannery Dolan** (flannery.dolan@tufts.edu)

Flannery grew up in the northern suburbs of Chicago. She spent most of her summers on Lake Michigan where she developed an appreciation for freshwater resources. She went to Colorado School of Mines and studied Geophysics to understand how to find and quantify natural resources and then moved on to complete a Masters in Hydrology at Mines. She is now working on her PhD in Civil and Environmental Engineering at Tufts University, focusing on Integrated Assessment Modeling. She is spending the summer working on her research, hiking, and pining for the 0% humidity in Colorado.



**Laura Fischer** (lfischer@epri.com)

Laura is an Engineer/Scientist III at the Electric Power Research Institute (EPRI). At EPRI, she supports research on climate impacts and resiliency in the context of the electric power sector as well as electrification and integrated resource planning. Prior to joining EPRI, she was an ORISE Fellow with the Climate Change Adaptation staff at the US Environmental Protection Agency (EPA), where she researched the impact of climate change on EPA programs and identified adaptation strategies being implemented to mitigate these impacts. Laura's initial interest in climate impacts and resiliency emerged from her experience working in preparedness and disaster services for the American Red Cross of Alaska. She holds a Master of Science with Distinction in Environmental Change and Management from the University of Oxford and a Bachelor of Arts in Government from Georgetown University. Laura's dissertation at Oxford explored the relevance of extreme weather even attribution to long-term planning for disaster risk reduction.



**Tej Gautam** (tgauta1@lsu.edu)

Tej is an applied economist interested in resource and environmental economics, production economics, and applied econometrics. His research focuses on water-energy-production nexus with special attention on water conservation, irrigation efficiency concerns in row crop production, the farm level impact of government policy, development of management decision aids, risk management, environmental implication, and technology adoption. Additionally, he has been involved in evaluating dynamics of sectoral energy demand in the U.S. Tej holds a Ph.D. in applied economics with concentration in environmental and resource economics, and applied econometrics; a master's degree in economics; and a bachelor's degree in mathematics. He is joining University of Arkansas System Research Center as a program associate by this fall.



**Andrew Gerard** (gerarda1@msu.edu)

Andrew is a PhD candidate in Michigan State University's Department of Community Sustainability, with a PhD major in Environmental Science and Policy. He studies food and agricultural systems in Africa and the US, using theory and tools from new institutional economics and public policy. Much of his research centers on policies related to coffee productivity and farmer income in Rwanda and Burundi, where he worked with the USAID-funded Africa Great Lakes Region Coffee Support Program. He also served as director of MSU's Academy for Global Engagement, a program that provides MSU faculty opportunities to collaborate and conduct research internationally. He is currently a research assistant on the Identifying Leverage Points for Transformation in Urban Food Systems project in Flint, Michigan, and studies institutional factors influencing Flint's food system. Prior to coming to MSU, Andrew was a Senior Program Officer at the Global Knowledge Initiative, a non-profit international development organization based in Washington, DC. Andrew has a Bachelor of Science in Behavioral Sciences from Andrews University, and a Master of Public Policy from Georgetown University.



**Christopher Gerstle** (ctgerstl@ncsu.edu)

Christopher is a Ph.D. student in the Dynamic Ecosystems and Landscapes Lab at North Carolina State University. His dissertation plan is to use modeling approaches to study the mechanisms of oak regeneration, but his research interests include studying how tree species ranges shift in response to climate change and the environmental factors that govern those shifts. Prior to entering the Ph.D. program at North Carolina State, Christopher worked in the Aquatic Ecology Research Lab at Texas Christian University where he studied the spatial patterns of mercury contamination of fish and the risk posed to fish-eating birds. He holds an M.S. in Biology from TCU and a B.S. in Biological Sciences with an emphasis in Quantitative Biology from Clemson University.



**Daniel Gilford** (daniel.gilford@rutgers.edu)

Daniel is a climate scientist interested in the answering the question "How do climate hazards evolve and affect me and my community?" He grew up in Florida, where he experienced threatening hurricanes firsthand and developed a passion for understanding environmental impacts on coastal communities. Daniel received my bachelor's degree in Meteorology from Florida State University, and my PhD at the Massachusetts Institute of Technology in 2018. At MIT he studied how atmospheric chemistry is linked to hurricane intensities and sea level change. Daniel's current research at Rutgers focuses on the deep uncertainties in polar ice-sheet contributions to global and local sea level rise. He uses a blend of statistical and machine learning techniques to study ice-sheet model emulation, the emergence of Antarctic contributions to sea level rise, and paleoclimate/observational constraints on ice-sheet model projections. Daniel is motivated to work on societally relevant problems and science communication, and aspires to connect science and communities, especially in the Southeast US. You can visit his website at <http://danielgilford.com> and follow him on twitter at @danielgilford.



**Taylor Goelz** (tgoelz@vims.edu)

Taylor is a Research Associate at Virginia Sea Grant. She recently completed her dual-masters degree in Marine Science from Virginia Institute of Marine Science and Public Policy from William & Mary's Public Policy Program where her thesis work analyzed the human dimensions of a collaborative modeling decision-making process. Her current position is an extension of her thesis work, allowing her to further study longitudinal changes in stakeholders' professional networks and attitudes. During her graduate career, Taylor completed an internship at the NOAA Chesapeake Bay Office where she worked at the science-policy interface for coastal and ocean issues impacting the Chesapeake Bay region and worked on funding mechanisms to address coastal flooding and adaptation in Virginia. Taylor received her B.A. in Environmental Studies from the University of San Diego in 2014.



**Lacey Goldberg** (lks187@psu.edu)

Lacey received her Master of Landscape Architecture in 2014, and is currently working on her dual-title Ph.D. in Architecture and Human Dimensions of Natural Resources and the Environment at Penn State. She works as a researcher in the Hamer Center for Community Design and as an instructor in landscape architecture. Lacey's graduate work has focused on the visual impacts of energy development, specifically natural gas extractive industries, and their effects on the scenic and cultural landscapes of Pennsylvania and other locales. Her current research focuses on utilizing crowdsourced data and developing procedures for integrating visual and cultural resource conservation into regional scale landscape management plans.



**Omanjana Goswami** (Omanjana.Goswami@mail.house.gov)

Omanjana is a NOAA Knauss Sea Grant Fellow at the office of Congresswoman Tulsi Gabbard in Washington DC. As a legislative fellow she handles the environment, interior, and science portfolio in the office, learning to integrate science and policy making decisions at the legislative level. Her fellowship ends in February 2020. Currently she is pursuing her PhD at Rutgers University-Newark, at the Department of Earth & Environmental Sciences. Her doctoral research focuses on studying interaction of metals with struvite (a wastewater recovery product), and its application in urban soils of Newark, New Jersey. Her doctoral project has allowed her to work with community gardens in Newark to determine the extent of lead (Pb) contamination in community garden soils, and adopting science-based strategies to mitigate the challenges of farming in urban soils. She is planning to graduate in 2020 at the end of her stint in DC.



**Masa Haraguchi** (haraguchi.masahiko@gmail.com)

Masa is a Postdoctoral Fellow in the Science, Technology, and Public Policy Program's (STPP) and Environment and Natural Resources Program's (ENRP) Water-Energy-Nexus Project at Belfer Center for Science and International Affairs, Harvard University. His research interests include disaster risk management, water resource systems analysis, risk management, and sustainability. Masa earned his Ph.D. in Earth and Environmental Engineering from Columbia University, where he worked on projects in the Columbia Water Center at the Earth Institute. Previously, Masa worked for the World Bank to design a training program on how cities should address climate mitigation and adaptation by utilizing climate finance. Before working at the World Bank, he worked on a research project at the NASA Goddard Institute for Space Studies that investigated the impact of climate change on cities. He was a fellow of the Robert Bosch Foundation's Global Governance Futures Program in 2014-15 and a fellow of the International Fellow Program at the School of International and Public Affairs at Columbia in 2013-14.



**Jacob Herbers** (herbe125@umn.edu)

Jacob is a researcher at the University of Minnesota Humphrey School of Public Affairs focusing on greenhouse gas emissions accounting. While obtaining a Masters degree in Science, Technology, and Environmental Policy, his research focused on analyzing and evaluating voluntary green power programs in Minnesota, and around the U.S. He also has attended three international climate change negotiation summits. Prior working on energy efficient buildings for Steen Engineering, Inc., he obtained a Bachelors of Mechanical Engineering degree from the University of Minnesota, and competed in four transcontinental solar-powered vehicle competitions in the process.



**Daniel Howard** (dhoward3@nd.edu)

Daniel is a PhD candidate at the University of Notre Dame in the Dept. of Applied & Computational Mathematics & Statistics. He studies meshless algorithms such as RBF-FD methods and their application to geophysical fluid flows on supercomputing systems, with specific interests in numerical weather and climate prediction models. This work is extended under the GLOBES program at Notre Dame towards understanding the Indian Monsoon system in complex mountainous terrain and how changes in monsoon dynamics stress social systems, as exhibited by mass migration during water stress events. Daniel also volunteers his time as member and past president of the Science Policy Initiative at Notre Dame, aiding the development of science communication and advocacy skills for students and established researchers by organizing trainings and meetings with state as well as congressional representatives. Daniel maintains enthusiasm in addressing climate change both via research and advocacy. He will be participating in the Youth Climate Leadership 2019 summer program starting in Berlin this August and is actively networking and seeking future employment opportunities.



**Rupak Kumar Jha** (rupakpu26@gmail.com)

Rupak is currently a Ph. D candidate at the Department of Humanities and Social Sciences, Indian Institute of Technology (IIT) Bombay, Mumbai. Previously, he completed his M. Phil. (specialization in Planning and Development) from IIT Bombay. He also has his Master's degree in Applied Econometrics from Pondicherry University. Rupak is a native of Kosi region of north Bihar in India. Having experienced floods from the close quarters has helped him evolve his research interests which primarily circumscribe around the inter-disciplinary aspects of human-environment interaction, and the climate extremes. More specifically, he is interested in assessing the climate risk, social vulnerability, and differential outcomes extreme events generate on the society and economy at the varying spatial and temporal scales. In his Ph. D work, he has integrated the various quantitative techniques with Geographical Information System (GIS) and remote sensing to assess the social vulnerability to floods. In addition, he also assigns importance to the field work information while engaging with the various stakeholders in order to mainstream the adaptation solutions. In his free time, he likes to travel to different places, meet various ethnic groups and understand local culture, and watches and reads various genres of cinema and books.



**Franklyn Kanyako** (fkanyako@gmail.com)

Franklyn is a Ph.D. Candidate in Industrial Engineering and Operations Research at the University of Massachusetts, Amherst and originally from Sierra Leone, West Africa. He is a former International Renewable Energy Agency (IRENA) Scholar and worked at the United Nations Secretary General's Climate Change Support Team. Franklyn is currently working on renewable energy portfolio decision-analysis, uncertainty in climate change policies. He mainly employs global integrated assessment energy modeling tools such as GCAM/WITCH and MESSAGE and decision analysis techniques in his research.



**Toni Klemm** (toni-klemm@tamu.edu)

Toni is a postdoctoral researcher in the Department of Ecosystem Science and Management at Texas A&M University. He is a part of an interdisciplinary team that studies the vulnerability of cattle ranching in the U.S. Great Plains to climate variability and change. From 2012 to 2018 Toni worked on a Ph.D. in Geography at the University of Oklahoma. His research at the South Central Climate Adaptation Science Center explored decision making in winter wheat production and to how improve seasonal climate forecasts to better suit the needs of winter wheat producers. Toni is German, and in 2011, before coming to the U.S., graduated with a M.Sc. in Geography from Dresden University of Technology.



**David Lafferty** (davidcl2@illinois.edu)

David received a bachelor's degree in physics from the University of Glasgow, Scotland. Having enjoyed two summer internships in Germany during this time, he then returned to pursue a master's degree at Ruprecht-Karls-Universität Heidelberg. An impromptu reading of a Scientific American article motivated his change of fields to climate science. Now a graduate student at the University of Illinois at Urbana-Champaign, his research focuses on uncertainty quantification in downscaled climate models.



**Rongkun Liu** (liu.5811@osu.edu)

Rongkun is currently a PhD candidate of environmental social sciences in the School of Environment and Natural Resources at The Ohio State University. His research interests encompass mountain ecology, land use and land cover changes, hazard management, and coupled human and natural systems in mountain environments, particularly the Himalayas. At present, he is conducting year-long fieldwork examining knowledge interactions and resilience building across contested natural, human and institutional landscapes in eastern Nepal and Southwest China. Previously, Rongkun worked for five years in the Himalayan region on environmental conservation and community development with the International Centre for Integrated Mountain Development (ICIMOD) based in Kathmandu, Nepal, as well as the Pendeba Society of the Tibet Autonomous Region. He also worked with the Mekong Institute in Thailand, Yunnan Provincial Environmental Protection Department in China and the World Resources Institute in the US. Rongkun holds a bachelor's in international relations from Peking University, and a master's in global environmental policy from American University in Washington, DC.



**Tasnuva Mahjabin** (tvm5451@psu.edu)

Tasnuva is a Ph.D. candidate in the Water Resources Engineering Program at the Pennsylvania State University. She conducts research on the Food-Energy-Water Nexus through the analysis of the complex socioeconomic, environmental, and infrastructural networks. She employs statistical modeling, network analysis, and environmental and economic metrics to understand the intertwined dynamics of humans, water, climate, and ecosystems. Tasnuva is also interested in water resources management, data analytics, and complex system modeling. She earned her MS in Civil Engineering from Florida International University (FIU) and her BS in Civil Engineering from Bangladesh University of Engineering and Technology (BUET). Her MS thesis focused on analyzing long-term trends in extreme rainfall events in Florida. Prior to her Ph.D., Tasnuva held a lecturer position in the Civil Engineering Department at the University of Asia Pacific, Bangladesh.



**Megan May** (megankatherinemay@gmail.com)

Megan is an environmental microbiologist interested in science policy, teaching, and issues of equity and inclusion. She is currently a NOAA Knauss Fellow working in the US Senate in Senator Tammy Baldwin's office on agriculture, environment, and natural resource issues, including climate change and adaptation. In December 2018, she received her PhD in Marine Environmental Microbiology from the Massachusetts Institute of Technology-Woods Hole Oceanographic Institution Joint Program in Oceanography. Her dissertation research focused on characterizing and quantifying antibiotic resistance in the ocean. Understanding the patterns that drive antibiotic resistance is important for the sustainability of human and environmental health. She received a Bachelor of Arts degree in Biology with minors in Spanish and Sociology from DePauw University in 2013. In her spare time, she enjoys eating ice cream around the DC-Maryland area, spending time in nature with her partner and their dog, and listening to podcasts.



**William Mobley** (wmobley@tamu.edu)

William is a Postdoctoral Researcher at Texas A&M Galveston. His work focuses on Hazard Mitigation in the built environment. William's current work models urban flood probability using machine learning, and identifying optimal flood mitigation policies given uncertainty.



**Alex Neidermeier** (alexandraneidermeier@gmail.com)

Alex grew up outside of Asheville, North Carolina, entering the University of North Carolina-Asheville as an environmental studies major in 2007 with a focus on secondary science education and geology. She was accepted to the Peace Corps Mali program in 2011 as an agricultural extension agent where she served until the program was grievously closed in early 2012. She then rejoined the Peace Corps as an agribusiness volunteer in Ouarkoye, Burkina Faso, working with local women's groups on community economic development. Alex took a position working with the US Forest Service International Programs in Washington, DC, in 2014, fostering technical exchange between the domestic Forest Service and counterparts in central Africa. Her work managing the SilvaCarbon portfolio as part of this position exposed her to the mechanics of international climate mitigation and motivated her to pursue studies in forest health. Alex was accepted to the natural resources graduate program at the University of Vermont's Rubenstein School of the Environment in 2017 where she has been working with Dr. Kimberly Wallin to research a biological control for the hemlock woolly adelgid. This project has given her the opportunity to pursue more technical exploration of the drivers, effects, and adaptation strategies to a changing climate through the lens of forest health and invasive species.



**Adam Pollack** (abpoll@bu.edu)

Adam is a PhD student in Boston University's Earth and Environment program. Prior to this he obtained an BS/MS degree from Stony Brook University in Applied Mathematics and Statistics with a concentration in statistics and minor in computer science. Adam studies perception and pricing of risk in markets to a range of climate impacts in order to inform budgetary allocation for adaptation strategies as well as better understand the way humans interact with and perceive their role in the surrounding environment.



**Andry Rajaoberison** (andry.rajaoberison@yale.edu)

Andry is a GIS Analyst focusing on coastal resilience and planning. He is currently helping to develop tools that can facilitate the assessment of storm impacts in the CT coast. While he spends most of his time in front of his computer, practicing GIS programming, data science, or watching movies, he also loves to go to parties, dance, or play soccer. Andry is originally from Madagascar and he recently graduated with an MEM degree from Yale School of Forestry & Environmental Studies.



**Andrea Cristina Ruiz** (acr2178@columbia.edu)

Andrea Cristina is a Senior Economic Analyst for the Port Authority of New York and New Jersey (PANYNJ) a regional transportation organization working for the Chief Economist and sitting in the Planning and Regional Development Department. She is a young professional working at the intersection of economics, climate change, and transportation. She has a background in economics and public policy and a passion for natural sciences. In her position Andrea Cristina focuses on climate change, both adaptation and mitigation. She conducts economic analysis on mitigation efforts, economic impacts (including pollution) and advises on elements on environmental policy design, including behavioral insights into these efforts. Andrea Cristina also works with the Planning Department to develop climate-risk informed long range plans for PANYNJ assets, critical transportation assets for the regional economy. Other parts of her work include macroeconomic analysis for activity forecasting, (resilience) benefit cost analysis, analysis on regional economics including inequality, and leads analysis for large scale renewable energy development (offshore wind). Andrea Cristina has an MPA from Columbia University School of International Public Affairs and an undergraduate degree from the George Washington University. Pronouns: she/hers



**Christopher Ryan** (Christopher.Ryan@asrc.cuny.edu)

A native Floridian, Christopher attended the University of Florida for his undergraduate work where he focused in social science. Christopher received bachelors' degrees in Anthropology and in Women's Studies and Gender Research. Following graduation, he worked for a plant breeder in the Agronomy department, assisting with the university's turfgrass breeding program in order to produce hardier turf species requiring reduced inputs, and would eventually complete a master's degree in Environmental Horticulture, conducting survey research related to Florida lawn and landscape fertilizer policy. Following his master's degree, Christopher moved to New York City to pursue a PhD, where he is currently enrolled at the City University of New York, studying Earth and Environmental Sciences. His dissertation research relates to soil nutrient dynamics and urban ecology. Christopher is driven by work that incorporates intersectionality with a global viewpoint in order to foster healthier and greener cityscapes. He also has a strong passion for improving current institutional hierarchies of knowledge production – meaning advocating for citizen science initiatives, open-source data and publications, and wiki-style collaborations.



**xiili sarkela** (hbassett@princeton.edu)

xiili sarkela (kye/kyr/kynes pronouns) just completed kyr first year in Princeton's Civil and Environmental Engineering graduate program. xiili grew up on the lands of the Red Willow People (now called Taos, NM), and cares deeply about decarbonization as a strategy for both energy sovereignty and climate resiliency in that region. xiili's career is to be a problem solver trained in both environmental engineering and justice, working to support bottom-up and local planning, design, and implementation of energy and water systems.



**Sanjib Sharma** (svs6308@psu.edu)

Sanjib is a Postdoctoral scholar in Earth and Environmental Systems Institute at Pennsylvania State University. Dr. Sharma obtained his PhD in Hydrology and Hydrometeorology from Pennsylvania State University in 2019. Dr. Sharma received his BS from Institute of Engineering Tribhuvan University Nepal in 2010, and MS in Water Resources Engineering from Southern Illinois University in 2015. His research interests concern the hydrology, hydraulics, hydrometeorology and hydroclimatology of extreme floods.



**Kristen Sharpe** (knsharpe@vims.edu)

Kristen is a Masters graduate student at William & Mary's School for Marine Science at the Virginia Institute of Marine Science (VIMS). She is in the Department of Biological Science's zooplankton ecology lab, under the advisement of Dr. Deborah Steinberg. The focus of her research is to define and compare the mesozooplankton community composition in the Chesapeake Bay and Sargasso Sea, and to quantify the role of community structure in fecal pellet-mediated carbon export/flux at each site. Prior to entering graduate school, Kristen worked as a Marine Education Specialist at the Chesapeake Bay National Estuarine Research Reserve (CBNERR) at VIMS. For nearly five years, she worked to disseminate and communicate science being done at VIMS to K-12 students, college undergraduates, teachers, fellow informal educators, and members of the general public. Kristen also had the opportunity to participate in a variety of professional development opportunities, including the National Network of Ocean and Climate Change Interpretation (NNOCCI)'s Mid-Atlantic regional study circle in 2017. She was so inspired by my participation that she served as the Climate Science Lead for the NNOCCI Hampton Roads Study Circle in 2019. Kristen remains a passionate advocate for the power of effective communication in advancing the role and reputation of science, and hopes to instill some of this passion into fellow summer school participants while learning about the strides being made by colleagues from other institutions as well!



**Carlos Silva** (cgsilva@ualr.edu)

Carlos is a Regional Economist at Arkansas Economic Development Institute (AEDI). Skilled in applied economic research, he is a research professional with a Master of Science in Applied Economics from Utah State University with a specialization in Natural Resource Economics, and a Doctoral degree in Economic Development from New Mexico State University. His research interests are economic development, natural resources, and their interaction.



**Wenjing Su** (wzs167@psu.edu)

Wenjing is a second-year doctoral student in Energy System Engineering at Pennsylvania State University. Most recently, she has been working on a project on how extreme weather and climate events impact the Pennsylvania energy infrastructure through the remainder of this century. Wenjing is interested in including flooding and other low-probability but high-impact extreme weather events in power system infrastructure planning process. She looks forward to meeting other students and faculty in the SCRiM 7th Annual Summer School.



**Nastaran Tebyanian** (nzt117@psu.edu)

Nastaran has backgrounds in architecture, landscape architecture, and statistics and is currently a researcher in Hamer Center for Community Design pursuing a PhD in architecture with a concurrent masters in statistics at Penn State. Nastaran identifies herself as a complexity enthusiast and is passionate about bringing the power of data science to environmental and urban planning and design. She has worked on a diverse set of research projects from the regional assessment of cultural and natural resources to the evaluation of community-engaged study abroad programs. Nastaran's dissertation is on green infrastructure and the resilience of urban food-energy-water nexus. In addition, she is currently working as a research collaborator for two projects: 1) Penn State Initiative for Resilient Communities (PSIRC): A Pilot to Develop Community-Based Solutions to Riverine Flooding 2) Developing a computational planting design and decision-making tool for assessing and predicting pollinator habitat resilience.



**Anh Duong Tran** (trananhduong1981@gmail.com)

Anh Duong was born in Thanh Hoa, Vietnam. He obtained his outstanding academic performance on Bachelor degree at the Water Resources University, Hanoi during 2000-2005. Subsequently he completed his MSc at Asian Institute of Technology (AIT), Thailand with full scholarship from Swedish International Development cooperation Agency (SIDA) in the period 2010-2012. During his MSc he specialized in climate change, hydrodynamic modelling and water resources engineering within the Water Engineering Management Department at AIT. During his MSc study, Duong successfully received full scholarship from German academic Exchange Service (DAAD) for the exchange program at Leichtweiß-Institute for Hydraulic Engineering and Water Resources, TU Braunschweig, Germany. Thereafter, he commenced his PhD research at the Chair of Hydraulic and Water Resources Engineering, Technical University of Munich, Germany with full two rounds scholarship from IPCC scholarship program funded by Cuomo Foundation and Prince Albert II of Monaco covering a duration of 2013-2016. During his entire PhD candidature, Duong had chance to conduct his exchange program at Department of Civil and Environmental Engineering, Colorado State University, USA. His major research interest is hydrodynamic modelling, climate change and downscaling and artificial neural network for rainfall, runoff prediction. He has published several journal and conference articles to date. At present, he is a research coordinator of Artificial Intelligence and Water Resources Engineering Research Group under Water Technology Department, Vietnamese German University (VGU).



**Matthew Varkony** (mvarkony@rsmas.miami.edu)

Matthew is a second-year graduate student at the University of Miami working on his PhD in climate economics. The focus of his research is on the social impact of extreme climate events. Specifically, Matthew is studying the impact that hurricanes have on academic achievement at the high school level. He obtained his undergraduate degree in math and economics at the University of Miami and went on to study natural hazards for his masters at Miami's Rosenstiel School for Marine and Atmospheric Sciences. Matthew is interested in spatial analysis and causal inference. His work looks to exploit the exogenous nature of weather events, to analyze the causal impact of these extreme events on society. Matthews is originally from Denver, Colorado and loves playing basketball and snowboarding in the winter. He is 25 years old.



**Laura Villegas Ortiz** (Laura.VillegasOrtiz@wri.org)

Laura is an environmental and development economist. She cares about people and the environment and wants to find ways to design and promote sustainable, feasible, and morally sound policies that guide the administration of natural resources and the building of cohesive and healthy communities. As an economics researcher, Laura explored the spectrum of topics in environmental, development and agricultural economics and her research has always been policy oriented. At present, she is focusing on the economic linkages between climate change, environmental sustainability, and social development. Laura's PhD dissertation was funded by the Southeast Climate Adaptation Science Center. She compared prescriptive and market-based land use policies aimed at reducing future damages from floods in rapidly growing counties with high natural capital in the Southeastern coast of the US. Her paper was recently published by EfD. In Laura's current position with the New Climate Economy, she conducts empirical research and helps build evidence to back the economic case for climate change mitigation and adaptation policies, particularly in developing countries. In the future, Laura would like to study the role of legislative uncertainty as a barrier to enter markets for ecosystem services (e.g., the market for wetland mitigation credits, the largest ecosystem services market in the U.S. and the world). She would also like to study environmental externalities from the environmental justice angle and answer questions regarding spatial distribution of environmental threats imposed by future climate disaster risks. Laura has degrees from North Carolina State University and Montana State University. She likes sports, learning languages, and loves her family.



**Valerie Washington** (vnwashin@umich.edu)

Valerie is a PhD candidate in Industrial and Operations Engineering at the University of Michigan. Her primary research interests are in using operations research and risk analysis to understand the impacts of natural hazards on communities, how communities respond during natural hazards, and what communities can do to be more resilient in future hazards. Her current research focuses on flood insurance, flood mitigation, and hurricane evacuations.



**Jay Wimhurst** (jaywimhurst@gmail.com)

Jay is from Norman, OK, and is a Geography (PhD) student at the University of Oklahoma. He is originally from the United Kingdom and moved to the US for grad school two years ago to pursue my interests in renewable energy provision and its intersections with climate change. Jay has since been able to complete a Master's thesis that considered the relationship between the Central Plains' Low-Level Jet and Oklahoma's future wind energy production, and is hoping to have work from his thesis published later this year.



**David Wright** (david.wright.hydro@gmail.com)

David is a hydrologist at the Bureau of Meteorology (Melbourne, Australia) working on the scientific development of a continental hydrological model of Australia (AWRA-L). He completed his PhD at the University of Adelaide in 2017 with a thesis that focused on implementation of applied statistical techniques in the context of catchment scale hydrological modelling. David is technically skilled in catchment scale and continental scale modelling, applied statistics, programming (Python, R, and Fortran), and environmental engineering. David is currently looking to expand his skill set so that I can contribute to science and policy development to address future challenges in climate and water resources management in Australia.



**Hui Yang** (hui@psu.edu)

Hui will be starting a PhD in Environmental Engineering at Penn State later in August. She received her BS in Civil Engineering from University of Macau. She then came to USA and completed a master's in Civil and Environmental Engineering at Carnegie Mellon, where she focused on air quality engineering. Her interests lie in the nexus of environment, climate and policy, as well as looking for good food and exploring the world.

## Instructor Directory

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