

# INTERDISCIPLINARY DIALOGUE: “Preparing to flourish in a changing climate”

Tuesday, March 12, 2018

## HOSTS

---

- [Center for Community and Citizen Science](#)
- [Center for Regional Change](#)
- [Data Science Initiative](#)
- [Davis Humanities Institute](#)
- [Energy & Efficiency Institute](#)
- [Feminist Research Institute](#)
- [John Muir Institute of the Environment](#)
- [Policy Institute for Energy, the Environment & the Economy](#)
- [Undergraduate Research Center](#)
- [Innovation Institute for Food & Health](#)

## INVITEES

---

**Rachael Bay, Assistant Professor, Department of Evolution and Ecology, College of Biological Sciences, UC Davis**

Rachael Bay is an Assistant Professor in the Department of Evolution and Ecology, College of Biological Sciences. Her research interests focus on evolutionary response to human-induced environmental changes, including how animals respond to changes in their environment that are caused by humans as well as how evolution might mitigate some of the negative impacts of human-induced change. Bay has a PhD in Biology from Stanford University and a Bachelor's in Marine Science/Biology from University of Miami. [Source: <https://biology.ucdavis.edu/people/rachael-bay>]

**Tom Beamish, Professor, Department of Sociology, UC Davis**

Professor Tom Beamish's studies began at UC Santa Barbara where he researched the petroleum industry for nearly a decade while in the Department of Sociology and at the Ocean Coastal Policy Center, Marine Sciences Institute. In 1999, having completed his dissertation on a massive oil spill disaster (published as a book titled, *Silent Spill: The Organization of an Industrial Crisis*. MIT Press), a he then took a post-doctoral fellowship at UC Davis, helping to lead a research team studying the slow and uneven adoption of “green” technologies in the commercial construction sector while at the Institute of Governmental Affairs and the Graduate School of Management. After the post-doc, in 2001 Beamish joined the Department of Sociology at the University of Georgia. Soon thereafter, in 2003 he then joined UC Davis's Department of Sociology. Professor Beamish's research interests and publications focus on environmental hazards and risks; social and community movements; organizations and the economy; and science, technology and innovation studies. He has recently completed his second book, titled *Community at Risk: Biodefense and the Collective Search for Security* (Stanford University Press). This book focuses on and compares local community based civic politics in three different communities surrounding a controversial and risky government led biodefense proposal. Finally, professor Beamish has researched and written extensively about organizational and institutional aspects (and impediments) to “green” innovation(s) and regarding metropolitan level governance in California as the state has responded to urban growth and climate change. [Source: <https://sociology.ucdavis.edu/people/tdbeamis>]

**Heather Bischel, Assistant Professor, Department of Civil and Environmental Engineering, UC Davis**

Heather Bischel is an Assistant Professor in the Department of Civil and Environmental Engineering at UC Davis. Her research interests include water sustainability, pathogens & micropollutants, resource-oriented sanitation, and water quality and reuse. She is passionate about improved environmental and human health. Dr. Bischel's research is highly collaborative, with current and past research collaborations at the Swiss Federal Institute of Technology in Lausanne (EPFL), the Swiss Federal Institute of Aquatic Science and Technology (Eawag), eThekweni Water and Sanitation (EWS) in South Africa, the University of Kwa-Zulu Natal, University College London, University of Malawi, Colorado School of Mines, and University of Missouri Kansas City. She holds a Bachelor's degree from UC Berkeley, and a Ph.D. from Stanford University's Environmental Engineering & Science Program.

[Source: <https://www.linkedin.com/in/heather-bischel-02344b6/>]

**Clare Cannon, Assistant Professor, Department of Human Ecology, UC Davis**

As Assistant Professor in the Department of Human Ecology at the University of California, Davis, Clare Cannon researches socio-environmental inequality, with an emphasis on feminist theories and methods. Her research areas include political economy and the environment, global and urban sustainability, gender and society, climate change and disasters, and mixed-methodologies.

Cannon's two main research lines include: 1) applying theories of intersectionality to studies of the environment; and, 2) applying queer and feminist theories to policies and interventions around personal-based violence. Her research continues to evolve in studying social vulnerability due to climate change related disasters and socio-environmental health in environmental justice communities. [Source: <https://clarecannon.ucdavis.edu/>]

**Sara Chandler, Policy & Community Manager, Elemental Excelsior**

As Elemental Excelsior's Policy & Community Manager in California, Sara leads local partnerships and project development with a focus on Elemental's engagement and policy efforts in low-moderate income communities in California. Sara also helps facilitate robust community engagement and public convenings to align Elemental Excelsior and our portfolio companies' work with the needs and priorities of communities disproportionately burdened by poverty and pollution. [Source: <https://elementalexcelerator.com/team/sara-chandler/>]

**Kathryn Conlon, Assistant Professor, Department of Public Health Sciences, UC Davis**

Kathryn Conlon joined the UC Davis Department of Public Health Sciences as an Assistant Professor in the Division of Epidemiology, with a dual appointment at the School of Veterinary Medicine's Department of Veterinary Medicine and Epidemiology (VME). Her collaborative research interests focus on topics relating to climate change in an urban setting and adaptation strategies to protect human health in a changing climate. Her research is both timely and impactful considering the increased frequency of extreme weather events. Her published work is in many areas of climate change epidemiology including: prevention of cold-related morbidity and mortality; creation of models to assist urban planners and public health practitioners in identifying vulnerable groups and mitigation strategies; descriptions of methodologies that combine climate and health data to project disease burdens; development of models to predict extreme heat events that will require heat advisories in urban settings; and assessments of the relationships between a population's vulnerability to disease and climate variability. She holds a Bachelor's and Ph.D. from the University

of Michigan, and an MPH from Emory University. [Source: [https://health.ucdavis.edu/phs/news/kathryn\\_conlon.html](https://health.ucdavis.edu/phs/news/kathryn_conlon.html)]

**Ben Finkelor, Executive Director, Energy and Efficiency Institute, UC Davis**

Benjamin Finkelor is Executive Director of the UC Davis Energy and Efficiency Institute. Prior to joining the EEI, he served in a variety of roles within the clean technology sector, including director of business development for a local clean-energy start-up company, interim executive director for CleanStart (a Sacramento-based business incubator supporting local clean energy technology ventures and entrepreneurs), and as a cleantech analyst for the private equity arm of the California Public Employees' Retirement System (CalPERS). Finkelor holds a master's degree in business administration from the University of California, Davis Graduate School of Management. He also earned an emphasis in corporate environmental management through the Bren School at University of California, Santa Barbara. His undergraduate degree is from University of California, San Diego. [Source: <https://energy.ucdavis.edu/finkelor-benjamin/>]

**Drew Fox, Assistant Professor, Department of Psychology, UC Davis**

Andrew Fox's is a member of the Psychology Department and the California National Primate Research Center (CNPRC). Fox is a member of a number of organizations including the Society for Neuroscience and the Society of Biological Psychiatry. In the Fox lab, we want to understand the neurobiology of "affective style". We want to understand why some people are afraid to leave the house, while others enjoy the feeling of danger. We want to understand why some people callously abuse, while others become overwhelmed with empathy. We hope that understanding the biology of affective style will lead us to a better understand humanity and help people make choices about who they want to be. [Source: <https://psychology.ucdavis.edu/people/dfox>]

**Annaliese Franz, Director, Undergraduate Research Center, Department of Chemistry, UC Davis**

Research in the Franz group combines organic synthesis, catalyst development, and chemical biology with applications for the synthesis of bioactive products, biofuels and materials. Our primary focus is to develop new reactions and catalysts for the efficient and enantioselective synthesis of bioactive and therapeutically-relevant molecules. An integral part of our research is to investigate the mechanism and molecular interactions that dictate the reactivity and selectivity of these synthetic transformations. In addition to developing new transformations for the synthesis of complex small molecules, we are interested in using chemical triggers to enhance the production of lipids in microalgae for biofuels. [Source: <https://chemistry.ucdavis.edu/people/annaliese-franz>]

**Seth Frey, Assistant Professor, Department of Communication, UC Davis**

Seth Frey is an Assistant Professor of Communication at the University of California, Davis, in the Computational Communication lab. Before a fellowship Dartmouth College's interdisciplinary Neukom Institute for Computational Science, he was a postdoctoral researcher at Disney Research, a part of Walt Disney Imagineering, where he applied his expertise to both theoretical and practical questions about engineered social systems, such as games, sports, online communities, and theme parks. His current research focus is human decision behavior in complex social environments. In 2013, Frey earned a Ph.D. in Cognitive Science and Informatics at Indiana University, after two years at the New England Complex Systems Institute. He holds a B.A. in Cognitive Science from UC Berkeley in 2004. (Source: <https://communication.ucdavis.edu/people/sethfrey> )

### **Irwin Gonzales, Assistant Postharvest Engineering Specialist, Bio & Ag Engineering, UC Davis**

Dr. Irwin Donis-González's passion for agriculture and postharvest technologies began in the years 2004 in his native Guatemala, working as an independent agro consultant upon earning his Bachelor's and Licentiate degree in Agricultural Engineering from the Del Valle University of Guatemala. Wanting to pursue advanced training in postharvest management, he came to the United States, at Michigan State University (MSU), as a Fulbright Scholar. Using chestnuts as a model, he was instrumental in reducing the microbial contamination in fresh and processed foods by directly overseeing the postharvest management/storage of chestnuts throughout the state of Michigan. He then went on to earn his Ph.D. in Biosystems and Agricultural Engineering at MSU to further the use of non-destructive sensing technologies to assess the internal attributes of fruits, chestnuts, and vegetables. Dr. Donis was previously working as a postdoctoral associate at MSU addressing challenges for agro-based industries in the State of Michigan. Just recently, Dr. Donis accepted a position as an Assistant Postharvest Systems Engineering Specialist in Cooperative Extension, in the Department of Biological and Agricultural Engineering at UC Davis. At UC Davis he will focus his work in postharvest engineering, handling (storage, drying, etc.), traceability, and processing of agricultural commodities with a goal of reducing energy consumption while ensuring food quality and safety. These are critical issues for the fresh market fruit and vegetable, dried fruit, tree nut, and rice industries in California and the World.

[Source: <https://faculty.engineering.ucdavis.edu/donisgonzalez/biography/>]

### **Chris Granger, Executive Director, Cool Davis**

Chris Granger is the Executive Director of Cool Davis, a nonprofit focused on climate impact and solutions for sustainable living. She is a graduate of UC Davis in Applied Behavioral Sciences (now Community Development). She also holds an MBA from Fresno State, with an emphasis in non-profit management. Granger has worked in Oakland, Sacramento, Boston, Fresno and Davis as a program coordinator, public policy advocate, and executive director for nonprofit social services and advocacy organizations. The organizations she has served include Catholic Charities of California (statewide), Women's Institute for Housing and Economic Development (in Boston), Habitat for Humanity and other organizations (in Fresno), STEAC (in Davis), Y-Me National Breast Cancer Org (Northern CA Affiliate) and now Cool Davis. She has lead staff and volunteers advocating for and serving immigrants & refugees, mentally ill & homeless, low-income households, people with breast cancer, and now households facing climate change. (Source: <https://www.cooldavis.org/board-of-directors/> )

### **Susan Harrison, Professor, Environmental Science & Policy, UC Davis**

Research in the Harrison lab seeks to understand the processes that shape and maintain plant species diversity at the landscape scale, where small-scale forces such as competition and facilitation interact with large-scale forces such as niche evolution and dispersal. Much of our recent work focuses on the impacts of climatic drying on grassland community diversity. [Source: <https://desp.ucdavis.edu/people/susan-p-harrison>]

### **Jelena Hartman, California Water Resources Control Board**

Jelena is a Senior Scientist for Climate Change at California State Water Resources Control Board. Her previous work was as a Senior Environmental Scientist at CalEPA - Central Valley Regional Water Quality Control Board. She received her PhD, Environmental Sciences (Environmental

Chemistry) at the University of Nevada-Reno and her MSc in Environmental and Resource Sciences at the University of Nevada-Reno. [Source: <https://www.linkedin.com/in/jelena-hartman-a097b210/>]

**Kayleen Keller, GIS and Data Manager, US Fish & Wildlife, Center for Watershed Sciences, UC Davis**

Dr. Keller is now the GIS and Data Manager for the Refuges Inventory & Monitoring Program, U.S. Fish and Wildlife Service, Pacific Southwest Region. [Source: <https://watershed.ucdavis.edu/people/kekeller>]

**Christine Kreuder-Johnson, Professor and Associate Director, One Health Institute, School of Veterinary Medicine, UC Davis**

Christine Kreuder Johnson is Professor of Epidemiology and Ecosystem Health and Associate Director of the One Health Institute in the School of Veterinary Medicine at UC Davis where she directs the EpiCenter for Disease Dynamics. Her research activities focus on disease spillover and spread, epidemiologic drivers of zoonotic disease transmission, ecosystem level processes that impact wildlife population health and emerging infectious diseases, and mechanisms underlying wildlife species declines. She provides epidemiologic support to state and national agencies to understand epidemic threats to wildlife and she has developed risk-based approaches for surveillance and risk characterization across a range of field studies from the local to global scale. Professor Johnson currently directs animal and human surveillance activities for USAID's Emerging Pandemic Threats PREDICT project to detect disease spillover, amplification, and spread and inform risk mitigation. At UC Davis, she has designed core didactic instruction in one health and ecosystem health for graduate and professional degree programs and trains graduate students and post-doctoral scholars in wildlife epidemiology and disease ecology. [Source: [vetmed.ucdavis.edu/ohi/about/one-health-institute-team.cfm](http://vetmed.ucdavis.edu/ohi/about/one-health-institute-team.cfm)]

**Andrew Morris Latimer, Associate Professor and Associate Ecologist, Department of Plant Sciences, College of Agricultural and Environmental Sciences, UC Davis**

Andrew Morris Latimer studies how plant populations and communities respond to change, including sudden, major disturbance such as fire and drought, as well as more gradual changes in climate. At the shortest time scales, he is focusing on how communities and populations respond to drought and fire, and how invasive species respond to novel habitats. Over longer time scales, his research examines local adaptation to gradients in climatic conditions and to variability in those conditions. Much of his work involves fire, since this plays such a major role in the ecology and evolution of Mediterranean climate floras and in local land management here in California. His research on the interactions among fire, vegetation, and climate has direct application to forest and rangeland management in an era of climate and land use change.

[Source: <https://www.plantsciences.ucdavis.edu/people/andrew-latimer>]

**Emily Merchant, Assistant Professor, Science and Technology Studies, UC Davis**

Emily Merchant, PhD, is a historian of science and technology in the twentieth century, focusing on the human sciences and technologies of human measurement. My current project, *Prediction and Control: U.S. Demography and Global Population in the Twentieth Century*, examines how human population became a subject of scientific expertise and how demography shaped population dynamics during a period of unprecedented growth. This project combines archival research, oral history, and computational textual analysis to develop an intellectual, institutional, and material history of the science and politics of global population in the twentieth century. She has recently

completed two large collaborative research projects. The first examined the history of Mexican immigration to the United States from About 1850 to 1950. Together with Brian Gratton (Arizona State University), they produced new estimates of the number of Mexican immigrants and their U.S.-born children who emigrated (both forcibly and voluntarily) to Mexico during the 1930s. on the history of Mexican migration to the United States from about 1850 to 1950 and one on the environmental and demographic history of the U.S. Great Plains since the Homestead Act (1862). Past projects include studies of the historical demography and environmental history of the United States West, which use computational methods to explore Mexican migration to the United States, the environmental consequences of agriculture on the Great Plains, and the changing living arrangements of older women. [Source: <https://sts.ucdavis.edu/people/eklanche>]

**Brett Milligan, Associate Professor, Landscape Architecture + Environmental Design, UC Davis**

Brett Milligan's research focuses on critical investigation and design of new forms of infrastructure that are based on landscape processes and which foster ecological recovery and social equity. He is a founding member of the Dredge Research Collaborative, which implements transdisciplinary approaches to water infrastructure and the design of dredged landscapes and sediment management. His UC Davis research lab - Metamorphic Landscapes – prototypes landscape adaptations to accelerated climatic and environmental change, focusing on applied fieldwork in floodplains, estuaries, urbanized deltas, and the dynamic interface between land and water. Brett's research approach is transdisciplinary, exploring ways to create new, integrative knowledge across disciplines and publics through design research, ethnography and extensive fieldwork methods. [Source: <https://humanecology.ucdavis.edu/brett-milligan/>]

**Sarah Oktay, Director, Natural Reserve System, Director of Strategic Engagement, Stebbins Cold Canyon, UC Davis**

Before joining UC Davis in April 2018, Sarah was Director of Institutional Advancement at Rocky Mountain Biological Lab, after 25 years at sea level researching, teaching, fundraising, and communicating with the public. She received her B.S. in Marine Science and a Ph.D. in Chemical Oceanography from Texas A&M University - Galveston. From 2003-2016 she was the Executive Director of the University of Massachusetts-Boston Nantucket Field Station, a biological field station on Nantucket Island. Her research focuses on climate change, carbon transport and harbor processes. After 9-11, she mapped the chemical signature of the World Trade Center ash and tracked it in the Hudson River. She is an invited member and national board member of the Society of Women Geographers, and she has been on the boards of many civic and nonprofit groups. She served as president of the Organization of Biological Field Stations, a professional organization representing several hundred field stations across the globe, from 2014-2016. Her nine years of service on the Nantucket Conservation Commission has been featured in Vanity Fair, Yankee Magazine, Cape Cod Times, ABC.com, CNN, the movie "Rising Tides", and many other news outlets. She also is a science adviser for actor Mark Ruffalo, advising on topics such as climate change, fracking, and water quality monitoring for the non-profits he founded, Water Defense and The Solutions Project. She strongly feels that scientists should communicate with the public and provide education services to all ages, and that place-based learning is the best route to achieve that. [Source: <https://naturalreserves.ucdavis.edu/people/sarah-oktay/>]

**Kyaw Tha Paw U, Professor, Department of Land/Air/Water Resources, UC Davis**

Kyaw Tha Paw U is a Professor of Atmospheric Science and Biometeorologist in the Department of Land, Air and Water Resources. Born in New York, Paw U lived in Thailand, Switzerland and Burma

before returning to the state to attain a Bachelor's degree from MIT, followed by a Masters and Ph.D. in Biometeorology from Yale. He currently teaches courses on atmospheric science, severe and unusual weather, climate change, advanced topics in micrometeorology and biometeorology, and more. [Source: <https://biology.ucdavis.edu/people/kyaw-tha-paw-u>]

**Jim Sanchirico, Professor, Department of Environmental Science & Policy, UC Davis**

Dr. Sanchirico received his Ph.D. in agricultural and resource economics from the University of California at Davis in 1998. After working nine years at Resources for the Future in Washington D.C. (an independent, non-profit environmental policy think-tank), he returned to UC Davis where he is currently a Professor in the Department of Environmental Science and Policy. His main research interests include the economic analysis of policy design, implementation, and evaluation for marine and terrestrial species conservation, the development of economic-ecological models for forecasting the effects of resource management policies, and the control and prevention of invasive species. Twice his research has been honored with Quality of Research Discovery awards from the Agricultural and Applied Economics Association. In 2012, he was the 38th recipient of the Rosenstiel Award for Oceanographic Sciences, which honors scientists who, in the past decade, have made significant and growing impacts in their field. He is currently an associate editor of the Journal of Theoretical Ecology, Associate Director of the Coastal and Marine Science Institute at UC Davis, and Master Advisor for the environmental policy undergraduate major. [Source: <https://desp.ucdavis.edu/people/james-n-sanchirico>]

**Mitch Sears, Valley Clean Energy**

Mitch currently works with the Valley Clean Energy through the City of Davis where he has worked for twenty-three years. Since 2007, Mitch has served as the City of Davis' Sustainability Manager. In this role he has led the City's efforts to address climate change and community sustainability. Past City of Davis projects he has managed include the PVUSA expansion from 75kWh to 10+MW, the City energy efficiency project (ESCo), the PACE program (CaliforniaFirst, Ygrene, HERO), the community electric vehicle charging system, and the City's involvement with Cool Davis, the Cool California Challenge, and the Cool Cities Challenge – elements of the City's community engagement planning program to shift behavior and reduce local energy use and GHG emissions. Prior to 2007, Mitch spent sixteen years managing Davis' Agricultural Land Conservation Program, and five years as an urban planner. [Source: <https://valleycleanenergy.org/about-us/staff/>]

**Sri Sethuratnam, Land-Based Learning Center**

Sri worked in agriculture for twenty years, as a tea estate manager and as a mixed crop farmer in India, and as an agricultural engineer engaged in soil conservation in Brunei, before he migrated to Canada in 2004. He is a passionate student of traditional management practices in agriculture, and a proponent of integrating traditional approaches into modern farming methods. Sri has a Master's Degree in Capacity Development and Extension from the University of Guelph, Ontario, Canada. He is currently pursuing a part time Ph.D. focusing on evaluating the outcomes and impacts of incubator farm programs in the US and Canada, which he hopes will lead to a better understanding of how to engage with and encourage a new generation of farmers, who will be the backbone of our future food systems. Prior to joining the Center Sri worked for FarmStart, a leader in the incubator farm movement in Canada. His work in this area combined with the research he is undertaking gives him

an in depth knowledge of the social, economic and practical barriers that new farmers face when trying to start small-scale farms. [Source: <https://landbasedlearning.org/staff-22>]

**Katharina Ullmann, *Director, Student Farm, UC Davis***

Katharina Ullmann has a PhD in Entomology from the University of California, Davis and eleven years of experience working in sustainable agriculture, research, and education with multiple partners in North America and Europe. Prior to this position Katharina was the National Crop Pollination Specialist with the Xerces Society for Invertebrate Conservation, where she led outreach and extension efforts associated with the Integrated Crop Pollination Project ([www.projecticp.org](http://www.projecticp.org)). As part of this project, Katharina collaborated with a national team of research partners representing eight institutions to develop practical management tools that farmers can use to ensure crop pollination. Katharina's research experience includes developing and testing citizen science training guides and identifying and testing farm management practices that support pollinators (e.g. hedgerows, wildflower strips, crop rotation practices, and tillage practices). Katharina has thirteen years of experience in outreach, extension and education. This includes three years working as an environmental educator focused on experiential and place-based learning. Katharina's career began on small farms in Austria (one year) and the United States (five growing seasons) focused on mixed vegetable and livestock production. During those formative years, working with and learning from farmers, she developed a strong interest in sustainable agriculture, knowledge exchange and experiential learning. In her new role as the Director of the UC Davis Student Farm, Katharina is excited to work with the Student Farm community to build upon the Student Farm's forty year history and ensure that it remains a leader in sustainable agriculture and food systems education. [Source: <https://asi.ucdavis.edu/people/katharina-ullmann>]