The California State University
OFFICE OF THE CHANCELLOR

Baden-Württemberg
MINISTRY OF SCIENCE, RESEARCH AND THE ARTS

Live Webcast Announcement

CSU – BW: Creating Climate Change Collaboration (4C)

The California State University (CSU) Office of the Chancellor
Baden-Württemberg Ministry of Science, Research and the Arts (MWFK)

Tuesday, July 16, 2019
8:00 A.M. – 10:30 A.M. Pacific Standard Time
5:00 P.M. - 7:30 P.M. Germany Time
(Lobby opens 10 minutes prior to live session)
The recorded presentation will be available upon request

This is a new effort intended to increase contacts between scholars in California and Baden-Württemberg around issues related to climate change. Seven scholars from each side will talk briefly about their current research. We encourage interested researchers to watch and initiate contact in areas of mutual interest.

PURPOSE

- Discover existing climate change-related research work
- Identify potential collaborators for future projects
- Build interdisciplinary research teams for a comprehensive impact
- Build multi-institution research teams for a global impact
- Establish ongoing communication to prepare for upcoming funding opportunities

REGISTRATION click this link to register for the webcast: https://www.surveymonkey.com/r/CSUBW4C

You will need to provide:

1. Full name, Title and Department, University, Email address
2. Area(s) of research interest
3. Whether you will be viewing alone at your computer or in a group
4. Questions for the speakers to address

You will receive the Webcast Confirmation with the webcast link and details from CSU's Leslie Ponciano on **July 9, 2019**.

AUDIO: Simply login and stream the audio via your computer speakers. Communicate with the host & presenters by typing into the on-screen Chat Pods.

TEST YOUR COMPUTER:

1. Please be sure your computer is webcast ready by clicking this test link.
2. **Download the Adobe Connect add-in** for your PC or Mac by clicking this link.
3. **Update your Flash Player – then restart your browser, and join the webcast link again.**

For technical assistance, contact Jennifer Wicks, Executive Producer at (562) 951-4525 or jwicks@calstate.edu

Short Bios and Research Outlines

Steve Blumenshine, California State University, Fresno

Dr. Steve Blumenshine is Professor of Biology at Fresno State University. He received his Ph.D. in Biological Sciences from the University of Notre Dame. His research objectives include asking of how factors intrinsic and extrinsic to aquatic habitats interact and influence the structure and functioning of aquatic ecosystems.

Research Outline: Research is shifting to exploring the effects of climate change and interactions with habitat degradation, which is critical to guiding conservation efforts. Climate change and human alteration of river hydrology has greatly changed the thermal landscape for salmonids in rivers. My research team and collaborators find that inland salmonids have substantial plasticity in their thermal tolerances. Our findings fundamentally challenge current bioenergetics and habitat models for scaling up from individual physiology to populations and ecosystems, and allow us to formulate predictive responses to climate change.

Gretchen LeBuhn, San Francisco State University

Dr. Gretchen LeBuhn is a Professor of Biology at San Francisco State University and the Director of the Great Sunflower Project. Her research spans the fields of ecology, biodiversity and conservation biology. She has worked on understanding and conserving plant and pollinator systems from the mountains of Ecuador and California to the canyons of urban San Francisco. In other research, she works to develop standardized, cost-effective methods for monitoring biodiversity. She has worked on spotted owls, prairie falcons, and bat, plant and bee communities. She developed a monitoring program for UN-FAO and was a lead author on the Intragovernmental Panel on Biodiversity and Ecosystem Services.

Research Outline: There are clear indications that climate change is altering plant and animal populations in ways that confound conservation efforts. The consequences of climate change may be particularly dire for montane and alpine bumble bee communities, which include species that are already at the upper elevational and northern limits of their habitat range. We modeled the effects of meadow condition and climate change on montane bumble bee population dynamics in the Sierra Nevada. We found that meadow restoration is an effective strategy for abating climate change threats to montane bee communities. Our results suggest that increasing the scale of current meadow restoration efforts may be an effective approach to conserving montane pollinator communities—and the plants that depend on their pollinator services—in the face of climate change.

Mehran Mazari, California State University, Los Angeles

Dr. Mehran Mazari is an Assistant Professor in the department of Civil Engineering at CSU Los Angeles, specializing in Transportation Infrastructures and Materials. His research interests include sustainable and resilient transportation infrastructures, transportation geotechnics and pavement materials, and non-destructive evaluation of transportation infrastructures. He has been actively involved in a number of national and state research projects. He is the member of three technical committees at Transportation Research Board of National Academies of Science and Engineering and the young member of Highway Pavement Committee of American Society of Civil Engineers (ASCE). He is the

founding director of Sustainable and Intelligent Transportation Infrastructure (SITI) research lab at CSU Los Angeles.

Research Outline: Focusing on the resilience of transportation infrastructure in response to extreme weather events and climate change. We have worked on evaluating the resilience of transportation systems in coastal regions affected by hurricane, sea level rise, flash floods and storms. We have been incorporating various satellite data in developing a decision support system for coastal infrastructure (including surface and underground infrastructure).

Nathan Rank, Sonoma State University

Dr. Nathan Rank is a Professor of biology and Director of Fairfield Osborn Preserve. He is interested in ecological interactions among plants and their herbivores and pathogens, and in the adaptive significance of genetic variation in natural populations of insects. Since 1984, he has studied populations of the leaf beetle Chrysomela aeneicollis in the Sierra Nevada mountains of California, focusing first on effects of insect predators on host plant suitability, and then on population and genetic responses to thermal variation in montane populations. He has also collaborated with researchers in Europe on plant-herbivore interactions in related insects. Finally, he is interested in effects of invasive species on native ecological communities. Ongoing work in this area focuses on the invasive pathogen Phytophthera ramorum, which has spread through Sonoma County woodlands since 2000.

Research Outline: My work focuses on responses of natural populations of insects to environmental change. The leaf beetle Chrysomela aeneicollis lives in the mountains of eastern California along steep elevation gradients (2800-3450m). My collaborators and I study how thermal variability affects responses to stress in natural environments along those gradients. We focus on interactions between mitochondrial and nuclear gene products and how endosymbiont organisms may mediate adaptation to thermal stress. Summer research occurs in Bishop, California at the White Mountain Research Center.

Ravinder Sehgal, San Francisco State University

Dr. Ravinder Sehgal is a Professor of biology at San Francisco State University. His research program focuses on the biology of avian blood parasites, including avian malaria. The work encompasses many aspects of biology including molecular parasitology, ecology, evolution, medical entomology, and conservation genetics. His group studies the effects of climate change and deforestation on the spread of infectious diseases in tropical and neotropical birds. The long-term goal of the research is to identify how rapid environmental changes affect the host specificity of parasites, so as to elucidate the mechanisms that facilitate the spread of emerging infectious diseases. He has established projects in the USA and internationally; in California, Alaska, Lithuania, and Cameroon.

Research Outline: The unprecedented rate of global warming is expected to have major impacts on the emergence of infectious diseases. Over a latitudinal gradient in Alaska, from 61°N to 67°N, we collected blood samples of resident and migratory bird species and found hatch year birds and residents infected with Plasmodium as far north as 64°N, providing the first evidence that malaria transmission occurs in these arctic conditions, and raising new concerns about the effects of malaria on previously naïve host populations. Given these results, we are continuing our work studying the habitat suitability for Plasmodium under a future-warming scenario.

Nazli Yesiller, California Polytechnic State University

Dr. Nazli Yesiller is Director of the Global Waste Research Institute at CPSLO. Her background is in civil and environmental engineering emphasizing geotechnical/geoenvironmental engineering. She studies all aspects of geoenvironmental engineering: containment, remediation, beneficial reuse, and waste-to-energy. She conducts landfill engineering investigations in U.S., Canada, Australia, and Japan studying containment systems, thermal regimes, and emissions.

Research Outline: My climate change research relates to development of representative GHG inventories and mitigation strategies in waste sector. The two main study areas are i) landfill gas (contains all four types of anthropogenic GHGs)–estimation of distribution, flow, and banks; modeling and large-scale field experimental investigation of generation and emissions and ii) understanding GHG releases through disaster debris and waste stream pathways and influence on climate.

Jason Henderson, San Francisco State University

Jason Henderson is Professor of Geography & Environment at San Francisco State University. His research focuses on the 'politics of mobility' and examines how culture, politics, and economics shape urban transportation. Mitigation of transport GhG emissions fundamentally informs his work in urban transport. Henderson's most recent work is: Street Fights in Copenhagen: Bicycle and Car Politics in a Green Mobility Capital, and is based on 3 years of extensive research in Copenhagen, Denmark, which is a widely recognized leader in climate change mitigation and urban sustainability. In 2018 Henderson spent a semester as a Guest Research Professor in Heidelberg, teaching and researching mobility. His interest is in a comparative study of German and US politics of mobility and implications for climate change mitigation.

Research Outline: In addition to new research on Germany and transport, Henderson is examining the politics of "tech mobility" (driverless cars, electric cars, transportation network companies TNCs) such as Uber and Lyft, and private transit such as the commuter tech shuttles) in Silicon Valley. This is a potentially fruitful topic for comparison between Germany and the US and the interaction with climate policy.

Vivian Price, California State University, Dominguez Hills

As a Fulbright Scholar at the University of Liverpool in spring 2018, Dr. Vivian Price taught a class on Labour and Climate change and conducted research on union policies towards a green transition. She was a co-author on Mapping Just Transition(s) to a Low-Carbon World, a Report for United Nations Research Institute on Social Development for COP 24. Her chapter on Labour Unions and Fracking in the UK will be published as a chapter in *Building a sustainable future: the role of non-state actors in the green transition*. Currently, she is a Fulbright Specialist working with the University of Oslo on the attitudes of fossil fuel workers cross-nationally on their role in a just transition and has presented her work in the US, Germany, Denmark, the Netherlands, and in Norway.

Research Outline: My present research continues to analyze the attitudes of workers and union policies towards a green transition, with an emphasis on petroleum and port workers in the US in a comparative international framework. How can labor internationally learn from one another to respond to the challenges of the future of work in a low-carbon and increasingly automated and digitized society? I am also researching labor conditions and organizing in renewable energy, with an emphasis on the solar industry.

Short CVs and Research Outlines 4C, Researchers from Baden-Württemberg, July 16th 2019

Steffen Abele, University of Applied Forest Sciences, Rottenburg

Prof. Dr. Steffen Abele holds the chair of "Rural Economics" at the University of Applied Forest Sciences in Rottenburg, Germany. His research foci lie on the marketing of regional food products. In the field of climate change, Steffen Abele has conducted studies on the adoption and economic viability of renewable energy systems (biogas and agroforestry) in Ethiopia.

Research Outline: Dr. Abele will present findings on renewable energy in Ethiopia. Biogas and afforestation are generally beneficial for rural households, yet less profitable and more risky for poorer households. Thus adoption rates may be lower than desired: Climate friendly technologies are for the wealthy.

Niklas Effenberger, University of Hohenheim

Niklas Effenberger holds a M.Sc. degree in Bioeconomy from the University of Hohenheim. Since 2018, Mr. Effenberger is a staff member at the Chair of Societal Transition and Agriculture where he is involved with teaching and with research on sustainability transitions. Previously, he spent one year in the Fraunhofer IAO - Research Group on Innovative Urban Governance. From 2015 to 2017, he was affiliated with the Chair of Environmental Management at the University of Hohenheim. From 2013 to 2015 Mr. Effenberger spent two years as a research assistant at the Chair of Life-Cycle Assessment at the University of Stuttgart.

Research Outline: Nature-Based Solutions (NBS) are a promising approach to address current issues cities face due to climate change and the ongoing pressures of urbanization. My research focuses on actor-networks and institutional factors promoting or inhibiting an uptake of NBS. This also connects to the wider context of the European sustainability transitions science community.

Florian Kapmeier, Reutlingen University

Prof. Dr. Florian Kapmeier is Professor of Strategy at ESB Business School Reutlingen University. He received his doctorate from the University of Stuttgart on "Interorganisational Learning in Learning Alliances". He has strengthened his academic profile with research visits at MIT Sloan School of Management (Cambridge, USA), McGill University (Montréal, Canada), University of Lugano (Switzerland), and EmLyon Business School (Lyon, France). For his research, he links the System Dynamics methodology with empirical research on theory development and testing, focusing on organizational aspects of the understanding of complexity, increasingly addressing environmental sustainability issues for companies. He served as President of the German Chapter of the System Dynamics Society, is a member of the jury of the Dana Meadows Award of the System Dynamics Society and works closely with the American NGO Climate Interactive to raise awareness of the consequences of climate change.

Research Outline: In my research I seek to assess how to improve understanding of climate change. As research shows that showing people research doesn't work, my co-authors and I develop calibrated interactive climate policy simulations with which people can learn for themselves. Research we published recently shows that the "World Climate" simulation (https://www.climateinteractive.org/programs/world-climate/) is effective in increasing participants' knowledge of climate change science, and, even more importantly, their emotional engagement, including their sense of urgency and their desire to take action on climate in the real world.

Eugen Pissarskoi, University of Tübingen

Dr. Eugen Pissarskoi joined 2017 the departments 'Ethics and Education' and 'Nature and Sustainable Development' at the International Centre for Ethics in the Sciences and Humanities of the University of Tübingen. He is trained in philosophy and economics and received his Ph.D from the Institute for Philosophy, Free University of Berlin, with the thesis "Climate Change and Social Welfare."

Research Outline: In his research, he firstly searches for principles for decision-making in the light of deep uncertainties resulting from climate change. He analyses which ethical principles are implicitly presupposed in decision-making approaches such as resilience thinking, adaptive management, robust decision-making, etc., and he specifies versions of precautionary principle. He shall analyze land-use conflicts arising from a transformation to bioeconomy in a research project starting in October 2019. Regionally focusing on Tanzania, the project shall identify conceptions of sustainable land-use hold by local farmers, analyze their ethical justification and compare them to the visions of sustainable bioeconomy discussed in the Global North.

Marc Ringel, HfWU Nürtingen-Geislingen University

Prof. Dr. Marc Ringel teaches Energy Policy, Energy Efficiency and Environmental Economics at Nürtingen Geislingen University, Germany, and as affiliated lecturer at Université d'Aix en Provence/Marseille, France. As former official with the Directorate General "Energy" of the European Commission and with the German Federal Ministry of Economics and Energy he continues to be deeply involved in the development and economic assessment of national and European energy efficiency policy frameworks. He supports policy-oriented research for several national energy action plans and key strategic EU policy actions (rapporteur for the Integrated Energy Roadmap of Horizon 2020, Energy Efficiency Directive, Energy Roadmap 2050, EU Energy 2020 and 2030 strategies). Prof. Ringel holds a Master in Economics from Mainz University and Université d'Angers, France. His PhD thesis focused on energy policy measures to combat climate change.

Research Outline: Integrating stakeholders into long-term energy and climate polices in the EU: The "Clean Energy Package" contains legislation that recalibrates almost the total of EU energy and climate policy for 2030. We review stakeholders' acceptance of the new instruments. Increased multi-level governance, local implementation (smart cities) and social aspects such as tackling energy poverty will be key for policy success.

Volker Schneider, University of Konstanz

Prof. Volker Schneider studied political science and economics in Berlin and Paris, and obtained his PhD from the EUI in Florence (Italy), and his habilitation at the University of Mannheim. Between 1986 and 1997 he was research fellow at the Max-Planck-Institute for the Study of Societies in Cologne, Germany, and since 1997 he is professor of political science at the University of Konstanz. In 2001 he was visiting scholar at Annenberg School of Communication, Los Angeles, and in 2006 he was guest researcher at Harvard University. Since the last two decades he also was Head of Department and Dean for many years.

Research Outline: His research focuses on policy networks, governance, and climate policy. Currently he investigates German climate policy. He is a member of the international research network COMPON that investigates the influence of inter-organizational relations in climate policy using the method of social network analysis. In the webinar he will present the German policy network to demonstrate how this approach can be applied at both national and regional level.

Alexander Siegmund, Heidelberg University of Education

Prof. Dr. Alexander Siegmund is professor of Physical Geography and Geo-Education, and chair holder of the "UNESCO Chair on World Heritage and Biosphere Reserve Observation and Education" at Heidelberg University of Education as well as Honorary Professor at the University of Heidelberg. He is a founding and board member of the Heidelberg Center for the Environment (HCE) at Heidelberg University, Executive Director of the Heidelberg Center Education for Sustainable Development (ESD) at Heidelberg University of Education, and member of the Baden-Württemberg Council on Sustainable Development. He fosters the use of modern geo-technologies in environmental and sustainability research and Education for Sustainable Development (ESD). Specific field of focus are (i) climate change & climate change communication, (ii) e-learning & serious gaming on environmental issues, (iii) remote sensing & GIS, and (iv) sustainable development.

Research Outline: Questions of climate change are discussed controversially in an international context. The aim of the research should therefore be: 1.) Determine knowledge, awareness and willingness to act on climate change issues on an international and intercultural comparison; 2.) Analyze and classify causes for different attitudes to climate change; 3.) To develop concepts and design principles (Educational Design Research) for digital interactive learning modules and serious game applications to promote knowledge, awareness and action on climate change issues; 4.) Implementation and evaluation of appropriate digital interactive learning modules and serious game applications for Climate Change Communication and Education.