

## 2012 DISCCRS VII Symposium Scholars: Dissertation Citation, Current Institution and Research Interest

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**Ashfaq, Moetasim.** 2009. Future hydro-climatic changes: Role of physical processes and model biases. Purdue University (United States)  
**Currently:** Oak Ridge National Laboratory

*My research focuses on understanding the temporal and spatial scales at which components of the climate system interact. I am particularly interested in the response of multi-scale climate system processes to anthropogenic forcing, and on the development of approaches to reliably estimate future hydro-climatic change.*

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**Bolson, Jessica A.** 2010. Integrating climate information into water resource decision making in South Florida University of Miami (United States)  
**Currently:** University of Florida/ Southeast Climate Consortium

*My research focuses on various aspects of the climate water nexus. I have researched the role of integrated models, decision support tools, and seasonal climate forecasts in decision-making in a hydroclimate context. My interests also include institutional design, water governance, adaptive capacity, and policy.*

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**Butman, David E.** 2011. Lability, structure and delta 14C isotope changes in dissolved organic carbon entering coastal water of North America. Yale University (United States)  
**Currently:** Yale University

*I investigate the influence both humans and climate have on the flow of carbon between soils, streams, rivers, and the coastal environment at local and global scales. I currently use stable and radioisotopes, satellite remote sensing and the field deployment of in-situ sensors to estimate greenhouse gas fluxes from US freshwater ecosystems.*

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**Davi, Nicole K.** 2010. Reconstructed drought variability across Mongolia based on tree-ring records. Rutgers University (United States)  
**Currently:** Lamont-Doherty Earth Observatory of Columbia University  
<http://www.ldeo.columbia.edu/~ndavi/website/Home.html>

*I use tree-rings to evaluate past and present climate variability. Currently, I am evaluating forcings of drought, landscape change and other variables that can amplify climate change and vulnerability in Mongolia— a country that is especially vulnerable to climatic extremes. I also work with teachers and artist to communicate science.*

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**Durack, Paul J.** 2011. Global ocean salinity: A climate change diagnostic? University of Tasmania (Australia)  
**Currently:** Lawrence Livermore National Laboratory  
<http://www-pcmdi.llnl.gov/about/staff/Durack>

*My research has focused on assessing long-term observed changes to ocean properties in response to climate change. The key focus is the little considered salinity field, which provides an insight into the oceanic global water cycle. My current research aims to further our understanding of observed and model-simulated changes to ocean properties*

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**Godsey, Sarah E.** 2009. Understanding water and solute fluxes in diverse catchments. University of California at Berkeley (United States)  
**Currently:** Idaho State University  
<http://www.personal.psu.edu/seg19/>

*I am interested in the impact of land use and climate change on water resources, especially in mountainous and polar regions. My current work focuses on linkages between hydrology, geomorphology, hydrochemistry, and permafrost dynamics.*

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**Higgins, Meytal B.** 2009. Reconstructing marine productivity using compound-specific nitrogen isotopes. Harvard University (United States)  
**Currently:** Princeton University

*I am interested in the interplay between ocean chemistry and primary production throughout earth history and in the modern ocean. I use a combination of organic geochemistry, stable isotopes and metabolomics techniques to study how changes in nutrient availability, especially nitrogen, affect the biochemical pathways that underlie global biogeochemical cycles.*

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**Holmes, Christopher.** 2010. Multiscale models of atmospheric mercury: Bromine chemistry, air-sea exchange, and global transport  
Harvard University (United States)  
**Currently:** University of California at Irvine  
[www.ess.uci.edu/~cdholmes](http://www.ess.uci.edu/~cdholmes)

*I study the atmospheric chemistry of greenhouse gases and mercury. My research uses chemical transport models to improve decadal predictions of methane and ozone and to quantify key uncertainties in those predictions. For mercury, I use global and regional models and observations to trace mercury from emissions to ecosystems.*

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**Hughes, Sara.** 2011. Institutions and policy change in public services: The case of urban water management reform.  
University of California at Santa Barbara (United States)  
**Currently:** NCAR  
<http://www.asp.ucar.edu/pdf/postdocs/S.Hughes.php>

*My research focuses broadly on environmental politics and institutions and more specifically on the implications of urban climate change planning for equity and development goals, the use of climate science and information, and the relationship between existing policy agendas and climate change planning.*

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**Jones, Holly P.** 2010. Evaluating island recovery following invasive species removal and seabird restoration.  
Yale University (United States)  
**Currently:** Northern Illinois University  
<http://www.bios.niu.edu/jones/jones.shtml>

*I use ecosystem resilience to prioritize restoration and use geospatial information to prioritize climate change adaptation strategies. I have used meta-analysis, small-scale field experiments, ecosystem-scale natural experiments, geospatial analysis, and modeling to address these interests.*

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**Jones, Michael D.** 2010. Heroes and villains: Cultural narratives, mass opinions, and climate change.  
University of Oklahoma (United States)  
**Currently:** Virginia Tech  
<http://works.bepress.com/mjones/>

*Theoretically, my research focuses on the role of narrative in policymaking and science communication. Substantively, my current research focuses primarily on climate change, including a study of the narratives policymakers use to shape coalitions and a book detailing the role of climate change narratives in shaping public opinion.*

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**Kapnick, Sarah B.** 2011. Snowpack variability in Western North America.  
University of California at Los Angeles (United States)  
**Currently:** Princeton University and GFDL / NOAA  
[http://www.princeton.edu/aos/people/research\\_staff/kapnick/](http://www.princeton.edu/aos/people/research_staff/kapnick/)

*My research focuses on understanding the mechanisms controlling hydroclimate variability and the related water resource impacts of a changing hydrologic cycle. In my current research, I combine observations and high-resolution global coupled climate model simulations to explore the variability of precipitation, snowfall, and runoff in the present and future climate.*

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**Krause, Rachel M.** 2011. Municipal involvement in climate protection: Local decision making and policy innovation.

Indiana University (United States)

**Currently:** University of Texas at El Paso

[http://works.bepress.com/rachel\\_krause/](http://works.bepress.com/rachel_krause/)

*The overall goal of my research is to assist in the effective design, adoption, and implementation of public policies that reduce greenhouse gas emissions. Specifically, I examine municipal climate protection efforts to understand, in a generalizable manner, their content, potential impacts, and the factors that drive and inhibit their adoption.*

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**Lemoine, Derek.** 2011. Characterizing and responding to uncertainty in climate change.

University of California at Berkeley (United States)

**Currently:** University of Arizona

[www.dereklemoine.com](http://www.dereklemoine.com)

*My work advances understanding of complex systems and how to manage them in the face of deep uncertainty. I have studied policymaking in the presence of climate tipping points, various aspects of electrified vehicles and biofuels, and how to learn from climate models and paleoclimatic records.*

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**Marshall, Michael T.** 2010. Modeling evapotranspiration in sub-Saharan Africa: A tool for food security analysis.

University of California at Santa Barbara (United States)

**Currently:** United States Geological Survey

<http://chg.geog.ucsb.edu/people/michael-marshall/index.html>

*I am broadly interested in how coupled land surface-atmospheric processes impact agrarian society. I was recently awarded a Mendenhall Fellowship through the U.S.G.S. to combine ground, hyper-spatial and spectral remote sensing, and ancillary spatial data for an impact assessment of crop water productivity in the Central Valley (California).*

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**Marston, John M.** 2010. Evaluating risk, sustainability, and decision making in agricultural and land-use strategies at ancient Gordion.

University of California at Los Angeles (United States)

**Currently:** Boston University

<http://bu.academia.edu/JohnMarston>

*My research focuses on developing new methods to reconstruct human impacts on ancient environments and applying them to study both agricultural sustainability and climate-change adaptation. I direct environmental research at archaeological sites from Turkey to Egypt to explore these issues in the eastern Mediterranean from 2000 BC through today.*

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**Milman, Anita D.** 2009. Bordering on water management: Ground and wastewater in the United States - Mexico Transboundary Santa Cruz Basin.

University of California at Berkeley (United States)

**Currently:** University of Massachusetts at Amherst

<http://eco.umass.edu/people/faculty/milman-anita/>

*My research investigates climate change adaptation in the water sector. I study i) how governance systems influence adaptation in transboundary river basins, ii) how knowledge of climate risks translates into action, and iii) the relationship between climate change and hydro-conflict.*

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**Misra, Sambuddha.** 2010. Lithium isotope evolution of Cenozoic seawater.

Florida State University (United States)

**Currently:** University of Cambridge

*The primary focus of my research is reconstructing paleo-seawater acidity to provide a first order estimate of atmospheric CO<sub>2</sub> concentrations during the recent geologic. I study the chemical composition (e.g. trace elements and isotopes) of marine foraminifera (calcium carbonate secreting organism) to reconstruct changes in ocean chemistry over time.*

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**Mobley, Megan L.** 2011. An ecosystem approach to dead plant carbon over 50 years of old-field forest development.  
Duke University (United States)  
**Currently:** University of Wyoming  
[www.megmobley.com](http://www.megmobley.com)

*I am an ecosystem ecologist and biogeochemist interested in carbon and nutrient cycling and storage and the response of these ecosystem functions to management and disturbance. My dissertation research quantified the carbon budget of a managed temperate forest, while my current research investigates how water-limited ecosystems respond to nitrogen manipulations.*

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**Moore, Sean M.** 2010. The effects of community composition, landscape structure, and climate on host-pathogen interactions.  
Oregon State University (United States)  
**Currently:** National Center for Atmospheric Research

*My research focuses on the influences of weather and climate on the incidence and distribution of vector-borne diseases such as plague, Lyme disease, and dengue. I am interested in studying how climate change will interact with the human dimensions of urbanization, land use change, and other stressors to affect human health.*

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**Newton, Peter.** 2011. Opportunities for conservation and livelihoods in Amazonian extractive reserves.  
University of East Anglia (United Kingdom)  
**Currently:** University of Michigan  
<http://www.tropicalforestresearch.org/people/pnewton.aspx>

*I am interested in how tropical forest regions may be managed for successful livelihood, carbon, and conservation objectives. With CCAFS, I study the effectiveness of interventions that affect agricultural commodity production; with the World Bank, I examine the contribution of community forest management to the development of REDD+.*

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**Petrovic, Nada.** 2011. Methods for integrating models of wildfire progression with disaster response.  
University of California at Santa Barbara (United States)  
**Currently:** Columbia University  
<http://www.cred.columbia.edu/about/people/petrovic/>

*I am interested in how perceptions of environmental issues influence decisions on an individual level. My current projects examine public health as a frame for climate change communication and environmental benefits of community gardens. In the past I studied wildfire decision making from a numerical modeling perspective.*

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**Phelan, Liam P.** 2010. The relationship between anthropogenic climate change and the insurance system: Imperatives, options and reflections on theory.  
Macquarie University (Australia)  
**Currently:** University of Newcastle  
[www.newcastle.edu.au/staff/research-profile/Liam\\_Phelan/](http://www.newcastle.edu.au/staff/research-profile/Liam_Phelan/)

*My research interests are: sustainability; climate change; insurance & finance; complex adaptive systems theory; critical political economy; transdisciplinary research methodologies; and pedagogy of online education, especially fostering online students' sense of belonging to learning communities. I have expertise in: researching complex sustainability problems; conceptual development; and qualitative research methods.*

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**Polashenski, Christopher M.** 2011. Attributing change and understanding melt ponds on a seasonal ice cover.  
Dartmouth College (United States)  
**Currently:** U.S. Army Corps of Engineers (USACE-CRREL)  
[chrishpolashenski.com](http://chrishpolashenski.com)

*My research focuses on understanding the changes which are being observed in the Arctic sea ice cover and the impact of these changes on the biological and physical systems of our planet. I am a field scientist and engineer, both developing new technologies and employing existing technology to collect observations in the challenging environment of the Arctic.*

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**Pricope, Narcisa G.** 2011. Using remote sensing to create indicators of ecosystem variability in a transboundary savanna watershed in southern Africa.  
University of Florida (United States)  
**Currently:** Southern Oregon University & University of California at Santa Barbara

*My main research interests lie at the intersection between land change science, watershed science, and population geography, primarily focusing on understanding the vulnerability of different populations to environmental change in the context of transboundary water and natural resources management.*

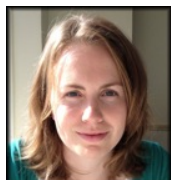
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**Renbaum-Wolff, Lindsay.** 2011. Kinetics, products, and optical property changes during the heterogeneous oxidation of organic aerosol.  
University of Georgia (United States)  
**Currently:** University of British Columbia

*My current research is aimed at understanding how the properties of atmospheric particles influence their role in climate-related processes such as their ability uptake water, act as nuclei for cloud formation, and scatter and absorb solar radiation and what effect rising temperatures and humidities will have on these processes.*

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**Ricke, Katharine L.** 2011. Characterizing impacts and implications of proposals for solar radiation management, a form of climate engineering.  
Carnegie Mellon University (United States)  
**Currently:** Carnegie Institution for Science

*My current work includes the application of physical and economic models of climate change to the problem of climate geoengineering, including large ensemble GCM modeling to explore uncertainty in regional effects, and development of game theoretic representations of potential international climate engineering coalitions.*

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**Saikawa, Eri.** 2010. Policy diffusion of emission regulations for on-road vehicles: causes and benefits for air quality.  
Princeton University (United States)  
**Currently:** Massachusetts Institute of Technology  
<http://www.mit.edu/~esaikawa>

*My main research interests are in investigating the causes and impacts of air pollution and climate change. I apply chemical transport models to understand air pollutant emissions and their impacts, and apply econometric methods to analyze economic impacts of environmental regulations. Currently I estimate emissions of non-CO2 greenhouse gases.*

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**Smith, Jordan W.** 2011. Adapting to changing environmental conditions: Mixed-methods analyses of how social capital and place-based social-psychological dependencies influence climate change resilience in Southern Appalachia.  
North Carolina State University (United States)  
**Currently:** Purdue University  
<http://web.ics.purdue.edu/~smit1547/>

*I have several interests related to the human dimensions of natural resource management. Currently, my research addresses how patterns of individuals' information seeking behavior, as well as the risks they associate with climate change, affect preferences for adaptation policies and individuals' willingness to alter personal behaviors as environmental conditions change.*

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**Steinhäuser, Karsten.** 2011. Viewing the world through a network lens.  
University of Notre Dame (United States)  
**Currently:** University of Minnesota at Twin Cities  
<http://www.umn.edu/~ksteinha>

*My research focuses on data mining and machine learning, in particular the construction and analysis of networks, time series analysis, and learning from large datasets, with applications to climate and environmental science, ecology, and sustainability. I am especially interested in climate variability, model evaluation and intercomparison, and downscaling methodologies.*

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**Terando, Adam J.** 2012. Quantifying the effects of climate change on crop yields.  
Pennsylvania State University (United States)  
**Currently:** North Carolina State University

*My research focuses on the impacts of climate change on ecosystems and agro-ecosystems and the complex human-environment relationships that drive these processes. Recent work involves quantifying uncertainty in the form of probabilistic climate projections to facilitate adaptive management and working with social/ecological models that simulate future land use changes.*

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**White-Newsome, Jalonne L.** 2011. Extreme heat and health: Understanding exposures, behaviors and vulnerability.  
University of Michigan (United States)  
**Currently:** Union of Concerned Scientists (UCS); WE ACT for Environmental Justice  
[www.ucsusa.org](http://www.ucsusa.org) and [www.weact.org](http://www.weact.org)

*Most of my research has focused on the public health impacts of extreme heat events in urban areas. Currently, I am exploring how communities are adapting, the adaptation costs, and the costs of associated health outcomes. I have a special interest in how climate change will impact environmental justice communities*

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**Xu, Xiaofeng.** 2010. Modeling methane and nitrous oxide exchanges between the atmosphere and terrestrial ecosystems over North America in the context of multifactor global change.  
Auburn University (United States)  
**Currently:** Oak Ridge National Laboratory  
<https://sites.google.com/site/xiaofengxuwebpage/>

*My research mainly focuses on land-atmosphere interaction in a framework of Earth system modeling by using a combination of field observation, earth system modeling, remote sensing and mathematical method; currently I am studying the contributions of soil microbial processes to the dynamics of Earth's climate system.*