

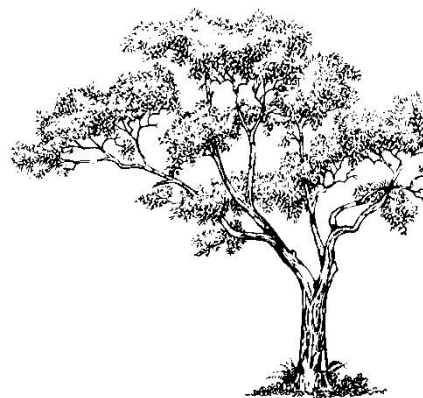
# **AERE 2016 Breckenridge**

**Association of Environmental and Resource Economists  
5<sup>th</sup> Annual Summer Conference**

**June 9-11, 2016**

**Beaver Run Resort and Conference Center  
Breckenridge, Colorado**

AERE Summer Conferences  
Excellence in academic  
programming – Collegiality in  
destinations worth visiting



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Peter Berck, University of California, Berkeley, Pre-Conference Workshop  
Patricia Champ, U.S. Forest Service, Sponsored Sessions  
John Loomis, Colorado State University, Poster Session

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University of Tennessee, Department of Economics  
University of Wisconsin - Madison, Department of Agricultural & Applied Economics  
Virginia Tech, Department of Agriculture & Applied Economics



Welcome to AERE's fifth annual summer conference! The AERE conference "tagline" is "Excellence in Academic Programming, Collegiality in Destinations Worth Visiting" – and the Breckenridge conference hits on both those points. The conference organizing committee has put together a fantastic program at a wonderful location. I expect we will all enjoy the research, friendship, and beautiful surroundings during the conference.

As always there are many people who have put hours of time and effort into making this a great event. First, thanks to Harrison Fell and Dan Kaffine, co-chairs of the conference organizing committee, and Patty Champ, Peter Berck, and John Loomis who organized the sponsored sessions, pre-conference workshop, and poster sessions respectively. These individuals have spent many hours making sure that all the components of the conference are top notch. Please take the time to thank them for their efforts.

This year's conference had the highest submission rate of all AERE summer conferences. There will be many excellent sessions including our sponsored sessions and a special Deepwater session. There will also be graduate students making their first presentations or poster talks – please make them feel welcome as well. Finally, please join me in thanking our sponsors who have contributed generously to the conference – financially and with their knowledge and ideas.

- Vic Adamowicz, AERE President

**Welcome to Breckenridge – site of the highest (9,600 feet in elevation) conference in AERE history!** This year's record-setting number of submissions has led to an excellent program with papers covering a broad range of topics in environmental and natural resource economics. We hope that this year's spectacular alpine setting will lead to lively and engaging discussions on the wide-ranging methodological and policy issues surrounding the field of environmental and resource economics. We also hope people drink water and apply sunscreen (again, 9,600 feet).

Organizing this conference is a considerable undertaking. Successfully putting on such an event would not be possible without the support of several people. We would like to thank our colleagues on the Organizing Committee – Peter Berck (pre-conference workshop), Patty Champ (sponsored sessions), and John Loomis (poster session) for their efforts in all aspects of the organizing as well as in their specific sessions. We would also like to thank Dallas Burtraw (Treasurer), Vic Adamowicz (President), Laura Taylor (President-elect), Andrew Plantinga (Past Co-Chair), and Mary Evans (Past Co-Chair) for their support and advice. In addition, we would like to particularly thank Marilyn Voigt for helping us navigate the many complex and time-consuming aspects required to put this program together. Finally, we thank the AERE Board for the opportunity to organize the conference and to host the 5<sup>th</sup> Annual AERE Summer Conference.

- Harrison Fell and Daniel Kaffine  
Co-Chairs of the 5th Annual AERE Summer Conference 2016



***AERE GRATEFULLY ACKNOWLEDGES  
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University of Colorado Boulder



## Keynote Speaker: Professor Catherine Wolfram

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Catherine Wolfram is the Cora Jane Flood Professor of Business Administration at the Haas School of Business at the University of California, Berkeley.

Professor Wolfram has been studying the energy industry for over twenty years and has published widely on topics ranging from privatization and restructuring in the US and UK, to the impact of carbon mitigation policies on the energy industry, to energy use in the developing world. Two of Professor Wolfram's seminal publications on the privatization of the electricity industry in the UK together have been cited over 1200 times.

As Faculty Director of the Energy Institute at Haas, Professor Wolfram works with faculty, students, and a wide network of partners to bridge the gap between cutting-edge economic and scientific energy research and the marketplace.

Together with her colleagues, she has helped establish UC Berkeley as the pre-eminent global institution in the field of energy economics. Professor Wolfram has overseen several multi-year, multi-million dollar research grants with both government and non-profit funding.

As Faculty Director of The E2e Project, Professor Wolfram has worked with colleagues at the Massachusetts Institute of Technology and the University of Chicago to lead a network of economists, engineers, and behavioral scientists working to better understand the energy efficiency gap. E2e researchers use state-of-the-art evaluation strategies, including randomized experiments, to enhance the impact of energy efficiency initiatives.

As an affiliate of the Center for Effective Global Action (CEGA) and Faculty Director of the USAID-funded Development Impact Lab (DIL) at the University of California, Berkeley, Professor Wolfram promotes rigorous inter-disciplinary research in a field where engineers and social scientists have traditionally worked in isolation. She uses cutting-edge tools and methods—including randomized controlled trials (RCTs), mobile data collection, satellite imagery, and sensors—to study how people in low-income countries make choices about energy, and how their use of electricity affects economic and social outcomes.

In addition, Professor Wolfram was a Member of the National Academy of Sciences Committee on the Effects of Provisions in the Internal Revenue Code on Greenhouse Gas Emissions, and is a Faculty Scientist at the Environmental Energy Technologies Division of the Lawrence Berkeley National Laboratory. She served on the Board of Directors for the Association of Environmental and Resource Economists from 2009-2011, and also serves on the Board of Editors at The Energy Journal. She also testifies before government bodies to provide valuable input on energy policy.

Dr. Wolfram is a Research Associate at the National Bureau of Economic Research. She received an AB in Economics from Harvard University and a PhD in Economics from MIT. Before joining the faculty at UC Berkeley, she was an assistant professor of economics at Harvard University.

### **Keynote Address: “Effective Carbon Mitigation Strategies”**

Saturday, June 11, 2016 at 1:45pm in Peaks 4,5

## Schedule at a Glance

Thursday, June 9, 2016											
7:30-9:00am	Workshop Check-in and Continental Breakfast, Imperial Ballroom, 4 <sup>th</sup> Floor										
9:00am-5:00pm	Pre-conference Workshop, <i>Big Data Analytics in Environmental and Resource Economics</i> , with Matthew Harding and Qing Wu, Imperial Ballroom, 4 <sup>th</sup> Floor										
5:30-8:00pm	Conference Registration, Coppertop III, 3 <sup>rd</sup> Floor										
6:30-8:30pm	Welcome Reception, Coppertop III, 3 <sup>rd</sup> Floor										
Friday, June 10, 2016											
7:00am-3:30pm	Conference Registration / Exhibits, Colorado Ballroom, 3 <sup>rd</sup> Floor Foyer										
7:00-8:45am	Continental Breakfast, Colorado Ballroom, Peaks 4,5, 3 <sup>rd</sup> Floor										
8:45-10:15am	Parallel Session 1										
	Coppertop II	Coppertop III	Peak 1	Peak 2	Peak 3	Peaks 6,7,8	Peak 9	Peak 10	Peak 11	Peak 12	
	Sponsored Session 1 - Adaptation to Climate: Agriculture and Land-use	Shale, Oil, and Gas I	Ecosystems I	Recreation Modeling	Valuation: Property Value I	Climate Policy: Integrated Assessment Models	Water I	Experiments I	Climate Change: Weather I	Electricity I	
10:15-10:30am	Break, Colorado Ballroom, 3 <sup>rd</sup> Floor Foyer										
10:30am-12:00pm	Parallel Session 2										
	Coppertop II	Coppertop III	Peak 1	Peak 2	Peak 3	Peaks 6,7,8	Peak 9	Peak 10	Peak 11	Peak 12	
	Sponsored Session 2 - Adaptation to Climate: Weather and Migration	Shale, Oil, and Gas II	Climate Change: Trade and Leakage	Resources and Common Property	Political Economy	Regulatory Enforcement I	Valuation: Methods and Application	Developing Countries I	Ecosystems II	Electricity II	
12:00-12:15pm	Break										
12:15-1:45pm	Boxed Lunch, Colorado Ballroom, Peaks 4,5, 3 <sup>rd</sup> Floor										
12:15-1:45pm	Poster Session, Colorado Ballroom, 3 <sup>rd</sup> Floor, South Foyer										
1:00-5:15pm	Special Session, <i>The 2010 Gulf of Mexico Oil Spill: Estimating the Economic Losses</i> , Imperial Ballroom, 4 <sup>th</sup> Floor										

1:45-3:15pm	Parallel Session 3										
	Coppertop II	Coppertop III	Peak 1	Peak 2	Peak 3	Peaks 6,7,8	Peak 9	Peak 10	Peak 11	Peak 12	
	Leakage and Competitive-ness in Climate Change Policy	Shale, Oil, and Gas III	No session	Fisheries I	Energy Economics	Climate Change: Weather II	Transportation I	Incidence and Distributional Effects	Environmental Regulation and Labor Demand - Research using Microdata	Air Pollution I	
3:15-3:30pm	Break, Colorado Ballroom, 3 <sup>rd</sup> Floor Foyer										
3:30-5:00pm	Parallel Session 4										
	Coppertop II	Coppertop III	Peak 1	Peak 2	Peak 3	Peaks 6,7,8	Peak 9	Peak 10	Peak 11	Peak 12	
	Biofuels	Energy Efficiency I	No session	Climate Change: Assessing the Impacts	Carbon Offsets	Regulating Firms	Experiments II	Land Use	Fisheries II	Market Mechanisms	
5:30-6:30pm	Cocktail Hour Cash Bar Meet-up, Colorado Ballroom, Peaks 4,5, 3 <sup>rd</sup> Floor										
5:30-8:30pm	AERE Board Meeting (invitation only), Mercury Boardroom, Building 4, Level G										
	Saturday June 11, 2016										
7:30am-2:45pm	Conference Registration / Exhibits, Colorado Ballroom, 3 <sup>rd</sup> Floor Foyer										
7:30-9:00am	Continental Breakfast, Colorado Ballroom, Peaks 4,5, 3 <sup>rd</sup> Floor Foyer										
9:00-10:30am	Parallel Session 5										
	Coppertop II	Coppertop III	Peak 1	Peak 2	Peak 3	Peaks 6,7,8	Peak 9	Peak 10	Peak 11	Peak 12	
	Sponsored Session 3 - Behavioral Economics: Housing and Energy	Air Pollution II	Forestry: Deforestation	Valuation: Property Value II	Agriculture I	Environmental Agreements	Resource Development and Extraction	Water II	Electricity III	Regulatory Enforcement II	
10:30-10:45am	Break, Colorado Ballroom, 3 <sup>rd</sup> Floor Foyer										

10:45am-12:15pm	Parallel Session 6										
	Coppertop II	Coppertop III	Peak 1	Peak 2	Peak 3	Peaks 6,7,8	Peak 9	Peak 10	Peak 11	Peak 12	
	Sponsored Session 4 - Behavioral Economics: Water and Energy	Trade	Agriculture II	Valuation: Ecosystems	Climate Change: Weather III	Water III	Transportation II	Forestry: Management	Valuation: Hedonic	Electricity IV	
	Break										
	Lunch, Colorado Ballroom, Peaks 4,5, 3 <sup>rd</sup> Floor										
12:15-12:30pm											
12:30-1:00pm											
1:00-1:45pm	AERE Awards Program, Colorado Ballroom, Peaks 4,5, 3 <sup>rd</sup> Floor										
1:45-2:30pm	Keynote Address by Catherine Wolfram, <i>Effective Carbon Mitigation Strategies</i> , Colorado Ballroom, Peaks 4,5, 3 <sup>rd</sup> Floor										
2:30-2:45pm	Break										
2:45-4:15pm	Parallel Session 7										
	Coppertop II	Coppertop III	Peak 1	Peak 2	Peak 3	Peaks 6,7,8	Peak 9	Peak 10	Peak 11	Peak 12	
	Behavioral Economics	Transportation III	Water IV	Climate Policy: Technical Change	Developing Countries II	Valuation: Property Value III	Intertemporal Dynamics	Natural Disasters	Air Pollution III	Energy Efficiency II	

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### Information on General Sessions:

General Sessions are 90 minutes each and typically include 4 papers, to be presented in the order they appear in the program. There are no discussants in General Sessions. Each presenter will have 15-18 minutes for his/her presentation, followed by 2-4 minutes of audience questions and answers (Q&A). Each paper (presentation and Q&A) is allocated no more than 22 minutes, which will be strictly enforced by the session chair. This will enable attendees to move from session to session.

### Information on Sponsored Sessions:

Sponsored Sessions are 90 minutes each and include 3 papers and discussants, to be presented in the order they appear in the program. Each presenter will have 15 minutes for his/her presentation, followed by 8 minutes for the discussant and 7 minutes for audience questions and answers (Q&A). Each paper (presentation, discussant, and Q&A) is allocated no more than 30 minutes, which will be strictly enforced by the session chair.

### AERE Press Policy:

Members of the Press are welcome to register for the conference—credentials should be presented at Registration. Press are expected to follow rules of academic conference decorum. Q & A periods follow paper presentations in each session and time limits are managed by the assigned Session Chair.

## THURSDAY 9TH JUNE 2016

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07:30 - 09:00	<b>WORKSHOP CHECK-IN AND CONTINENTAL BREAKFAST</b>	Imperial Ballroom
09:00 - 05:00	<b>PRE-CONFERENCE WORKSHOP BIG DATA IN ENVIRONMENTAL AND RESOURCE ECONOMICS</b> Matthew Harding, Duke University Qing Wu, Google	Imperial Ballroom
05:30 - 08:00	<b>REGISTRATION</b>	Room Coppertop III
06:30 - 08:30	<b>WELCOME RECEPTION</b>	Room Coppertop III

## FRIDAY 10TH JUNE 2016

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07:00 - 03:30	<b>REGISTRATION/EXHIBITS</b>	Third Floor Foyer
07:00 - 08:45	<b>CONTINENTAL BREAKFAST</b>	Room Peaks 4,5
08:45 - 10:15	<b>PARALLEL PAPERS SESSION 1</b>	
08:45 - 10:15	<b>CLIMATE POLICY: INTEGRATED ASSESSMENT MODELS</b> Chairperson: Ivan Rudik, Iowa State University	Room Peaks 6,7,8
	<b>SOCIAL DISCOUNTING IN GENERAL EQUILIBRIUM</b> Lint Barrage, Brown University	
	<b>AN ASSESSMENT OF THE IMPACT OF CLIMATE CHANGE ON THE INSURANCE MARKET: GLOBAL AND LOCAL ANALYSES</b> Mordechai Shechter, University of Haifa	



Co-Author(s): Ofira Ayalon, University of Haifa, Ayelet Davidovitch,  
University of Haifa and Ruslana Palatnik, University of Haifa

**NON-CONJUGATE LEARNING IN DYNAMIC STOCHASTIC MODELS:  
LEARNING THE CLIMATE SENSITIVITY**

Ivan Rudik, Iowa State University

Co-Author(s): Derek Lemoine, University of Arizona and Max Rosenthal,  
University of Arizona

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08:45 - 10:15

**WATER I**

Room Peak 9

Chairperson: Jacob LaRiviere, Microsoft Economics

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**THE WELFARE CONSEQUENCES OF THE 2015 CALIFORNIA  
DROUGHT MANDATE: EVIDENCE FROM NEW RESULTS ON  
MONTHLY WATER DEMAND**

Mehdi Nemati, University of Kentucky

Co-Author(s): Steven Buck, University of Kentucky, Stephen Hamilton,  
California Polytechnic State University and David Sunding, University of  
California, Berkeley

**DOWN, DOWN, UNDERGROUND: A COMPARISON OF CORRELATED  
AND UNCORRELATED RANDOM PARAMETERS LOGIT MODELS IN  
ESTIMATING PREFERENCES FOR WATER UTILITY  
INFRASTRUCTURE INVESTMENT**

Jennifer Thacher, University of New Mexico

Co-Author(s): Heidi Pitts, New Mexico Public Regulation Commission

**PUTTING PRICES INTO CONTEXT: HOW DO WEATHER AND POLICY-  
RELATED EVENTS IMPACT EFFECTIVENESS OF INCREASES IN THE  
MARGINAL PRICE OF WATER**

Janine Stone, California State University, Chico

Co-Author(s): Marco Costanigro, Colorado State University and Christopher  
Goemans, Colorado State University

**THESE ARE THE BREAKS: CAUSAL IMPACTS OF WATER  
INFRASTRUCTURE RELIABILITY ON TRAFFIC CONGESTION**

Jacob LaRiviere, Microsoft Economics

Co-Author(s): Casey Wichman, Resources for the Future

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08:45 - 10:15

**CLIMATE CHANGE: WEATHER I**

Room Peak 11

Chairperson: Maximilian Auffhammer, University of California,  
Berkeley

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**WEATHER AND WATER CONSUMPTION: EVIDENCE FROM  
CALIFORNIA TO GUIDE RESIDENTIAL WATER AND ENERGY  
CONSERVATION**

Steven Buck, University of Kentucky

Co-Author(s): Maximilian Auffhammer, University of California, Berkeley

**WEATHER INDEX INSURANCE: A STRATEGY TO ENABLE  
PRODUCTIVE RESOURCE INVESTMENTS BY SMALLHOLDER  
FARMERS FACING CLIMATE RISK?**

Geoffrey McCarney, University of Ottawa

Co-Author(s): Daniel Osgood, International Research Institute for Climate and Society (IRI)

**WELFARE EFFECTS OF CLIMATE CHANGE IMPACTS ON THE AGRICULTURAL SECTOR: EXPLORING MULTIPLE MARGINS OF ADAPTATION TO YIELD SHOCKS**

Frances Moore, University of California, Berkeley

Co-Author(s): Uris Baldos, Purdue University, Delavane Diaz, Electric Power Research Institute and Thomas Hertel, Purdue University

**CLIMATE CHANGE HAS SEVERE IMPACT ON FREQUENCY AND INTENSITY OF PEAK ELECTRICITY DEMAND ACROSS THE US**

Maximilian Auffhammer, University of California, Berkeley

Co-Author(s): Patrick Baylis, University of California, Berkeley and Catherine Hausman, University of Michigan

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08:45 - 10:15

**EXPERIMENTS I**

Room Peak 10

Chairperson: Sarah Jacobson, Williams College

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**RISK INTERDEPENDENCY, SOCIAL NORMS, AND WILDFIRE MITIGATION BEHAVIORS**

Katherine Dickinson, University of Colorado Boulder

Co-Author(s): Hannah Brenkert-Smith, University of Colorado Boulder, Nicholas Flores, University of Colorado Boulder and Gregory Madonia, University of Colorado Boulder

**FORMULATING AND TESTING A NEW CONSERVATION AUCTION MECHANISM IN AN EXPERIMENTAL SETTING**

Steven Otto, Cornell University

Co-Author(s): David Just, Cornell University, Gregory Poe, Cornell University and William Schulze, Cornell University

**POLICY INSTRUMENT CHOICE WHEN MARGINAL DAMAGES ARE UNCERTAIN: THEORY AND EVIDENCE FROM A LABORATORY EXPERIMENT**

David Heres, Centro de Investigacion y Docencia Economicas

Co-Author(s): C.-Y. Cynthia Lin Lawell, University of California, Davis

**(IM)PATIENCE BY PROXY: MAKING INTERTEMPORAL DECISIONS FOR OTHERS**

Sarah Jacobson, Williams College

Co-Author(s): Angela de Oliveira, University of Massachusetts Amherst

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08:45 - 10:15

**SHALE, OIL, AND GAS I**

Room Coppertop III

Chairperson: Hendrik Wolff, Simon Fraser University

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**THE EFFECTS OF THE NATURAL GAS AND OIL BOOM ON WATER USE IN THE U.S.**

Minhong Xu, University of Illinois, Urbana-Champaign

Co-Author(s): Madhu Khanna, University of Illinois, Urbana-Champaign and Yilan Xu, University of Illinois, Urbana-Champaign

**LAND USE CHANGE AND UNCONVENTIONAL OIL AND GAS DEVELOPMENT**

Yusuke Kuwayama, Resources for the Future  
Co-Author(s): Timothy Fitzgerald, Texas Tech University, Yusuke Kuwayama, Resources for the Future, Sheila Olmstead, University of Texas at Austin and Alexandra Thompson, Resources for the Future

**UNCONVENTIONAL OIL AND GAS DEVELOPMENT, NEIGHBORHOOD CHOICE, AND EXTERNALITIES**

Chrystie Burr, University of Colorado Boulder  
Co-Author(s): Kathleen Nosal, University of Mannheim

**ESTIMATING INDIRECT ENVIRONMENTAL BENEFITS: FRACKING, COAL, AND AIR POLLUTION**

Hendrik Wolff, Simon Fraser University  
Co-Author(s): Reid Johnsen, University of California, Berkeley and Jacob LaRiviere, Microsoft Economics

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08:45 - 10:15

**RECREATION MODELING**

Room Peak 2

Chairperson: Steven Dundas, Oregon State University

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**COMBINING REVEALED AND STATED PREFERENCE DATA FOR VALUING RECREATION USE: A CASE STUDY FOR THE SAN JACINTO WILDERNESS**

Jose Sanchez, USDA Forest Service  
Co-Author(s): Kenneth Baerenklau, University of California, Riverside and Armando González-Cabán, USDA Forest Service

**INTERTEMPORAL SUBSTITUTION AND THE VALUE OF LEISURE TIME: EVIDENCE FROM RECREATIONAL ANGLERS IN THE GULF OF MEXICO**

Patrick Lloyd-Smith, University of Alberta, Edmonton  
Co-Author(s): Joshua Abbott, Arizona State University, Wiktor Adamowicz, University of Alberta and Daniel Willard, Environmental Defense Fund

**MODEL SELECTION IN RECREATION MODELS**

Yongjie Ji, Iowa State University  
Co-Author(s): Hocheol Jeon, Iowa State University and Catherine Kling, Iowa State University

**WEATHER EFFECTS ON THE DEMAND FOR COASTAL RECREATIONAL FISHING: IMPLICATIONS FOR A CHANGING CLIMATE**

Steven Dundas, Oregon State University  
Co-Author(s): Roger von Haefen, North Carolina State University

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08:45 - 10:15

**ECOSYSTEMS I**

Room Peak 1

Chairperson: Emi Uchida, University of Rhode Island

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**SANCTIONS AND COOPERATION IN COLLECTIVE PAYMENTS FOR ECOSYSTEM SERVICES (PES) PROGRAMS**

David Kaczan, Duke University

Co-Author(s): Alex Pfaff, Duke University, Luz Rodriguez, Duke University and Elizabeth Shapiro, Duke University

**CAPTIVE BREEDING OF ENDANGERED SPECIES: ANOTHER PERVERSE INCENTIVES STORY**

Richard Woodward, Texas A&M University

Co-Author(s): Elizabeth A. Marchio, Texas A&M University, Kendra M. Williamson, Texas A&M University and Constance Woodman, Texas A&M University

**IMPLICATIONS OF MISSING BASELINES FOR ESTIMATING THE IMPACTS OF PROTECTED AREAS.**

Merlin Hanauer, Sonoma State University

Co-Author(s): Paul Ferraro, Johns Hopkins University

**LONG-TERM ECONOMIC EFFECTS OF PAYMENTS FOR ENVIRONMENTAL SERVICE SCHEME: EVIDENCE FROM RURAL CHINA**

Emi Uchida, University of Rhode Island

Co-Author(s): Aya Suzuki, University of Tokyo, Chengliang Wu, Beijing Forestry University and Xiaojun Yang, Peking University

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08:45 - 10:15

**SPONSORED SESSION 1 - ADAPTATION TO CLIMATE: AGRICULTURE AND LAND USE**

Room Coppertop II

Chairperson: Travis Warziniack, USDA Forest Service

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**ESTIMATING LAND-USE ADAPTATION TO CLIMATE CHANGE IN THE UNITED STATES**

Michael McWilliams, University of Michigan

Co-Author(s): Michael Moore, University of Michigan

Discussant: Andrew Plantinga, University of California, Santa Barbara

**GOVERNMENT PROGRAMS, MORAL HAZARD, AND LAND-USE ADAPTATION TO WEATHER RISK IN THE U.S. MIDWEST**

Hsing-Hsiang Huang, University of Michigan

Co-Author(s): Michael Moore, University of Michigan

Discussant: Jeremy Weber, University of Pittsburgh

**CLIMATE, INSURANCE, AND INNOVATION: THE CASE OF THE U.S. AGRICULTURE**

Ruiqing Miao, Auburn University

Discussant: Jason Murray, National Oceanic and Atmospheric Administration

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08:45 - 10:15

**ELECTRICITY I**

Room Peak 12

Chairperson: Elaine Frey, California State University, Long Beach

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**POWER FROM THE PEOPLE: OPPORTUNITY COST AND INCOME FUNGIBILITY IN SOLAR HOMES**

Andrea La Nauze, University of Melbourne

**WHAT IS GAINED BY SPATIALLY DIFFERENTIATING SOLAR SUBSIDIES?**

Anatolii Kokoza, University of Arizona

**THE EFFECT OF ELECTRICITY PRICES ON RESIDENTIAL SOLAR PHOTOVOLTAIC PANEL ADOPTION: FUKUSHIMA AS A NATURAL EXPERIMENT**

Takahiko Kiso, University of Aberdeen

Co-Author(s): Yosuke Arino, Keio University and Ron Chan, University of Manchester

**THE EFFECTS OF CALIFORNIA SOLAR INITIATIVE REBATES ON THE ADOPTION OF SOLAR ENERGY**

Elaine Frey, California State University, Long Beach

Co-Author(s): Saba Mojtahedi, California State University, Long Beach

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08:45 - 10:15

**VALUATION: PROPERTY VALUE I**

Room Peak 3

Chairperson: Ben Gilbert, University of Wyoming

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**VOTING WITH FEET AND VOTING WITH VOTES: USING HOUSING PRICES AND REFERENDA VOTING TO ESTIMATE THE NET VALUE OF OPEN SPACE CONSERVATION**

Corey Lang, University of Rhode Island

**ARE LAND VALUES RELATED TO AMBIENT AIR POLLUTION LEVELS? HEDONIC EVIDENCE FROM MEXICO CITY**

Lopamudra Chakraborti, Centro de Investigacion y Docencia Economicas

Co-Author(s): David Heres, Centro de Investigacion y Docencia Economicas and Danae Hernandez, Centro de Investigacion y Docencia Economicas

**PIPELINE INCIDENTS AND LOCAL AVERSION TO INFRASTRUCTURE EXPANSION**

Rich Sweeney, Boston College

Co-Author(s): Evan Herrnsstadt, Harvard University

**SOCIAL IMAGE, SIGNALING, AND SORTING: EVIDENCE FROM A DISCRETE CHOICE EXPERIMENT WITH SOLAR HOMES**

Ben Gilbert, University of Wyoming

Co-Author(s): Nicholas Gorman, University of Wyoming

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10:15 - 10:30

**BREAK**

Third Floor Foyer

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10:30 - 12:00

**PARALLEL PAPERS SESSION 2**

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10:30 - 12:00

**POLITICAL ECONOMY**

Room Peak 3

Chairperson: Gal Hochman, Rutgers University

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**A LEADERSHIP CURSE? OIL SHOCKS AND THE SELECTION OF NATIONAL LEADERS**

Kodjovi Eklou, Universite de Sherbrooke

**OWNERSHIP RIGHTS VERSUS ACCESS RIGHTS ALLOCATION TO CRITICAL RESOURCES: AN EMPIRICAL STUDY OF THE ECONOMIC IMPACT OF CHANGES IN OIL GOVERNANCE**

Mohammad Kemal, Colorado School of Mines

**THE POLITICAL ECONOMY OF EMBODIED TECHNOLOGIES**

Gal Hochman, Rutgers University

Co-Author(s): David Zilberman, University of California, Berkeley

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10:30 - 12:00

**SHALE, OIL, AND GAS II**

Room Coppertop III

Chairperson: Timothy Fitzgerald, Texas Tech University

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**ASYMMETRIC INFORMATION, ROYALTY DISTORTIONS, AND DRILLING DEADLINES: UNDERSTANDING OIL AND GAS LEASE CONTRACTS**

Evan Herrnschmidt, Harvard University

Co-Author(s): Ryan Kellogg, University of Michigan and Eric Lewis, U.S. Department of Justice

**THE TAX TREATMENT OF OIL AND GAS PRODUCTION IN THE UNITED STATES: ASSESSING THE OPTIONS**

Gilbert Metcalf, Tufts University

**WHEN EXTERNALITIES ARE TAXED: THE EFFECTS AND INCIDENCE OF PENNSYLVANIA'S IMPACT FEE ON SHALE GAS WELLS**

Katie Jo Black, University of Pittsburgh

Co-Author(s): Shawn McCoy, University of Pittsburgh and Jeremy Weber, University of Pittsburgh

**REGIONAL WINDFALLS OR BEVERLY HILLBILLIES? LOCAL AND ABSENTEE OWNERSHIP OF OIL AND GAS ROYALTIES**

Timothy Fitzgerald, Texas Tech University

Co-Author(s): Jason Brown, Federal Reserve Bank of Kansas City, James Sears, Montana State University and Jeremy Weber, University of Pittsburgh

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10:30 - 12:00

**ECOSYSTEMS II**

Room Peak 11

Chairperson: Michael Springborn, University of California, Davis

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**ADAPTIVE RESISTANCE MANAGEMENT WITH UNCERTAIN FITNESS COSTS**

Zachary Brown, North Carolina State University

Co-Author(s): Hyeongyul Roh, North Carolina State University

**SPATIAL-DYNAMIC MANAGEMENT OF STOCHASTIC SPECIES INVASIONS: SPATIAL-DYNAMIC INTERACTIONS, ECOLOGICAL CHARACTERISTICS OF INVASIONS, AND SOLUTION METHODS**

Kim Hall, Oregon State University

Co-Author(s): Heidi J Albers, University of Wyoming, Tom Dietterich,



Oregon State University and Majid Alkaee Taleghan, Oregon State University

**ESTIMATING THE COST OF INVASIVE SPECIES CONTROL**

Sunny Jardine, University of Delaware

Co-Author(s): James Sanchirico, University of California, Davis

**THE HITCHHIKER'S GUIDE TO THE GREENERY: ESTIMATING DYNAMICS OF 150 YEARS OF TRADE-DRIVEN NON-NATIVE SPECIES INTRODUCTIONS VIA PLANT MATERIAL**

Michael Springborn, University of California, Davis

Co-Author(s): Andrew Liebhold, USDA Forest Service and Matthew MacLachlan, USDA ERS

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10:30 - 12:00

**CLIMATE POLICY: TRADE AND LEAKAGE**

Room Peak 1

Chairperson: Jevan Cherniwchan, University of Alberta

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**CAP(-TURE) AND TRADE: HOW MULTINATIONAL FIRMS CAPTURE ECONOMIC RENTS THROUGH ENVIRONMENTAL REGULATIONS**

Sanjay Patnaik, George Washington University

**THE ELUSIVE QUEST FOR CARBON LEAKAGE: MULTINATIONAL CORPORATIONS AND THE EU-ETS**

Michael Themann, Rheinisch-Westfaelisches Institut fuer Wirtschaftsforschung - Berlin

Co-Author(s): Nils aus dem Moore, Rheinisch-Westfaelisches Institut fuer Wirtschaftsforschung - Berlin and Philipp Grosskurth, Rheinisch-Westfaelisches Institut fuer Wirtschaftsforschung - Berlin

**NO CLEANER THAN THE REST: SUPPLYING FOREIGN FIRMS YIELDS NO ENVIRONMENTAL GAIN**

Paul Stroik, University of California, Irvine

**A "NEW TRADE" THEORY OF TRANSBOUNDARY POLLUTION**

Jevan Cherniwchan, University of Alberta

Co-Author(s): Liang Chen, Wuhan University

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10:30 - 12:00

**RESOURCES AND COMMON PROPERTY**

Room Peak 2

Chairperson: Christopher Costello, University of California, Santa Barbara

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**CREDIT AND NATURAL RESOURCE MANAGEMENT: A QUASI-EXPERIMENT FROM A RURAL CREDIT PROGRAM IN INNER MONGOLIA, CHINA**

Brian Robinson, McGill University

**ECONOMIC INCENTIVES AND CROWDING-IN SOCIAL NORMS IN A GROUNDWATER COMMONS**

Steven M. Smith, Haverford College

**PUBLIC CONTROL OF RATIONAL AND UNPREDICTABLE EPIDEMICS**

Charles Sims, University of Tennessee

Co-Author(s): David Finnoff, University of Wyoming and Suzanne O'Regan,  
University of Tennessee

**PROPERTY RIGHTS, REGULATORY CAPTURE, AND EXPLOITATION  
OF NATURAL RESOURCES**

Christopher Costello, University of California, Santa Barbara

Co-Author(s): Corbett Grainger, University of Wisconsin - Madison

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10:30 - 12:00

**REGULATORY ENFORCEMENT I**

Room Peaks 6,7,8

Chairperson: Jay Shimshack, University of Virginia

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**GREENER CARS OR GREENER DRIVERS? HOW CARBON AND FUEL  
TAXES INFLUENCE THE CHOICE AND USE OF CARS.**

Sumeet Gulati, University of British Columbia

Co-Author(s): Werner Antweiler, University of British Columbia

**ENVIRONMENTAL EFFECTS OF ANTIDUMPING TARIFFS: EVIDENCE  
FROM SOLAR PHOTOVOLTAICS**

Todd Gerarden, Harvard University

**DO GLOBAL BUSINESSES THAT JOIN VOLUNTARY CLIMATE  
INITIATIVES EMIT LESS CARBON? EXPLAINING FIRM  
PARTICIPATION AND CARBON EMISSIONS BY INTERNAL FIRM-  
LEVEL FACTORS AND DYNAMICS**

Lily Hsueh, Arizona State University

**DOES MANDATORY LABELING OF OUTFALL POINTS INFLUENCE  
POLLUTION AND COMPLIANCE? EVIDENCE FROM OHIO**

Jay Shimshack, University of Virginia

Co-Author(s): Xian Liu, Indiana University-Purdue University - Indianapolis

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10:30 - 12:00

**SPONSORED SESSION 2 - ADAPTATION TO CLIMATE:  
WEATHER AND MIGRATION**

Room Coppertop II

Chairperson: Jason Murray, National Oceanic and Atmospheric  
Administration

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**MODELLING EQUILIBRIUM RESPONSES TO CLIMATE-INDUCED  
MIGRATION**

Sul-Ki Lee, Colorado School of Mines

Co-Author(s): Jared Carbone, Colorado School of Mines

Discussant: Daniel Phaneuf, University of Wisconsin-Madison

**AGRICULTURAL ADAPTATION TO DISASTER THROUGH LAND  
RENTAL MARKET: EVIDENCE FROM BANGLADESH**

Shaikh Eskander, London School of Economics

Co-Author(s): Edward Barbier, University of Wyoming

Discussant: Katherine Dickinson, University of Colorado Boulder

**THE IMPACT OF ADAPTATION ON PRICE VS. QUANTITY  
INSTRUMENTS**

Tamara Sheldon, University of South Carolina

Co-Author(s): Stephie Fried, Carleton College

Discussant: Travis Warziniack, USDA Forest Service

10:30 - 12:00	<b>ELECTRICITY II</b> Chairperson: Shaun McRae, University of Michigan	Room Peak 12
	<b>MEASURING SPLIT INCENTIVES IN COMMERCIAL ELECTRICITY USAGE</b> Maya Papineau, Carleton University Co-Author(s): Katrina Jessoe, University of California, Davis and David Rapson, University of California, Davis	
	<b>LOSS AVERSION, TEMPORAL FRAMING, AND HOUSEHOLD ENERGY DECISIONS</b> Carrie Gill, University of Rhode Island Co-Author(s): Stephen Atlas, University of Rhode Island	
	<b>PRICE PERCEPTION AND ELECTRICITY DEMAND WITH NONLINEAR TARIFFS</b> Shaun McRae, University of Michigan Co-Author(s): Robyn Meeks, University of Michigan	
10:30 - 12:00	<b>DEVELOPING COUNTRIES I</b> Chairperson: Heidi J Albers, University of Wyoming	Room Peak 10
	<b>COLLECTIVE INCENTIVES INSTITUTIONS IN REGULATING SMALL-SCALE GOLD MINING: A FIELD-LAB EXPERIMENT ON CONDITIONAL COOPERATION, COMPLIANCE AND FAIRNESS UNDER GROUP REWARDS</b> Luz Rodriguez, Duke University Co-Author(s): Alexander Pfaff, Duke University and Maria Alejandra Velez, Universidad de los Andes	
	<b>THE COST OF CONSERVATION IN DEVELOPING COUNTRIES: SATELLITE EVIDENCE FROM CHINA'S FARMLAND PROTECTION PROGRAM</b> Peter Christensen, University of Illinois, Urbana-Champaign	
	<b>THE VALUE OF ACTING LOCAL: MICRO-INSTITUTIONS AND ADOPTION OF AN ENVIRONMENTAL HEALTH-IMPROVING TECHNOLOGY</b> Marc Jeuland, Duke University Co-Author(s): Subhrendu Pattanayak, Duke University and Faraz Usmani, Duke University	
	<b>MARINE PROTECTED AREAS IN LOW-INCOME COUNTRIES: LABOR ALLOCATION, LOCATION DECISIONS, AND INCOMPLETE ENFORCEMENT</b> Heidi J Albers, University of Wyoming Co-Author(s): Roger Madrigal, CATIE, Louis Preonas, University of California, Berkeley and Elizabeth JZ Robinson, University of Reading	
10:30 - 12:00	<b>VALUATION: METHODS AND APPLICATION</b> Chairperson: Alan Krupnick, Resources for the Future	Room Peak 9

**ALTERNATIVE VALUE ELICITATION QUESTIONS IN CONTINGENT VALUATION: A NEW HOPE**

Christian Vossler, University of Tennessee

Co-Author(s): J. Scott Holladay, University of Tennessee

**PRICE PREMIA FOR USDA ORGANIC CERTIFIED GROCERY ITEMS AND NUTRITIONAL QUALITY**

Tyler Mangin, University of Colorado Boulder

**ESTIMATING TOTAL ECONOMIC VALUE OF THE NATIONAL PARK SYSTEM USING CHOICE EXPERIMENTS: RANK ORDERED LOGIT MODELS AND RANKING A MORE REPRESENTATIVE SAMPLE**

John Loomis, Colorado State University

Co-Author(s): Linda Bilmes, Harvard University and Michelle Haefele, Colorado State University

**PREFERENCES FOR EQUALITY IN ENVIRONMENTAL OUTCOMES**

Alan Krupnick, Resources for the Future

Co-Author(s): Maureen Cropper, University of Maryland, Alan Krupnick, Resources for the Future and William Raich, Resources for the Future

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12:00 - 12:15

**BREAK**

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12:15 - 01:45

**BOXED LUNCH**

Room Peaks 4,5

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12:15 - 01:45

**POSTER SESSION**

Third Floor South  
Foyer

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**COMPARING PERFORMANCE OF DISCRETE CHOICE MODELS IN STATED CHOICE METHODS: A PREDICTION-BASED APPROACH USING PREFERENCE ORDER DATA**

Yau-Huo Shr, Pennsylvania State University

Co-Author(s): Richard Ready, Montana State University

**INDIVIDUAL AND COMMUNITY-LEVEL INFLUENCES ON WILDFIRE RISK MITIGATION DECISIONS ON PRIVATE PROPERTY**

James Meldrum, University of Colorado Boulder

Co-Author(s): Hannah Brenkert-Smith, University of Colorado Boulder, Patricia Champ, USDA Forest Service and Travis Warziniack, USDA Forest Service

**MORE EVIDENCE FOR IMPACTS OF CLIMATE CHANGE ON ENERGY CONSUMPTION**

Hocheol Jeon, Iowa State University

**DO PEOPLE LEARN FROM THE MISFORTUNE OF THEIR NEIGHBORS? AN EMPIRICAL ANALYSIS OF THE EFFECT OF EXPERIENCE ON NATURAL DISASTER DAMAGE IN THE UNITED**

**STATES**

Patrick Prendergast, University of Rhode Island

**BAD WEATHER, SAFE DAY? THE EFFECT OF WEATHER AND POLLUTION ON CRIME**

Bo Liu, Georgia State University

**DO CONSUMERS RESPOND TO MARGINAL PRICE UNDER INCREASING BLOCK TARIFFS WHEN RATE INFORMATION IS CHEAP? EVIDENCE FROM RESIDENTIAL WATER DEMAND.**

Corey Lott, University of California, Santa Barbara

**RECREATIONAL DIVER WILLINGNESS TO PAY FOR GOLIATH GROUPER ENCOUNTERS DURING THE MONTHS OF THEIR SPAWNING AGGREGATION OFF EASTERN FLORIDA, USA**

Geoffrey Shideler, University of Miami

Co-Author(s): Pierce Brett, University of Miami

**THE DYNAMICS OF A FISHERY FACED WITH THE AQUACULTURE DILEMMA**

Andreea L. Cojocaru, University of Stavanger

Co-Author(s): Frank Asche, University of Stavanger

**THE EFFECT OF TROPICAL CYCLONES ON ECONOMIC SECTORS WORLDWIDE: A PANEL DATA ANALYSIS USING GEODATA**

Sven Kunze, Heidelberg University

**THE IMPACT OF RESTRUCTURING ON US ELECTRICITY MARKET INVESTMENT**

Alex Hill, University of Colorado Boulder

**TURNING THE TIDE: IMPACT OF FRAMING ON COASTAL WATER QUALITY DECISIONS**

Caroline Noblet, University of Maine

Co-Author(s): Kathleen Bell, University of Maine

**VALUING CARBON ABATEMENT BENEFITS OF INTERMITTENT RENEWABLE ENERGY**

Miguel Castro, Michigan State University

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01:00 - 05:15

**SPECIAL SESSION - THE 2010 GULF OF MEXICO OIL SPILL: ESTIMATING THE ECONOMIC LOSSES**

Imperial Ballroom

Chairpersons: Norman Meade, NOAA and Roger von Haefen,  
North Carolina State University

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01:45 - 03:15

**PARALLEL PAPERS SESSION 3**

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01:45 - 03:15

## **AIR POLLUTION I**

Room Peak 12

Chairperson: Erich Muehlegger, University of California, Davis

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### **AVOIDANCE BEHAVIOR AGAINST AIR POLLUTION: DO PEOPLE RESPOND TO PM2.5 INFORMATION?**

Tong Liu, Hong Kong University of Science and Technology

Co-Author(s): Guojun He, Hong Kong University of Science and Technology and Alexis Lau, Hong Kong University of Science and Technology

### **THE (NON)SEPARABILITY OF AIR QUALITY: EVIDENCE FROM MILLIONS OF HOUSEHOLDS ACROSS THE UNITED STATES**

Christos Makridis, Stanford University

### **AIR POLLUTION AND LABOR SUPPLY: EVIDENCE FROM SOCIAL SECURITY DATA**

Ulrich Wagner, University of Mannheim

Co-Author(s): Felix Holub, University of Mannheim and Laura Hospido, Bank of Spain

### **AIR POLLUTION AND CRIMINAL ACTIVITY: EVIDENCE FROM CHICAGO MICRODATA**

Erich Muehlegger, University of California, Davis

Co-Author(s): Evan Herrnsstadt, Harvard University

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01:45 - 03:15

## **LEAKAGE AND COMPETITIVENESS IN CLIMATE CHANGE POLICY**

Room Coppertop II

Chairperson: Peter Maniloff, Colorado School of Mines

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### **TRADE BETWEEN MASS- AND RATE-BASED REGULATORY REGIMES: BAD FOR EMISSIONS?**

Carolyn Fischer, Resources for the Future

### **DOES CLIMATE CHANGE POSE A RISK TO COMPETITIVENESS? - GLOBAL FIRM LEVEL EVIDENCE**

Ralf Martin, Imperial College London

Co-Author(s): Antoine Dechezlepretre, London School of Economics, Stefania Lovo, London School of Economics and Misato Sato, London School of Economics

### **MEASURING LEAKAGE RISK**

Meredith Fowlie, University of California, Berkeley

Co-Author(s): Mar Reguant, Northwestern and Stephen Ryan, University of Texas at Austin

### **UPDATING ALLOCATION OF EMISSIONS ALLOWANCES**

Peter Maniloff, Colorado School of Mines

Co-Author(s): Ian Lange, Colorado School of Mines

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01:45 - 03:15

## **SHALE, OIL, AND GAS III**

Room Coppertop III

Chairperson: Charles Mason, University of Wyoming

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**RENTS, YIELDS AND HYDRAULIC FRACTURING: THE CASE OF THE BAKKEN**

Timothy Rakitan, Iowa State University

**SUPPLY-SIDE COINTEGRATION IN NATURAL GAS PRICES AND CRUDE OIL PRICES**

Gavin Roberts, University of Wyoming

Co-Author(s): Benjamin Gilbert, University of Wyoming

**OPTION VALUE, LEARNING, AND LOCAL OPPOSITION TO HYDRAULIC FRACTURING**

Joshua Hess, Colorado State University

Co-Author(s): Harvey Cutler, Colorado State University, Terrence Iverson, Colorado State University and Dale Manning, Colorado State University

**THE IMPACT OF NEW TECHNOLOGIES ON NATURAL GAS WELL PRODUCTIVITY**

Charles Mason, University of Wyoming

Co-Author(s): Gavin Roberts, University of Wyoming

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01:45 - 03:15

**FISHERIES I**

Room Peak 2

Chairperson: Joshua K. Abbott, Arizona State University

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**A MODEL OF QUOTA ARBITRAGE IN MULTISPECIES FISHERIES**

Jorge Holzer, University of Maryland

Co-Author(s): Geret DePiper, NOAA Fisheries

**MANAGING FOR A DIVERSE PORTFOLIO: THE VALUE OF GENETIC VARIATION IN SALMON FOR RESILIENCE UNDER ENVIRONMENTAL CHANGE**

Amanda Faig, University of California, Davis

Co-Author(s): Michael Springborn, University of California, Davis

**SCALLOPS AND SHELLFISH FISHERMEN: A BIO-ECONOMETRIC ANALYSIS**

Brian Reed, Yale School of Forestry & Environmental Studies

Co-Author(s): Eli Fenichel, Yale School of Forestry & Environmental Studies and Seong Do Yun, Yale School of Forestry & Environmental Studies

**THE BENEFITS OF ESCAPING RECREATIONAL "DERBIES": EVIDENCE FROM A POLICY TRIAL**

Joshua K. Abbott, Arizona State University

Co-Author(s): Wiktor Adamowicz, University of Alberta, Edmonton, Patrick Lloyd-Smith, University of Alberta, Edmonton and Daniel Willard, Environmental Defense Fund

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01:45 - 03:15

**INCIDENCE AND DISTRIBUTIONAL EFFECTS**

Room Peak 10

Chairperson: Billy Pizer, Duke University

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**THE DISTRIBUTIONAL EFFECTS OF ADOPTING A CARBON TAX**

Stephie Fried, Carleton College

Co-Author(s): Kevin Novan, University of California, Davis and William Peterman, Federal Reserve Board of Governors

**WHAT IMPACTS SOLAR SUBSIDY INCIDENCE?**

Jacquelyn Pless, Colorado School of Mines

Co-Author(s): Ruben Lobel, University of Pennsylvania and Arthur van Benthem, University of Pennsylvania

**CARBON TAXATION, INEQUALITY AND ENGEL'S LAW - THE DOUBLE DIVIDEND OF REDISTRIBUTION**

David Klenert, Mercator Research Institute on Global Commons and Climate Change (MCC)

Co-Author(s): Ottmar Edenhofer, Mercator Research Institute on Global Commons and Climate Change (MCC); Potsdam Institute for Climate Impact Research (PIK); Technical University Berlin, Linus Mattauch, Mercator Research Institute on Global Commons and Climate Change (MCC) and Gregor Schwerhoff, Mercator Research Institute on Global Commons and Climate Change (MCC)

**THE INEQUITY OF POLLUTION TAXES**

Billy Pizer, Duke University

Co-Author(s): Steven Sexton, Duke University

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01:45 - 03:15

**ENVIRONMENTAL REGULATION AND LABOR DEMAND --  
RESEARCH USING MICRODATA**

Room Peak 11

Chairperson: Wayne Gray, Clark University

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**ENVIRONMENTAL REGULATION, POLLUTION REDUCTION AND  
LABOR DEMAND: EVIDENCE FROM TEXTILE PRINTING AND DYEING  
INDUSTRY IN CHINA**

Liu Mengdi, Nanjing University

Co-Author(s): Zhang Bing, Nanjing University and Ronald Shadbegian, National University of Singapore

**ENVIRONMENTAL REGULATION AND INPUT REALLOCATION:  
EVIDENCE FROM U.S. MANUFACTURING PLANTS**

Ron Shabegian, National University of Singapore

Co-Author(s): Randy Becker, U.S. Census Bureau, Center for Economic Studies, Ann Ferris, US EPA and Christos Makridis, Stanford University

**INDUSTRIAL COMPETITIVENESS AND STATE-LEVEL CLIMATE  
POLICY**

Brendan Casey, Clark University

Co-Author(s): Wayne Gray, Clark University, Joshua Linn, Resources for the Future and Richard Morgenstern, Resources for the Future

**GROSS VS NET EMPLOYMENT EFFECTS OF ENVIRONMENTAL  
REGULATORY STRINGENCY**

Wayne Gray, Clark University

Co-Author(s): Ann Ferris, US EPA and Ronald Shadbegian, National University of Singapore

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01:45 - 03:15

**ENERGY ECONOMICS**

Room Peak 3

Chairperson: Andrew Leach, University of Alberta

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**WEAK LINKS AND ENERGY PRODUCTIVITY: MEASURING AND EXPLAINING INTERNATIONAL DIFFERENCES IN ENERGY PRODUCTIVITY**

Botong Zhang, University of California, Los Angeles  
Co-Author(s): Christos Makridis, Stanford University

**MARKET POWER, CLIMATE CHANGE, AND COAL RETIREMENT: EVIDENCE FOR THE TEXAS ELECTRICITY MARKET**

Matt Woerman, University of California, Berkeley

**EXPANDING CROSS-BORDER ELECTRICITY COOPERATION AND TRADE IN SOUTH ASIA**

Mike Toman, World Bank

**OIL SANDS, GREENHOUSE GAS POLICY, AND THE OIL PRICE CRASH**

Andrew Leach, University of Alberta  
Co-Author(s): Branko Boskovic, University of Alberta

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01:45 - 03:15

**CLIMATE CHANGE: WEATHER II**

Room Peaks 6,7,8

Chairperson: Olivier Deschenes, University of California, Santa Barbara

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**ADAPTATION AND THE MORTALITY EFFECTS OF TEMPERATURE ACROSS US CLIMATE REGIONS**

Nolan Miller, University of Illinois at Urbana-Champaign  
Co-Author(s): Garth Heutel, Georgia State University and David Molitor, University of Illinois at Urbana-Champaign

**CATCHING A COLD: THE DYNAMIC RELATIONSHIP BETWEEN TEMPERATURE AND HEALTH**

Corey White, University of California, Santa Barbara

**WEATHER, TRAFFIC ACCIDENTS, AND EXPOSURE TO CLIMATE CHANGE**

Kevin Roth, University of California, Irvine  
Co-Author(s): Benjamin Leard, Resources for the Future

**MAYBE NEXT MONTH? TEMPERATURE SHOCKS, CLIMATE CHANGE, AND DYNAMIC ADJUSTMENTS IN BIRTH RATES**

Olivier Deschenes, University of California, Santa Barbara

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01:45 - 03:15

**TRANSPORTATION I**

Room Peak 9

Chairperson: Gabriel Lade, Iowa State University

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**CHARGING DRIVERS BY THE POUND: THE EFFECT OF THE VED SYSTEM IN THE UK**

Davide Cerruti, University of Maryland

Co-Author(s): Anna Alberini, University of Maryland and Joshua Linn,  
Resources for the Future

**STRATEGIC RESPONSE TO ENVIRONMENTAL REGULATION:  
THEORY, AND EVIDENCE FROM THE U.S. FREIGHT TRUCK  
INDUSTRY**

Matthew Zaragoza-Watkins, Environmental Defense Fund and  
Massachusetts Institute of Technology  
Co-Author(s): Katherine Rittenhouse, Environmental Defense Fund

**PASS-THROUGH AND MARKET STRUCTURE: EVIDENCE FROM THE  
RENEWABLE FUEL STANDARD**

Gabriel Lade, Iowa State University  
Co-Author(s): James Bushnell, University of California, Davis

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03:15 - 03:30	<b>BREAK</b>	Third Floor Foyer
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03:30 - 05:00	<b>PARALLEL PAPERS SESSION 4</b>
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03:30 - 05:00	<b>MARKET MECHANISMS</b>	Room Peak 12
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Chairperson: Sebastian Rausch, ETH Zurich

**WHEN DO FIRMS GO GREEN? COMPARING PRICE INCENTIVES WITH  
COMMAND AND CONTROL REGULATIONS IN INDIA**

Ann Harrison, University of Pennsylvania  
Co-Author(s): Ann Harrison, University of Pennsylvania, Leslie Martin,  
University of Melbourne and Shanthi Nataraj, RAND Corporation

**PRICES VERSUS QUANTITIES WITH POLICY UPDATING**

Brian Prest, Duke University  
Co-Author(s): William Pizer, Duke University

**THE EFFECTS OF CONSIGNMENT SALES ON EMISSION ALLOWANCE  
AUCTIONS**

William Shobe, University of Virginia  
Co-Author(s): Charles Holt, University of Virginia

**COMBINING PRICE AND QUANTITY CONTROLS UNDER  
PARTITIONED ENVIRONMENTAL REGULATION**

Sebastian Rausch, ETH Zurich  
Co-Author(s): Jan Abrell, ETH Zurich

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03:30 - 05:00	<b>FISHERIES II</b>	Room Peak 11
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Chairperson: Scott Barrett, Columbia University

**OBSERVER EFFECTS IN THE GULF OF MAINE GROUND FISH  
SECTOR**

Angela Muench, NOAA Northeast Fisheries Science Center

Co-Author(s): Chad Demarest, NOAA Northeast Fisheries Science Center, SSB

**SPATIAL BEHAVIOR AND THE VALUE OF SPATIALLY  
DIFFERENTIATED RESOURCE MANAGEMENT: EVIDENCE FROM THE  
GREAT BARRIER REEF COMMERCIAL FISHERY**

Gabriel Sampson, University of California, Davis

**CREATING LOCAL ECONOMIC VALUE THROUGH ARTISANAL  
FISHERIES MANAGEMENT: AN ECOSYSTEM SERVICE VALUATION  
APPROACH**

Jacob Salcone, Colorado State University

Co-Author(s): Dale Manning, Colorado State University

**PROPERTY RIGHTS VS. COOPERATIVE AGREEMENTS: THE OCEAN  
FISHERIES GAME**

Scott Barrett, Columbia University

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03:30 - 05:00

**CARBON OFFSETS**

Room Peak 3

Chairperson: Leslie Martin, University of Melbourne

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**BIOPHYSICAL AND ECONOMIC ANALYSIS OF CARBON DIOXIDE  
REMOVAL OPTIONS: FOREST SEQUESTRATION AND WOODY  
BIOMASS PRODUCTION FOR BECCS**

Alice Favero, Georgia Institute of Technology

**ASSESSING THE ADDITIONALITY OF THE CLEAN DEVELOPMENT  
MECHANISM IN CHINA WITH EMISSIONS FORECASTS**

Gabriel Chan, University of Minnesota

Co-Author(s): Joseph Aldy, Harvard University

**ANTICIPATION OF PES INCENTIVES AND ENVIRONMENTAL SERVICE  
GOALS**

Augustina Odame, Yale School of Forestry & Environmental Studies

Co-Author(s): Vic Adamowicz, University of Alberta, Alicia Entem,  
Smithsonian Tropical Research Institute and Eli Fenichel, Yale School of  
Forestry & Environmental Studies

**SUPPLY AND IMPACT OF VOLUNTARY CARBON OFFSETS:  
PARTICIPATION OF INDIA'S MANUFACTURING FIRMS IN THE CLEAN  
DEVELOPMENT MECHANISM**

Leslie Martin, University of Melbourne

Co-Author(s): Kim Liu, University of Melbourne

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03:30 - 05:00

**ENERGY EFFICIENCY I**

Room Coppertop III

Chairperson: Garth Heutel, Georgia State University

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**INVESTMENT IN THE HEAT OF THE MOMENT: HEATING AND  
COOLING UPGRADES IN RESPONSE TO EXTREME WEATHER**

Alecia Cassidy, University of Michigan

**ENERGY EFFICIENCY SAVINGS IN LOW-INCOME HOUSEHOLDS:  
EVIDENCE FROM THE CALIFORNIA ENERGY SAVINGS ASSISTANCE**

**PROGRAM**

Joshua Blonz, University of California, Berkeley

**CONSUMER INATTENTION AND ENERGY INTENSIVE DURABLES: A REJOINDER AND NEW EVIDENCES FOR THE US APPLIANCE MARKET**

Sebastien Houde, University of Maryland

Co-Author(s): Erica Myers, University of Illinois, Urbana-Champaign

**PROSPECT THEORY AND ENERGY EFFICIENCY**

Garth Heutel, Georgia State University

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03:30 - 05:00

**EXPERIMENTS II**

Room Peak 9

Chairperson: Tsvetan Tsvetanov, University of Kansas

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**TRIGGERING COOPERATION**

Peter Martinsson, University of Gothenburg

Co-Author(s): Martin Dufwenberg, University of Arizona and University of Gothenburg, Gunnar Köhlin, University of Gothenburg and Haileselassie Medhin, University of Gothenburg

**SOCIAL IDENTITY, SOCIAL PREFERENCES, AND THE PROVISION OF PUBLIC GOODS: EVIDENCE FROM SWITZERLAND**

Marcella Veronesi, University of Verona and ETH Zurich

Co-Author(s): Devesh Rustagi, Goethe University Frankfurt

**AN ONLINE EXPERIMENT ON COOPERATION AND GROUPISHNESS ACROSS URBAN DISTRICTS**

Carlo Gallier, Centre for European Economic Research (ZEW)

Co-Author(s): Timo Goeschl, University of Heidelberg, Martin Kesternich, Centre for European Economic Research (ZEW), Johannes Lohse, University of Heidelberg, Christiane Reif, Centre for European Economic Research (ZEW) and Daniel Roemer, Centre for European Economic Research (ZEW)

**NUDGING ENERGY EFFICIENCY ADOPTION: EVIDENCE FROM A FIELD EXPERIMENT**

Tsvetan Tsvetanov, University of Kansas

Co-Author(s): Kenneth Gillingham, Yale University

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03:30 - 05:00

**BIOFUELS**

Room Coppertop II

Chairperson: Mark Jacobsen, University of California, San Diego

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**INVESTMENT IN CORN-ETHANOL PLANTS IN THE MIDWESTERN UNITED STATES**

C.-Y. Cynthia Lin Lawell, University of California, Davis

Co-Author(s): Karen Thome, USDA Economic Research Service

**LAND USE IMPACT OF THE RENEWABLE FUEL STANDARD - EVIDENCE FROM CHANGES IN THE CONSERVATION RESERVE PROGRAM ENROLLMENT**

Deepak Rajagopal, University of California, Los Angeles



Co-Author(s): Jenny Ifft, Cornell University and Ryan Weldzius, University of California, Los Angeles

**EXAMINING THE EFFECTS OF UNCERTAINTY ON SECOND-GENERATION BIOFUEL INVESTMENT BY USING A TWO STOCHASTIC PROCESS APPROACH**

Evan Markel, University of Tennessee

Co-Author(s): Charles Sims, University of Tennessee

**BIOFUEL AND THE REGULATION OF LIFE-CYCLE EMISSIONS ACROSS BOUNDARIES**

Mark Jacobsen, University of California, San Diego

Co-Author(s): William Leung, University of California, Davis

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03:30 - 05:00

**LAND USE**

Room Peak 10

Chairperson: David Newburn, University of Maryland

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**CURRENT USE PROPERTY TAXATION IN PROTECTING RURAL LAND: AN APPLICATION USING DURATION ANALYSIS**

Darshana Udayanganie, Central Michigan University

**MEETING WATER QUALITY STANDARDS BY ALTERING LAND USE PATTERNS: AN ANALYSIS OF PRICE VS. QUANTITY BASED POLICY INSTRUMENTS**

Douglas Wrenn, Pennsylvania State University

Co-Author(s): Allen Klaiber, The Ohio State University

**BURNING DOWN THE HOUSE: HOUSING CHARACTERISTICS AND THE POLITICAL ECONOMY OF WILDFIRE SUPPRESSION**

Matthew Wibbenmeyer, University of California, Santa Barbara

Co-Author(s): Sarah Anderson, University of California, Santa Barbara,

Andrew Plantinga, University of California, Santa Barbara and Randall

Walsh, University of Pittsburgh

**ADDITIONALITY AND FOREST CONSERVATION POLICY FOR RESIDENTIAL DEVELOPMENT**

David Newburn, University of Maryland

Co-Author(s): Jeffrey Ferris, University of Maryland

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03:30 - 05:00

**REGULATING FIRMS**

Room Peaks 6,7,8

Chairperson: Jonathan Hughes, University of Colorado Boulder

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**MANAGEMENT AND POLLUTION**

Mark Curtis, Wake Forest University

**THE IMPACTS OF ENVIRONMENTAL REGULATION IN THE PRESENCE OF HETEROGENOUS FIRMS**

Scott Holladay, University of Tennessee

Co-Author(s): Lawrence LaPlue, University of Tennessee

**RATE OF RETURN REGULATION AND ENVIRONMENTAL EXTERNALITIES: EVIDENCE FROM METHANE LEAKS**

Catherine Hausman, University of Michigan  
Co-Author(s): Lucija Muehlenbachs, University of Calgary

**WHO (ELSE) BENEFITS FROM ELECTRICITY DEREGULATION?  
RAILROADS, INFORMATION AND PRICE DISCRIMINATION**

Jonathan Hughes, University of Colorado Boulder  
Co-Author(s): Ian Lange, Colorado School of Mines

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03:30 - 05:00	<b>CLIMATE CHANGE: ASSESSING THE IMPACTS</b> Chairperson: Justin Caron, HEC Montreal	Room Peak 2
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**TEMPERATURE AND ECONOMIC GROWTH: NEW EVIDENCE FROM  
TOTAL FACTOR PRODUCTIVITY**

Peng Zhang, University of California, Santa Barbara

**LONG-TERM IMPACTS OF HIGH TEMPERATURES ON ECONOMIC  
PRODUCTIVITY**

Jason Russ, George Washington University  
Co-Author(s): Paul Carrillo, George Washington University and Ram  
Fishman, Tel Aviv University

**TEMPERATURE AND GROWTH: A PANEL ANALYSIS OF THE UNITED  
STATES**

Bridget Hoffmann, Inter-American Development Bank  
Co-Author(s): Riccardo Colacito, University of North Carolina Chapel Hill  
and Toan Phan, University of North Carolina Chapel Hill

**PER CAPITA INCOME, CONSUMPTION PATTERNS, ENERGY DEMAND  
AND CO2 EMISSIONS**

Justin Caron, HEC Montreal  
Co-Author(s): Thibault Fally, University of California, Berkeley

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05:30 - 06:30	<b>COCKTAIL HOUR CASH BAR MEET-UP</b>	Room Peaks 4,5
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05:30 - 08:30	<b>AERE BOARD MEETING</b> By invitation only	Mercury Boardroom
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**SATURDAY 11TH JUNE 2016**

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07:30 - 02:45	<b>REGISTRATION/EXHIBITS</b>	Third Floor Foyer
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07:30 - 09:00	<b>CONTINENTAL BREAKFAST</b>	Room Peaks 4,5
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09:00 - 10:30

## PARALLEL PAPERS SESSION 5

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09:00 - 10:30

### **ELECTRICITY III**

Room Peak 11

Chairperson: Ujjayant Chakravorty, Tufts University

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#### **HYDRO POWER. MARKET MIGHT.**

Grant McDermott, University of California, Santa Barbara

#### **WASTE NOT: CAN BIOGAS DELIVER A DOUBLE DIVIDEND?**

Hope Thompson, University of Michigan

Co-Author(s): Robyn Meeks, University of Michigan and Katharine Sims, Amherst College

#### **DO ENERGY SAVINGS GROW WITH (SHADE) TREES?**

Joe Maher, National Socio-Environmental Synthesis Center

#### **CHINA'S CLEAN ENERGY STRATEGY: SOLAR, SHALE GAS OR NUCLEAR?**

Ujjayant Chakravorty, Tufts University

Co-Author(s): Carolyn Fischer, Resources for the Future and Marie-Helene Hubert, University of Rennes

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09:00 - 10:30

### **FORESTRY: DEFORESTATION**

Room Peak 1

Chairperson: Teevrat Garg, University of California, San Diego and London School of Economics

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#### **ASSESSING THE IMPACT OF PROTECTED AREAS ON FOREST RECOVERY AND REFORESTATION**

Jordi Honey-Rosés, University of British Columbia

Co-Author(s): Kathy Baylis, University of Illinois, Urbana-Champaign and Isabel Ramirez, Universidad Nacional Autonoma de Mexico (UNAM)

#### **CONSEQUENCES OF PROTECTED AREAS FOR FOREST EXTRACTION AND HUMAN WELL-BEING: EVIDENCE FROM NEPAL**

Aparna Howlader, University of Illinois Urbana-Champaign

Co-Author(s): Amy Ando, University of Illinois Urbana-Champaign

#### **COMMUNITY-MANAGED FORESTS AND HOUSEHOLD WELFARE: EMPIRICAL EVIDENCE FROM NEPAL**

Jayash Paudel, University of Massachusetts Amherst

#### **THE ROLE OF LOCAL GOVERNMENT IN PRESERVING THE COMMONS: THEORY AND EVIDENCE FROM INDONESIA**

Teevrat Garg, University of California, San Diego and London School of Economics

Co-Author(s): Caterina Gennaioli, London School of Economics and Stefania Lovo, London School of Economics

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09:00 - 10:30

### **VALUATION: PROPERTY VALUE II**

Room Peak 2

Chairperson: Sathya Gopalakrishnan, Ohio State University

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**HOUSEHOLD LOCATION DECISIONS AND THE VALUE OF CLIMATE AMENITIES**

Paramita Sinha, RTI International

Co-Author(s): Maureen Cropper, University of Maryland

**ASSESSING THE ECONOMIC BENEFITS OF STRUCTURAL FLOOD PROTECTION: A REPEAT-SALES APPROACH FROM THE ENGLISH HOUSING MARKET**

Allan Beltran, University of Birmingham

Co-Author(s): Robert Elliott, University of Birmingham and David Maddison, University of Birmingham

**MIGRATION AS REVEALED PREFERENCE FOR AMENITIES: EVIDENCE FROM TAX FILING LOCATIONS**

Brett Close, University of Wisconsin - Madison

Co-Author(s): Daniel Phaneuf, University of Wisconsin - Madison

**COASTAL ADAPTATION TO CLIMATE CHANGE AND THE CAPITALIZED IMPACT OF BEACH NOURISHMENT**

Sathya Gopalakrishnan, Ohio State University

Co-Author(s): Yun Qiu, Ohio State University

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09:00 - 10:30

**REGULATORY ENFORCEMENT II**

Room Peak 12

Chairperson: David Finnoff, University of Wyoming

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**NATURAL VS ANTHROPOGENIC INSURANCE: MANAGING A NATIVE SPECIES FACING INVASION RISKS INVOLVING MULTI-STABLE OUTCOMES**

David Finnoff, University of Wyoming

Co-Author(s): Kevin Berry, Yale University, Richard Horan, Michigan State University, Carson Reeling, Michigan State University and Jason Shogren, University of Wyoming

**REGULATING THE REGULATORS? FEDERAL OVERSIGHT OF STATE ENVIRONMENTAL ENFORCEMENT**

Sarah Stafford, College of William and Mary

Co-Author(s): Mary Evans, Claremont McKenna

**WHEN THREATS BECOME CREDIBLE: A NATURAL EXPERIMENT OF ENVIRONMENTAL ENFORCEMENT FROM FLORIDA**

Wesley Blundell, University of Arizona

**MANDATORY MINIMUM PENALTIES FOR ENVIRONMENTAL ENFORCEMENT**

Mary Evans, Claremont McKenna College

Co-Author(s): J.R. DeShazo, University of California Los Angeles

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09:00 - 10:30

**RESOURCE DEVELOPMENT AND EXTRACTION**

Room Peak 9

Chairperson: Martin Stuermer, Federal Reserve Bank of Dallas

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**CREATING ANTICOMMONS: HISTORICAL LAND PRIVATIZATION AND MODERN NATURAL RESOURCE USE**

Bryan Leonard, University of California, Santa Barbara

Co-Author(s): Dominic Parker, University of Wisconsin, Madison

**SOCIAL LICENSING OF MINERAL RESOURCES: FORMAL AND INFORMAL ROADBLOCKS FOR AVAILABILITY**

Brett Jordan, Colorado School of Mines

**OPTIMAL GROUNDWATER EXTRACTION UNDER STOCHASTIC CLIMATE CHANGE.**

Nicolas Quintana Ashwell, Kansas State University

Co-Author(s): Nathan Hendricks, Kansas State University and Jeff Peterson, University of Minnesota

**NON-RENEWABLE RESOURCES, EXTRACTION TECHNOLOGY AND ENDOGENOUS GROWTH**

Martin Stuermer, Federal Reserve Bank of Dallas

Co-Author(s): Gregor Schwerhoff, Potsdam Institute for Climate Impact Research

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09:00 - 10:30

**ENVIRONMENTAL AGREEMENTS**

Room Peaks 6,7,8

Chairperson: Glenn Sheriff, US Department of State

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**(UN)FAIR DELEGATION: EXPLORING THE STRATEGIC USE OF EQUITY RULES IN INTERNATIONAL CLIMATE NEGOTIATIONS**

Andreas Lange, University of Hamburg

Co-Author(s): Claudia Schwirplies, University of Hamburg

**THE STRATEGIC DIMENSION OF FINANCING GLOBAL PUBLIC GOODS**

Ulrike Kornek, Mercator Research Institute on Global Commons and Climate Change

Co-Author(s): Ottmar Edenhofer, Mercator Research Institute on Global Commons and Climate Change

**EVALUATING THE PARIS AGREEMENT'S MITIGATION PLEDGES WITH STATISTICAL FORECASTING MODELS**

Cuicui Chen, Harvard University

Co-Author(s): Joseph Aldy, Harvard University and William Pizer, Duke University

**WHAT IS THE IMPLICIT BURDEN SHARING ARRANGEMENT FOR INTERNATIONAL ALLOCATION OF GREENHOUSE GAS REDUCTION REVEALED BY SUBMISSIONS TO THE 2015 PARIS AGREEMENT?**

Glenn Sheriff, US Department of State

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09:00 - 10:30

**AIR POLLUTION II**

Room Coppertop III

Chairperson: Paulina Oliva, University of California, Santa Barbara

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**THE IMPACT OF ENERGY POLICY ON RESPIRATORY HEALTH AND MORTALITY**

Alex Hollingsworth, Indiana University  
Co-Author(s): Ivan Rudik, Iowa State University

**THE WELFARE COSTS OF AIR POLLUTION INDUCED MEDICAL EXPENDITURES**

Austin Williams, University of Wisconsin - Madison

**THE EFFECT OF POLLUTION ON HEALTH AND SPENDING: EVIDENCE FROM CHANGES IN WIND PATTERNS**

Tatyana Deryugina, University of Illinois at Urbana-Champaign  
Co-Author(s): Garth Heutel, Georgia State University, Nolan Miller, University of Illinois at Urbana-Champaign, David Molitor, University of Illinois at Urbana-Champaign and Julian Reif, University of Illinois at Urbana-Champaign

**AIR POLLUTION AND PROCYCLICAL MORTALITY: CAUSAL EVIDENCE FROM THERMAL INVERSIONS**

Paulina Oliva, University of California, Santa Barbara  
Co-Author(s): Daniel Hicks, University of Oklahoma and Patrick Marsh, NOAA/NWS/NCEP Storm Prediction Center

09:00 - 10:30

**AGRICULTURE I**

Room Peak 3

Chairperson: Jeremy Weber, University of Pittsburgh

**AN ANALYSIS OF CLIMATE IMPACTS ON HERBICIDE, INSECTICIDE, AND FUNGICIDE EXPENDITURES: A FORWARD LOOKING ANALYSIS**

Lauren Rhodes, Texas A&M University  
Co-Author(s): Bruce A. McCarl, Texas A&M University

**COST-BENEFIT ANALYSIS OF CONTROLLING PHOSPHORUS EMISSION FROM AGRICULTURAL FIELDS: A DYNAMIC APPROACH**

Shaohui Tang, The Ohio State University  
Co-Author(s): Brent Sohngen, The Ohio State University

**ESTIMATION OF SPILLOVER EFFECTS FROM LARGE SCALE ADOPTION OF BT CORN IN THE PHILIPPINES**

Lawson Connor, North Carolina State University  
Co-Author(s): Zachary Brown, North Carolina State University, Roderick Rejesus, North Carolina State University and Jose Yorobe, University of the Philippines Los Banos

**DOES FEDERAL CROP INSURANCE INCREASE ENVIRONMENTAL EXTERNALITIES FROM AGRICULTURE?**

Jeremy Weber, University of Pittsburgh  
Co-Author(s): Nigel Key, USDA ERS and Erik O'Donoghue, USDA ERS

09:00 - 10:30

**SPONSORED SESSION 3 - BEHAVIORAL ECONOMICS: HOUSING AND ENERGY**

Room Coppertop II

Chairperson: Stephan Kroll, Colorado State University

**THE ADAPTATION OF THE US RESIDENTIAL SECTOR TO GLOBAL WARMING**

Matthieu Glachant, MINES ParisTech

Co-Author(s): François Cohen, London School of Economics and Magnus Söderberg, University of Gothenburg  
Discussant: Nicholas Flores, University of Colorado Boulder

**THE PERSISTENCE OF MORAL SUASION ON ENERGY USE**

Michael Price, Georgia State University  
Co-Author(s): Alec Brandon, University of Chicago, Paul Ferraro, Johns Hopkins University, John List, University of Chicago, Robert Metcalfe, University of Chicago and Florian Rundhammer, Georgia State University  
Discussant: James Meldrum, University of Colorado Boulder

**CARROT AND STICK: USING A REGRESSION KINK DESIGN TO IDENTIFY IMPACTS OF ENERGY FEEBATES**

Laura Grant, Claremont McKenna College  
Discussant: Meredith Fowlie, University of California, Berkeley

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09:00 - 10:30	<b>WATER II</b>	Room Peak 10
	Chairperson: John Rolfe, Central Queensland University	

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**(NOT SO) GENTLY DOWN THE STREAM: HEALTH AND RIVER POLLUTION IN INDONESIA**

Evan Plous, Columbia University  
Co-Author(s): Teevrat Garg, University of California, San Diego and London School of Economics, Stuart Hamilton, Salisbury University, Jacob Hochard, East Carolina University and John Talbot, Eastern Shore Regional GIS Cooperative

**WATER QUALITY RESILIENCE IN TRANSBOUNDARY GAME**

Linda Fernandez, Virginia Commonwealth University

**BEHAVIORAL RESPONSE TO AGRICULTURAL COST SHARING AND IMPLICATIONS FOR WATER QUALITY IN THE CHESAPEAKE BAY**

Patrick Fleming, Franklin & Marshall College  
Co-Author(s): Erik Lichtenberg, University of Maryland and David A. Newburn, University of Maryland

**RECONCILING COSTS OF IMPROVING AGRICULTURAL WATER MANAGEMENT: THE GREAT BARRIER REEF IN AUSTRALIA**

John Rolfe, Central Queensland University

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10:30 - 10:45	<b>BREAK</b>	Third Floor Foyer
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10:45 - 12:15	<b>PARALLEL PAPERS SESSION 6</b>
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10:45 - 12:15	<b>AGRICULTURE II</b>	Room Peak 1
	Chairperson: Frederik Noack, University of California, Santa Barbara	

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**ASEAN AGRICULTURAL TOTAL FACTOR PRODUCTIVITY**

Lee Kottmeyer, University of Nebraska Lincoln

Co-Author(s): Lilyan Fulginiti, University of Nebraska-Lincoln

**"PRODUCING LAND". TECHNOLOGICAL DIFFUSION, INSTITUTIONAL INNOVATION, AND PRICE EFFECTS DURING THE SOYBEAN BOOM IN BRAZIL.**

Gil DePaula, Yale University

**PERCEIVED, MEASURED, AND ESTIMATED SOIL FERTILITY: IMPLICATIONS FOR FARMER MANAGEMENT PRACTICES IN EAST AFRICA**

Julia Berazneva, Middlebury College

Co-Author(s): David Guerena, One Acre Fund, Linden McBride, Cornell University and Megan Sheahan, Cornell University

**TECHNOLOGY ADOPTION AND CROP DIVERSITY**

Frederik Noack, University of California, Santa Barbara

Co-Author(s): Ashley Larsen, University of California, Berkeley and Martin Quaas, University of Kiel

10:45 - 12:15

**VALUATION: HEDONIC**

Room Peak 11

Chairperson: Brent Sohngen, The Ohio State University

**THE IMPACT OF TIME-VARYING UNOBSERVABLES ON HEDONIC REGRESSION ESTIMATION: EVIDENCE FROM BROWNFIELD CLEANUP PROGRAM IN NEW YORK, NY.**

Olesya Savchenko, University of Illinois Urbana-Champaign

Co-Author(s): John Braden, University of Illinois Urbana-Champaign and Taro Mieno, University of Nebraska-Lincoln

**THE IMPACT OF POLLUTION BURDEN ON MICRO-LEVEL RESIDENTIAL SORTING**

Cristina Connolly, California Polytechnic State University

Co-Author(s): Mitchell Livy, California State University Fullerton

**DOES WETLAND QUALITY MATTER? A SEMI-PARAMETRIC HEDONIC STUDY IN FRANKLIN, OHIO**

Brent Sohngen, The Ohio State University

Co-Author(s): Yingdan Mei, The Ohio State University

10:45 - 12:15

**WATER III**

Room Peaks 6,7,8

Chairperson: Charles Howe, University of Colorado Boulder

**PRICE EFFICIENCY IN U.S. WATER RIGHTS MARKETS**

Renata Rimsaite, Pennsylvania State University

Co-Author(s): Karen Fisher-Vanden, Pennsylvania State University and Sheila Olmstead, University of Texas at Austin

**DEMAND FOR INCREASED WATER RELIABILITY AMONG URBAN HOUSEHOLDS IN JORDAN**



Jennifer Orgill, Duke University  
Co-Author(s): Marc Jeuland, Duke University

**DROUGHTS AND SURFACE WATER SALES: AN INVESTIGATION OF  
SPATIAL DATA ON RICE FARMS IN CALIFORNIA**

Anita Chaudhry, California State University, Chico  
Co-Author(s): Dean Fairbanks, California State University, Chico

**GETTING WESTERN WATER PRICES RIGHT: CORRECTLY  
REFLECTING THE SCARCITY VALUE OF RAW WATER**

Charles Howe, University of Colorado Boulder  
Co-Author(s): Peter Nichols, Berg Hill Greenleaf Ruscitti LLP

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10:45 - 12:15

**ELECTRICITY IV**

Room Peak 12

Chairperson: Dallas Burtraw, Resources for the Future

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**ON THE INTERACTION OF RATE-BASED POLICY OPTIONS AND  
ELECTRICITY STORAGE CAPACITY UNDER THE CLEAN POWER  
PLAN**

Maxwell Brown, Colorado School of Mines  
Co-Author(s): Jared Carbone, Colorado School of Mines

**TRADE-OFFS IN TRADE: EXAMINING REGIONAL COST AND  
EMISSIONS OUTCOMES UNDER ALTERNATIVE CLEAN POWER PLAN  
COMPLIANCE SCENARIOS**

David Bielen, National Renewable Energy Laboratory

**CARBON-POLICY INTERACTIONS IN CALIFORNIA AND THE  
COMPETITIVE SELECTION OF RENEWABLE GENERATION  
TECHNOLOGIES**

Ed Balistreri, Colorado School of Mines  
Co-Author(s): Fadli Rahman, Colorado School of Mines

**EMISSIONS ALLOCATION DESIGN TO AVOID LEAKAGE UNDER THE  
CLEAN POWER PLAN**

Dallas Burtraw, Resources for the Future  
Co-Author(s): Karen Palmer, Resources for the Future, Anthony Paul,  
Resources for the Future and Hang Yin, Resources for the Future

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10:45 - 12:15

**TRADE**

Room Coppertop III

Chairperson: Carol McAusland, University of British Columbia

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**GARBAGE IN AND GARBAGE OUT? ON WASTE HAVENS IN  
SWITZERLAND**

Tobias Erhardt, University of Basel

**SULFUR DIOXIDE REGULATION, EMISSIONS LEAKAGE AND U.S.  
COAL EXPORTS**

Ron Chan, University of Manchester

**GLOBAL TRADE AND RISK SHARING IN A SPATIALLY CORRELATED  
CLIMATE**

Kyle Meng, University of California, Santa Barbara

Co-Author(s): Solomon Hsiang, University of California, Berkeley and  
Jonathan Dingel, University of Chicago

**CARBON REROUTING**

Carol McAusland, University of British Columbia

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10:45 - 12:15

**FORESTRY: MANAGEMENT**

Room Peak 10

Chairperson: Andrew Plantinga, University of California, Santa  
Barbara

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**ADAPTATION TO CLIMATE CHANGE IN FORESTRY - AN EMPIRICAL  
ANALYSIS OF HARVEST AND REPLANTING DECISIONS UNDER  
CLIMATE CHANGE IN THE WESTERN U.S.**

Yukiko Hashida, Oregon State University

Co-Author(s): David Lewis, Oregon State University

**THE OPTIMAL CONTROL OF WILDFIRES IN COMPLEX LANDSCAPES**

James Goodenberger, The Ohio State University

**COLONIAL ORIGINS AND FORESTLAND OUTCOMES - THE IMPACT  
OF INSTITUTIONS ON FORESTS AND TIMBER**

Chris Goodwin, University of California, Santa Barbara

**SALIENCE OF WILDFIRE RISK AND PUBLIC LAND MANAGEMENT**

Andrew Plantinga, University of California, Santa Barbara

Co-Author(s): Sarah Anderson, University of California, Santa Barbara,  
Heather Hodges, University of California, Santa Barbara and Matthew  
Wibbenmeyer, University of California, Santa Barbara

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10:45 - 12:15

**SPONSORED SESSION 4 - BEHAVIORAL ECONOMICS:  
WATER AND ENERGY**

Room Coppertop II

Chairperson: David Chapman, USDA Forest Service

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**THE MICRO-BEHAVIORAL ECONOMICS OF TECHNOLOGY ADOPTION  
FOR WATER CONSERVATION AND CLIMATE CHANGE ADAPTATION:  
ENGINEERS VS BEHAVIORAL SCIENTISTS**

Paul Ferraro, Johns Hopkins University

Co-Author(s): Francisco Alpizar, Centro Agronómico Tropical de  
Investigación y Enseñanza and Maria Bernedo, Georgia State University

Discussant: Stephan Kroll, Colorado State University

**CONSERVATION SPILLOVERS AND BEHAVIORAL INTERVENTIONS:  
EXPERIMENTAL EVIDENCE FROM WATER AND ENERGY USE**

Katrina Jessoe, University of California, Davis

Co-Author(s): Gabriel Lade, Iowa State University, Frank Loge, University  
of California, Davis and Edward Spang, University of California, Davis

Discussant: Casey Wichman, Resources for the Future

**MOTIVATIONS FOR WATER CONSERVATION FROM BEHAVIORAL  
INTERVENTIONS**

Daniel Brent, Louisiana State University

Co-Author(s): Joseph Cook, University of Washington, Corey Lott,  
University of California, Santa Barbara, Kimberly Rollins, University of

Nevada, Reno, Shawn Stoddard, Truckee Meadows Water Authority and  
Michael Taylor, University of Nevada, Reno  
Discussant: David Chapman, USDA Forest Service

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10:45 - 12:15

**CLIMATE CHANGE: WEATHER III**

Room Peak 3

Chairperson: Nathan Hendricks, Kansas State University

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**CLIMATE CHANGE AND AGRICULTURE: THE ROLE OF TILE DRAINAGE**

Kevin Meyer, Iowa State University

Co-Author(s): David Keiser, Iowa State University

**THE ROLE OF CROP INSURANCE PROGRAMS IN CLIMATE CHANGE IMPACT MEASUREMENT: A 2SLS ESTIMATION**

Zhangliang Chen, University of Illinois Urbana-Champaign

Co-Author(s): Sandy Dall'Erba, University of Illinois Urbana-Champaign

**HOW DO HEAT WAVES, COLD WAVES, DROUGHTS, HAIL AND TORNADOES AFFECT US AGRICULTURE?**

Emanuele Massetti, Georgia Institute of Technology

Co-Author(s): Robert Mendelsohn, Yale University

**THE ECONOMIC EFFECTS OF HEAT AND WATER STRESS IN AGRICULTURE**

Nathan Hendricks, Kansas State University

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10:45 - 12:15

**TRANSPORTATION II**

Room Peak 9

Chairperson: J.R. DeShazo, University of California Los Angeles

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**PROVIDING THE SPARK: IMPACT OF FINANCIAL INCENTIVES ON BATTERY ELECTRIC VEHICLE ADOPTION**

Bentley Clinton, University of Colorado Boulder

Co-Author(s): Daniel Steinberg, National Renewable Energy Laboratory

**PUBLIC TRANSIT AND PROPERTY VALUES: DID THE METRO BLUE LINE AFFECT HOME PRICES IN MINNEAPOLIS?**

Sarah West, Macalester College

Co-Author(s): Clemens Pilgram, Macalester College

**FUEL COSTS, ECONOMIC ACTIVITY, AND THE REBOUND EFFECT FOR HEAVY-DUTY TRUCKS**

William Raich, Resources for the Future

Co-Author(s): Benjamin Leard, Resources for the Future, Joshua Linn, Resources For the Future and Virginia McConnell, Resources For the Future

**HOW DOES THE PRESENCE OF HOV LANES AFFECT PLUG-IN ELECTRIC VEHICLE ADOPTION IN CALIFORNIA? A GENERALIZED PROPENSITY SCORE APPROACH**

J.R. DeShazo, University of California Los Angeles

Co-Author(s): Tamara Sheldon, University of South Carolina

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10:45 - 12:15

**VALUATION: ECOSYSTEMS**

Chairperson: Jacob Hochard, East Carolina University

Room Peak 2

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**THE WEALTH OF ECOSYSTEMS: VALUING NATURAL CAPITAL IN THE CONTEXT OF ECOSYSTEM BASED MANAGEMENT**

Seong Do Yun, Yale University

Co-Author(s): Joshua K. Abbott, Arizona State University, Eli P. Fenichel, Yale University and Barbara Hutniczak, National Oceanic and Atmospheric Administration (NOAA)

**ANGLER BEHAVIOR AND THE WELFARE EFFECTS OF STREAM RESTORATIONS**

Michele Baggio, University of Connecticut

Co-Author(s): Charles Towe, University of Connecticut

**ECONOMIC VALUATION OF RESTORATION ACTIONS FOR SALMON AND FORESTS AND ASSOCIATED WILDLIFE IN AND ALONG THE ELWHA RIVER**

Colleen Donovan, ABT Environmental Research

Co-Author(s): Richard Bishop, Professor Emeritus from the University of Wisconsin, James Boyd, Resources for the Future, Adam Domanski, National Oceanic and Atmospheric Administration, John Duffield, University of Montana, Peter Edwards, National Oceanic and Atmospheric Administration, Heather Hosterman, ABT Environmental Research, Barbara Kanninen, BK Econometrics, LLP, John Loomis, Colorado State University, Jason Murray, National Oceanic and Atmospheric Administration, Giselle Samonte, National Oceanic and Atmospheric Administration and Roger Tourangeau, Westat

**STORM PROTECTION SERVICES OF MANGROVE FORESTS**

Jacob Hochard, East Carolina University

Co-Author(s): Edward Barbier, University of Wyoming and Stuart Hamilton, Salisbury University

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12:15 - 12:30

**BREAK**

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12:30 - 01:00

**LUNCH**

Room Peaks 4,5

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01:00 - 01:45

**AERE AWARDS PROGRAM**

Room Peaks 4,5

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01:45 - 02:30

**KEYNOTE ADDRESS**

Catherine Wolfram, University of California, Berkeley  
*Effective Carbon Mitigation Strategies*

Room Peaks 4,5

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02:30 - 02:45

**BREAK**

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02:45 - 04:15

## PARALLEL PAPERS SESSION 7

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02:45 - 04:15

### BEHAVIORAL ECONOMICS

Room Coppertop II

Chairperson: Severin Borenstein, University of California, Berkeley

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#### **DO EXTRINSIC INCENTIVES UNDERMINE SOCIAL NORMS? EVIDENCE FROM A FIELD EXPERIMENT IN ENERGY CONSERVATION**

Gonzalo Sanchez, Escuela Superior Politecnica del Litoral  
Co-Author(s): Jose Pellerano, Universidad Iberoamericana, Michael Price, Georgia State University and Steven Puller, Texas A&M University

#### **THE EFFECT OF CONSERVATION MESSAGING ON URBAN RESIDENTIAL WATER DEMAND: AN EVENT STUDY USING HOURLY METER DATA FROM SAN FRANCISCO**

Dina Gorenshteyn, University of California, Berkeley

#### **BEHAVIORAL NUDGES IN NUTRIENT MANAGEMENT DECISIONS: ARE THEY "ONE-SIZE-FITS-ALL"?**

Wendong Zhang, Iowa State University

#### **NUDGING WITH TIME: HOW MUCH DOES STANDARDIZING TIME CHANGE BEHAVIOR?**

Severin Borenstein, University of California, Berkeley

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02:45 - 04:15

### VALUATION: PROPERTY VALUE III

Room Peaks 6,7,8

Chairperson: Allen Klaiber, The Ohio State University

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#### **A VALUATION OF URBAN STREAM RESTORATIONS**

Charles Towe, University of Connecticut  
Co-Author(s): H. Allen Klaiber, The Ohio State University and Joe Maher, National Socio-Environmental Synthesis Center

#### **DO HOUSING VALUES RESPOND TO UNDERGROUND STORAGE TANK RELEASES? EVIDENCE FROM HIGH-PROFILE CASES ACROSS THE UNITED STATES**

Dennis Guignet, US Environmental Protection Agency  
Co-Author(s): Robin Jenkins, US Environmental Protection Agency, Matthew Ranson, Abt Associates Inc. and Patrick Walsh, US Environmental Protection Agency

#### **QUESTIONING THE DISTANCE-ONLY PARADIGM: OPTIMIZED QUANTITY-WITHIN-DISTANCE MODELS OF SPATIAL WELFARE HETEROGENEITY**

Robert Johnston, Clark University  
Co-Author(s): Benedict Holland, Clark University

#### **BLUE-GREEN ALGAE'S IMPACT ON OHIO'S INLAND LAKE HOUSING MARKETS**

Allen Klaiber, The Ohio State University  
Co-Author(s): David Wolf, The Ohio State University

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02:45 - 04:15

**ENERGY EFFICIENCY II**

Room Peak 12

Chairperson: Ian Lange, Colorado School of Mines

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**ENERGY SAVINGS FROM RESIDENTIAL BUILDING CODES:  
EVIDENCE FROM SMART-METER DATA**

Tianxia Zhou, University of California, Davis  
Co-Author(s): Kevin Novan, University of California, Davis and Aaron Smith,  
University of California, Davis

**DO ENERGY RETROFITS WORK? EVIDENCE FROM COMMERCIAL  
AND RESIDENTIAL BUILDINGS IN PHOENIX**

Yueming Qiu, Arizona State University  
Co-Author(s): Jing Liang, Arizona State University

**DO ENERGY EFFICIENCY INVESTMENTS DELIVER AT THE RIGHT  
TIME?**

Judson Boomhower, Stanford University  
Co-Author(s): Lucas Davis, University of California, Berkeley

**THE SUPPLY-SIDE EFFECTS OF ENERGY EFFICIENCY LABELS**

Ian Lange, Colorado School of Mines  
Co-Author(s): David Comerford, University of Stirling and Mirko Moro,  
University of Stirling

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02:45 - 04:15

**DEVELOPING COUNTRIES II**

Room Peak 3

Chairperson: Kelly Jones, Colorado State University

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**THE OPPORTUNITY COST OF FOREST PRESERVATION IN TERMS OF  
AGRICULTURAL ACTIVITY FORGONE IN THE BRAZILIAN AMAZON**

Felipe de Figueiredo Silva, University of Nebraska-Lincoln  
Co-Author(s): Lilyan Fulginiti, University of Nebraska-Lincoln and Richard  
Perrin, University of Nebraska-Lincoln

**DETERMINANTS OF AMAZON DEFORESTATION: THE ROLE OF OFF-  
FARM INCOME**

Jose Feres, Institute for Applied Economics Research (IPEA)  
Co-Author(s): Claudio Araujo, CERDI/Universite d'Auvergne and Jean-  
Louis Combes, CERDI/Universite d'Auvergne

**INDIA'S GREENHOUSE GAS ABATEMENT POLICIES - CONSIDERING  
THE CASE FOR MARKET BASED INSTRUMENTS**

Ashish Tyagi, Pennsylvania State University

**GENERATING EVIDENCE ON THE IMPACT OF HYBRID PUBLIC-  
PRIVATE CONSERVATION APPROACHES IN ECUADOR: DO FOREST  
ECONOMIC INCENTIVES INCREASE PROTECTED AREA  
EFFECTIVENESS?**

Kelly Jones, Colorado State University

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02:45 - 04:15

**INTERTEMPORAL DYNAMICS**

Chairperson: Ashley Langer, University of Arizona

Room Peak 9

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**THE REPRESENTATIVE AGENT MUST DIE: USING DEMOGRAPHICS TO INFORM SOCIAL DISCOUNT RATES**

Ethan Addicott, Yale University

Co-Author(s): Eli Fenichel, Yale School of Forestry & Environmental Studies and Matthew Kotchen, Yale University

**REPUTATION-INDUCED HYSTERESIS AND DYNAMIC ENVIRONMENTAL REGULATION**

Beat Hintermann, University of Basel

Co-Author(s): Andreas Lange, University of Hamburg

**CLIMATE CHANGE AND LONG-RUN DISCOUNT RATES: EVIDENCE FROM REAL ESTATE**

Andreas Weber, New York University

Co-Author(s): Stefano Giglio, University of Chicago, Matteo Maggiori, Harvard University and Johannes Stroebel, New York University

**DYNAMIC TECHNOLOGY SUBSIDIES**

Ashley Langer, University of Arizona

Co-Author(s): Derek Lemoine, University of Arizona

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02:45 - 04:15

**NATURAL DISASTERS**

Chairperson: Daniel Osberghaus, Centre for European Economic Research

Room Peak 10

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**MEASURING THE FINANCIAL SHOCKS OF NATURAL DISASTERS: A PANEL STUDY OF US STATES**

Qing Miao, Arizona State University

Co-Author(s): Michael Abrigo, University of Hawaii and Hou Yilin, Syracuse University

**SEA LEVEL RISE, FLOOD RISK, AND PROPERTY VALUES: EVIDENCE FROM NEW YORK CITY**

Jamie Mullins, University of Massachusetts Amherst

Co-Author(s): Matthew Gibson, Williams College and Alison Hill, Williams College

**THE EFFECT OF FEDERAL DISASTER ASSISTANCE ON HOUSEHOLD FINANCE AND BUSINESS SURVIVAL AFTER A NATURAL DISASTER**

Justin Gallagher, Case Western Reserve University

Co-Author(s): Daniel Hartley, Chicago Federal Reserve Bank

**THE DEMAND FOR INDEX-BASED FLOOD INSURANCE IN A HIGHLY DEVELOPED COUNTRY**

Daniel Osberghaus, Centre for European Economic Research

Co-Author(s): Martin Achtnicht, Leibniz Institute of Ecological Urban and Regional Development

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02:45 - 04:15

**CLIMATE POLICY: TECHNICAL CHANGE**

Chairperson: Derek Lemoine, University of Arizona

Room Peak 2

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**OPTIMAL EXPERIMENTATION WITH SOLAR GEOENGINEERING**

David Kelly, University of Miami

Co-Author(s): Garth Heutel, Georgia State University, Juan Moreno-Cruz, Georgia Tech University and Soheil Shayegh, Stanford University

**SHARING R&D INVESTMENTS IN BREAKTHROUGH TECHNOLOGIES TO CONTROL CLIMATE CHANGE**

Santiago Rubio, University of Valencia

**ENERGY TRANSITIONS: DIRECTED TECHNICAL CHANGE MEETS DIRECTED EXTRACTION**

Derek Lemoine, University of Arizona

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02:45 - 04:15

**AIR POLLUTION III**

Room Peak 11

Chairperson: Corbett Grainger, University of Wisconsin - Madison

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**THE EFFECTS OF AIR POLLUTION ON EDUCATION AND HUMAN CAPITAL: EVIDENCE FROM CHINESE CITIES**

Niall Williams, Connecticut College

Co-Author(s): Wei Zhang, Connecticut College

**CANARY IN A COAL MINE: IMPACT OF MID-20TH CENTURY AIR POLLUTION ON INFANT MORTALITY AND PROPERTY VALUES**

Edson Severnini, Carnegie Mellon University

Co-Author(s): Karen Clay, Carnegie Mellon University and Joshua Lewis, University of Montreal

**HAZED AND CONFUSED: AIR POLLUTION, COGNITIVE FUNCTIONING, AND FINANCIAL DECISION MAKING AMONG THE ELDERLY**

Nicolai Kuminoff, Arizona State University

Co-Author(s): Kelly Bishop, Arizona State University, Jonathan Ketcham, Arizona State University and Christopher Powers, U.S. Centers for Medicare and Medicaid Services

**HOW STATE REGULATORS COMPLY WITH FEDERAL STANDARDS: STRATEGIC AMBIENT POLLUTION MONITOR SITING**

Corbett Grainger, University of Wisconsin - Madison

Co-Author(s): Andrew Schreiber, University of Wisconsin - Madison and Wonjun Chang, University of Wisconsin - Madison

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02:45 - 04:15

**TRANSPORTATION III**

Room Coppertop III

Chairperson: Gloria Helfand, U.S. Environmental Protection Agency

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**FUEL ECONOMY STANDARDS, ATTRIBUTE-BASING, AND FUEL PRICE UNCERTAINTY**

Ryan Kellogg, University of Michigan

**FUEL PRICES, NEW VEHICLE FUEL ECONOMY, AND IMPLICATIONS FOR ATTRIBUTE-BASED STANDARDS**



Benjamin Leard, Resources for the Future  
Co-Author(s): Joshua Linn, Resources for the Future

**OVERLAPPING STRATEGIES FOR REDUCING CARBON EMISSIONS  
FROM THE PERSONAL TRANSPORTATION SECTOR**

Soren Anderson, Michigan State University  
Co-Author(s): Carolyn Fischer, Resources for the Future

**EXAMINING THE AFFORDABILITY IMPACTS OF LIGHT-DUTY  
VEHICLE GREENHOUSE GAS EMISSION STANDARDS**

Gloria Helfand, U.S. Environmental Protection Agency  
Co-Author(s): Geoffrey Burmeister, University of Michigan and Alecia  
Cassidy, University of Michigan

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02:45 - 04:15

**WATER IV**

Room Peak 1

Chairperson: Casey Wichman, Resources for the Future

---

**IMPLICATION OF WELL CAPACITY FOR INTRA-SEASONAL VALUE OF  
AQUIFER MANAGEMENT**

Mani Rouhi Rad, University of Illinois at Urbana-Champaign  
Co-Author(s): Nicholas Brozovic, University of Nebraska-Lincoln

**GROWING INTO WATER CONSERVATION? DECOMPOSING THE  
DRIVERS OF REDUCED WATER CONSUMPTION IN LAS VEGAS, NV**

Christa Brelsford, Santa Fe Institute  
Co-Author(s): Joshua Abbott, Arizona State University

**SUBSIDIES FOR SUCCULENTS: THE WELFARE IMPACTS OF LAS  
VEGAS' CASH-FOR-GRASS REBATE PROGRAM**

Jonathan Baker, Harvard University

**ENDURING EFFECTS OF CHANGES IN BILLING FREQUENCY:  
EVIDENCE FROM URBAN WATER USE**

Casey Wichman, Resources for the Future

## AERE Summer Conference Special Session

June 10, 2016 in Breckenridge, Colorado

### *The 2010 Gulf of Mexico Oil Spill: Estimating the Economic Losses*

On April 20, 2010, an explosion on the *Deepwater Horizon* oil rig in the Gulf of Mexico led to the largest oil spill in US waters. This session presents research that two interdisciplinary teams conducted over a five-year period to assess the economic losses arising from the spill.

#### *I. Recreational Losses*

**Time:** 1:00-3:00pm, Imperial Ballroom

**Abstract:** In May 2010 a group of state and federal agencies (“natural resource trustees”) assembled a team of experts to estimate the value of recreational losses incurred by US households as a result of injuries to natural resources from the release of oil into the Gulf of Mexico from the Macondo well. The expert team was instructed by the trustees to choose and implement the most reliable methods capable of estimating recreational losses. Overflight photos and onsite surveys were used to estimate lost recreational user days within the spill area. Phone surveys were used to collect information on a nationally representative sample’s recreational trips to coastal sites in Texas, Louisiana, Mississippi, Alabama, Florida and Georgia. The value of a lost user day was then estimated from a random utility model of recreational participation and site choice. This session will summarize the research conducted by a team of economists and survey research experts leading to an estimate of recreational losses.

**Moderator:** **Norman Meade**, National Oceanographic Atmospheric Administration (NOAA)

#### **Presentation 1 – *Overview***

**Adam Domanski**, NOAA

#### **Presentation 2 – *Estimating Lost User Days***

**Eric Horsch**, Industrial Economics, Inc. (IEc)

#### **Presentation 3 – *Valuation Data Collection Efforts***

**Mike Welsh**, IEc

#### **Presentation 4 – *A Model of Recreational Behavior***

**Frank Lupi**, Michigan State University (MSU)

#### **Presentation 5 – *Recreational Losses & Sensitivities***

**Roger von Haefen**, North Carolina State University (NCSU)

#### **Presentation 6 – *Lessons Learned***

**Roger Tourangeau**, Westat and **Eric English**, Bear Peak Economics

**Recreation Research Team (listed alphabetically):** Ismael Flores Cervantes, Westat; Adam Domanski, NOAA; Eric English, Bear Peak Economics; Joseph Herriges, MSU; Eric Horsch, IEc; Chris Leggett, Bedrock Statistics; Frank Lupi, MSU; Ted McConnell, UMD; Norman Meade, NOAA; Jason Price, IEc; Roger Tourangeau, Westat; Roger von Haefen, NCSU; Mike Welsh, IEc

## ***II. Total Value Losses***

**Time:** 3:15-5:15pm, Imperial Ballroom

**Abstract:** In May 2010 a group of state and federal agencies (“natural resource trustees”) assembled a team of experts to estimate the value of the total economic loss incurred by US households as a result of injuries to natural resources from the release of oil into the Gulf of Mexico from the Macondo well. The expert team was instructed by the trustees to choose and implement the most reliable measurement technique capable of estimating the total economic loss. Contingent Valuation was chosen as the most reliable technique. This session will summarize the research conducted by an interdisciplinary team of economists, psychologists, sociologists, and survey research experts leading to an estimate of total value loss.

**Moderator:** Norman Meade, NOAA

**Presentation 1 – *Study Design/Overview***

Raymond J. Kopp, Resources for the Future (RFF)

**Presentation 2 – *Economic Theory of Lost Total Value***

V. Kerry Smith, Arizona State University (ASU)

**Presentation 3 – *Structure of the Contingent Valuation Questionnaire and Survey Administration***

Roger Tourangeau, Westat

**Presentation 4 – *Issues of Statistical Estimation***

Richard Carson, University of California, San Diego

**Presentation 5 – *Tests of Price and Quantity Hypotheses***

V. Kerry Smith, ASU

**Presentation 6 – *Measures of Survey Reliability/Validity***

Jon Krosnick, Stanford University

**Presentation 7 – *Summary/Lessons Learned***

Kevin Boyle, Virginia Tech

**Total Value Research Team (listed alphabetically):** Richard Bishop, University of Wisconsin; Kevin Boyle, Virginia Tech; Richard Carson, University of California, San Diego; Matt DeBell, Stanford University; Michael Hanemann, ASU; Ray Kopp, RFF; Barbara Kanninen, BK Econometrics; Matt Konopka, Prospect Analytics; Jon Krosnick, Stanford University; John List, University of Chicago; Norman Meade, NOAA; Chip Patterson, IEC; Stanley Presser, UMD; Nora Scherer, IEC; V. Kerry Smith, ASU; Roger Tourangeau, Westat; Mike Welsh, IEC; Jeffrey Wooldridge, MSU

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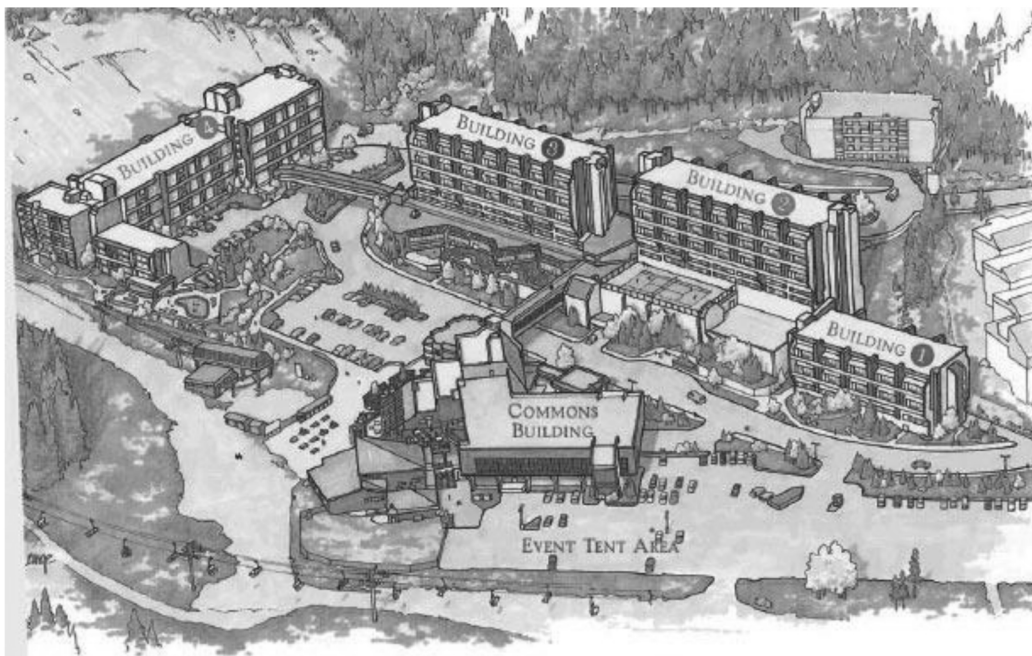
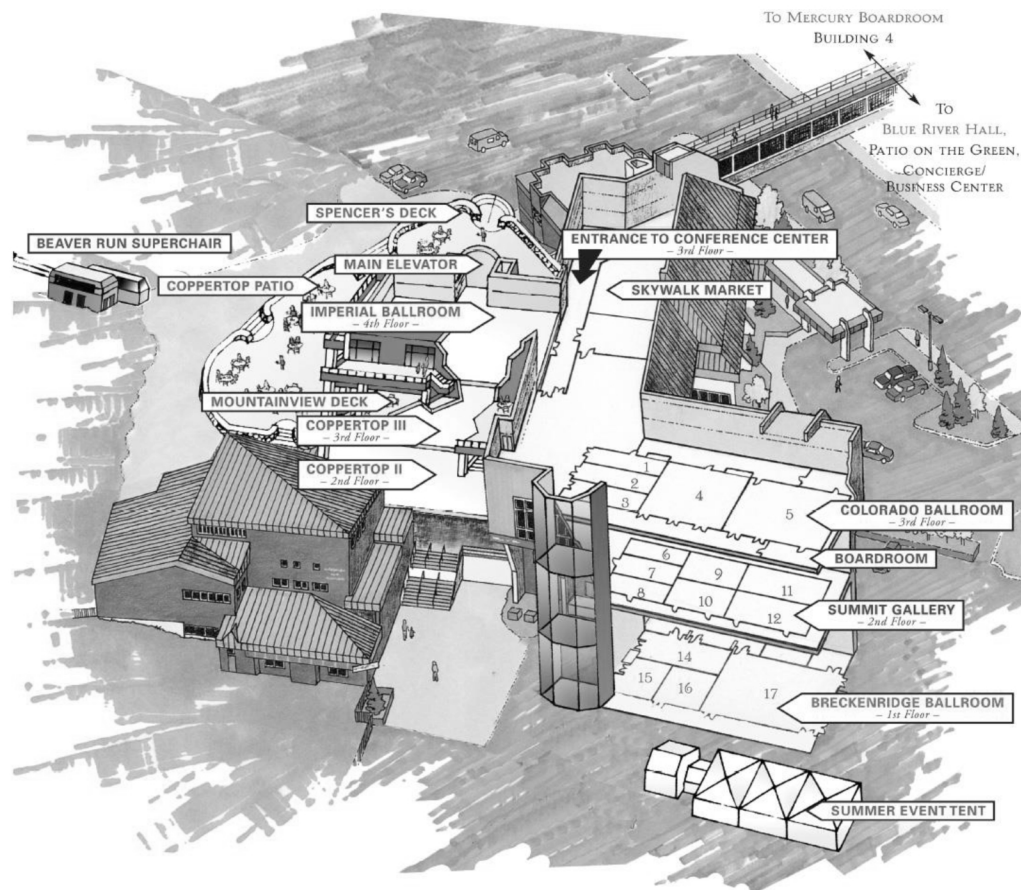
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# Beaver Run Conference Center



<http://www.beaverrun.com/location-property-map>

## Conference Participants

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Ryan	Abman	San Diego State University
W.L. (Vic)	Adamowicz	University of Alberta
Ethan	Addicott	Yale University
Heidi	Albers	University of Wyoming
Soren	Anderson	Michigan State University
Maximilian	Auffhammer	University of California, Berkeley
Michele	Baggio	University of Connecticut
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Lint	Barrage	Brown University
Scott	Barrett	Columbia University
Kathleen	Bell	University of Maine
Allan	Beltran	University of Birmingham
Julia	Berazneva	Cornell University
Mark	Berkman	The Brattle Group
Xiang	Bi	University of Florida
David	Bielen	National Renewable Energy Laboratory
Katie Jo	Black	University of Pittsburgh
Joshua	Blonz	University of California, Berkeley
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Judson	Boomhower	Stanford University
Severin	Borenstein	University of California, Berkeley
Kevin	Boyle	Virginia Tech
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Zachary	Brown	North Carolina State University
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Gabriel	Chan	University of Minnesota

Nathan	Chan	Colby College
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Lawson	Connor	North Carolina State University
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Maureen	Cropper	University of Maryland, College Park
Mark	Curtis	Georgia State University
Felipe	de Figueiredo Silva	University of Nebraska-Lincoln
Guilherme	DePaula	Yale University
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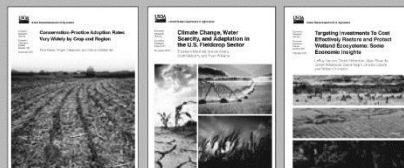
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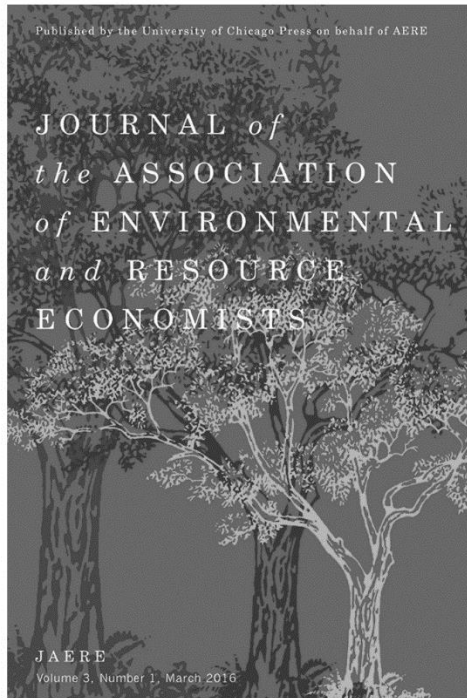
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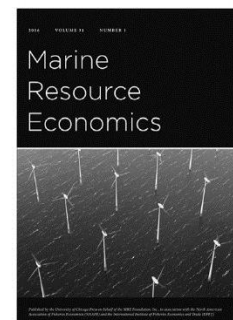
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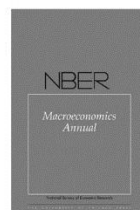
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**Gothenburg, Sweden**

**June 25<sup>th</sup>-29<sup>th</sup>, 2018**

The Association of Environmental and Resource Economists (AERE), the East Asian Association of Environmental and Resource Economics (EAAERE), and the European Association of Environmental and Resource Economists (EAERE), announce that the 6th World Congress of Environmental and Resource Economists will be held in Gothenburg, Sweden, from June 25<sup>th</sup> to June 29<sup>th</sup>, 2018. The Congress will be organized by the University of Gothenburg, with Prof. Thomas Sterner chairing the Local Organizing Committee. The Program Committee Co-Chairs will soon be announced.

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