

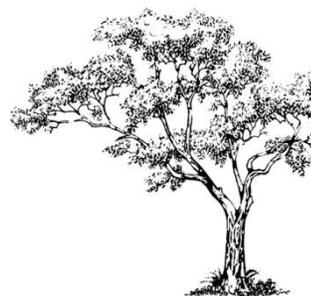
**Association of Environmental and Resource Economists  
(AERE) 4<sup>th</sup> Annual Summer Conference**

**June 3-5, 2015**

**U.S. Grant Hotel, San Diego, California**



AERE Summer Conferences—Excellence in  
academic programming and collegiality in  
destinations worth visiting



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**Welcome to the fourth Annual AERE Summer Conference** in beautiful San Diego! The AERE conferences have exceeded our expectations as places for presenting and debating exciting research—the San Diego conference promises to be this year's professional and social highlight! I wish all attendees a wonderful time.

I also want to express my deep appreciation to our San Diego Conference Organizing Committee, co-chaired by Mary Evans and Andrew Plantinga, with support from Susan Capalbo and Junjie Zhang, who have put together an outstanding program of Sponsored Sessions, General Sessions, Poster Session, and pre-conference workshop. Be sure to thank

them for many hours of effort. Enjoy the presentations from colleagues familiar to you but please also make sure to welcome the many graduate student presenters and attendees to our association and profession. Finally, a huge thank you is owed to the sponsors of our conference.

Vic Adamowicz, AERE President

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**Welcome to San Diego!** We look forward to a thought-provoking and stimulating conference with papers presented on a wide range of topics in environmental and natural resource economics. We hope that this year's seaside setting will lead to a lively and engaging discussion of the cutting-edge research and policy issues in the our field.

This conference takes a great deal of organization. It would not be possible without the assistance of several people putting in countless hours of work. We would like to thank our colleagues on the Organizing Committee—Susan Capalbo and Junjie Zhang—for their excellent work on all aspects of the program and in particular on the Poster Session. We would also like to thank Susanne Dieper and Lynn Van Norstrand (of Future Field Solutions), Dallas Burtraw (Treasurer), Vic Adamowicz (President) and Alan Krupnick (Past President) for their support. We extend a great deal of gratitude to Marilyn Voigt, without whom managing this complex process would not have been possible, and Adam Jorge for his careful work in helping us put together the program. Finally, we thank the AERE Board for the opportunity to organize the conference and to host AERE 2015.

Mary Evans and Andrew Plantinga  
Co-Chairs of the 4th Annual AERE Summer Conference 2015



**AERE GRATEFULLY ACKNOWLEDGES THE SUPPORT PROVIDED FOR THIS CONFERENCE BY:**

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The Brattle Group



Industrial Economics

**UCLA** Luskin School of Public Affairs



UCLA Luskin Center for Innovation

## KEYNOTE SPEAKER: PROFESSOR M. SCOTT TAYLOR

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Professor Taylor is the Canada Research Chair in International, Energy and Environmental Economics at the University of Calgary, Alberta. He is also a Research Associate at the National Bureau of Economic Research (NBER) in both the International Trade and Investment, and Energy and Environmental Economics working groups and a fellow of the Beijer Institute of Ecological Economics. In addition, he is a CESifo associate and a research professor at the Ifo Institute, Germany.

In 2004, Professor Taylor's book "International Trade and the Environment: Theory and Evidence" (joint with Brian Copeland) won the Doug Purvis Prize for its outstanding contribution to Canadian Economic Policy. In 2010, he was awarded an Honorary Doctorate by the University of Basel, Switzerland for his pioneering work on trade, the environment, and renewable resources. In 2014 Scott Taylor was named fellow to the Royal Society of Canada (RSC), the highest honor that can be attained by scholars, artists and scientists in Canada.

Professor Taylor's research focuses on the interaction of international markets, economic growth, and environmental outcomes. His most influential works examine how the level of pollution concentrations in major cities is affected by changes in industrial production brought about by international trade and/or economic growth. Other important work connects the health of biological resources such as fish and forest stocks to the pressures brought about by globalization. He has investigated the role natural resource collapses have played in the rise and fall of prehistoric societies, how growth and trade jointly determine environmental outcomes, and how access to international markets affects research, development, and long run growth.

Professor Taylor's publications have appeared in the American Economic Review, Quarterly Journal of Economics, Review of Economic Studies, International Economic Review, Journal of International Economics, Journal of Environmental Economics and Management, Canadian Journal of Economics, and Resource and Energy Economics.

### **KEYNOTE ADDRESS: "THE BEGINNING OF THE END OF THE FOSSIL FUEL ERA?"**

Thursday, June 4, 2015 at 2:00 p.m. in the Presidential Ballroom

Wednesday, June 3, 2015									
7:00-8:30 am	Pre-conference workshop check-in and breakfast, Executive Corridor								
8:30 am-5:00 pm	Pre-conference workshop, <i>Field Experiments: Design, Methods and Applications</i> , with Meredith Fowlie and Mushfiq Mobarak, Executive Room								
5:00-8:00 pm	Conference registration, Porte Cochere Entry (in hotel lobby)								
7:00-9:00 pm	Welcome reception, Palm Court								
Thursday, June 4, 2015									
7:30-9:00 am	Continental breakfast and conference registration, Presidential Ballroom Foyer								
9:00-10:30 am	<b>Parallel session 1</b>								
	Congressional Room	Executive Room	Senate Room	Sycuan Parlor	Horton Room	Grant A	Grant B	Grant C	Grant D
	Pollution Control: Other Instruments I	Developing Contemporary Guidelines for Stated-Preference Valuation	Climate Change I	Revealed Preference I	Growth and the Environment I	Regulation and Compliance I	Transportation I	Environment and Development I	Ecosystems I
10:30-11:00 am	Coffee and snack break, Grant Foyer and Presidential Ballroom Foyer								
11:00 am-12:30 pm	<b>Parallel session 2</b>								
	Congressional Room	Executive Room	Senate Room	Sycuan Parlor	Horton Room	Grant A	Grant B	Grant C	Grant D
	Fisheries I	<b>Sponsored Session 1:</b> Field Experiments I	Revealed Preference II	Ecosystems II	Technological Change I	Political Economy and the Environment	Pollution Control: Taxes	Trade and the Environment I	Forest Resources I
12:30-12:45 pm	Break								
12:45-1:15 pm	Lunch, Presidential Ballroom								
1:15-2:00 pm	AERE awards program, Presidential Ballroom								
2:00-2:45 pm	Keynote address by Professor M. Scott Taylor, "The Beginning of the End of the Fossil Fuel Era?", Presidential Ballroom								
2:45-3:00 pm	Coffee break, Grant Foyer and Presidential Ballroom Foyer								

3:00-4:30 pm	<b>Parallel session 3</b>								
	Congressional Room	Executive Room	Senate Room	Sycuan Parlor	Horton Room	Grant A	Grant B	Grant C	Grant D
	Employment and Distributional Effects of Environmental Policy	<b>Sponsored Session 2:</b> Evidence-based Ecosystem Management	Climate Change II	Stated Preference I	Spatial Analysis I	Revisiting the Energy Paradox and the Implications of Efficiency Standards: What do the Data say?	Agri-Environmental Policy I	Environment and Development II	Pollution Control: Other Instruments II
5:00-8:00 pm	AERE board meeting (invitation only), Vintage Room								
<b>Friday, June 5, 2015</b>									
7:30-8:30 am	Continental breakfast, Presidential Ballroom Foyer								
8:30-10:00 am	<b>Parallel session 4</b>								
	Congressional Room	Executive Room	Senate Room	Sycuan Parlor	Horton Room	Grant A	Grant B	Grant C	Grant D
	Health and the Environment	<b>Sponsored Session 3:</b> Big Data	Water Management I	Natural Disasters	Technological Change II	Climate Change and Agriculture	Non-renewable Resources	Environment and Development III	Environment and the Firm
10:00-10:30 am	Coffee and snack break, Grant Foyer and Presidential Ballroom Foyer								
10:30 am-12:00 pm	<b>Parallel session 5</b>								
	Congressional Room	Executive Room	Senate Room	Sycuan Parlor	Horton Room	Grant A	Grant B	Grant C	Grant D
	Irreversibility, Risk and Uncertainty	Environmental Regulations and Employment	Water Management II	Air Pollution	Regulation and Compliance II	Climate Change III	Transportation II	Energy I	Forest Resources II

12:00-1:30 pm	<b>Poster Session</b> and boxed lunch, Presidential Ballroom and Foyer								
1:30-3:00 pm	<b>Parallel session 6</b>								
	Congressional Room	Executive Room	Senate Room	Sycuan Parlor	Horton Room	Grant A	Grant B	Grant C	Grant D
	Pollution Control: Other Instruments III	<b>Sponsored Session 4:</b> Field Experiments II	Fisheries II	Climate Change IV	Growth and the Environment II	Stated Preference II	Pollution Control: Tradable Permits I	Trade and the Environment II	Ecosystems III
3:00-3:15 pm	Coffee break, Grant Foyer and Presidential Ballroom Foyer								
3:15-4:45 pm	<b>Parallel session 7</b>								
	Congressional Room	Executive Room	Senate Room	Sycuan Parlor	Horton Room	Grant A	Grant B	Grant C	Grant D
	International Environmental Agreements	New Applications of Spatial Analysis to Climate Change Issues	Water Pollution	No session	Spatial Analysis II	Pollution Control: Tradable Permits II	Agri-Environmental Policy II	Energy II	Forest Resources III

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**Presenters are listed in the program in boldface type.**

### Information on General Sessions:

General Sessions are 90 minutes each and typically include 4 papers. General Sessions do not have discussants. 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.

### Information on Sponsored Sessions:

Each Sponsored Session has 3 papers. Sponsored Sessions have discussants. Each presenter will have about 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, discussion, and Q&A) is allocated no more than 30 minutes, which will be strictly enforced by the session chair.

## WEDNESDAY, JUNE 3, 2015

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8:00 – 8:30 am	WORKSHOP BREAKFAST	Executive Room
8:00 – 10:00 am	CHECK-IN FOR PRE-CONFERENCE WORKSHOP	Executive Corridor
8:30 am – 5:00 pm	PRE-CONFERENCE WORKSHOP FIELD EXPERIMENTS: DESIGN, METHODS, AND APPLICATIONS Meredith Fowlie, University of California, Berkeley Mushfiq Mobarak, Yale University	Executive Room
7:00 – 9:00 pm	<b>WELCOME RECEPTION</b>	Palm Court
5:00 – 8:00 pm	<b>CONFERENCE REGISTRATION</b>	Porte Cochere Entry

## THURSDAY, JUNE 4, 2015

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7:30 – 9:00 am	<b>CONTINENTAL BREAKFAST AND CONFERENCE REGISTRATION</b>	Presidential Ballroom Foyer
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### PARALLEL SESSION 1

9:00 – 10:30 am	POLLUTION CONTROL: OTHER INSTRUMENTS 1 Chair: Brian C. Murray, Duke University	Congressional Room
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A Proximate Mirror: Greenhouse Gas Rules and Strategic Behavior Under the U.S. Clean Air Act  
Dallas Burtraw, Resources for the Future; **Karen Palmer, Resources for the Future**; Sophie Pan, Resources for the Future; Anthony Paul, Resources for the Future

Incentives and Additionality in Energy Efficiency Subsidies  
**Benjamin Gilbert, University of Wyoming**; Jacob LaRiviere, University of Tennessee; Kevin Novan, University of California, Davis

Energy Efficiency and Intensity Standards  
Harrison Fell, Colorado School of Mines; **Daniel Kaffine, University of Colorado Boulder**; Daniel Steinberg, National Renewable Energy Lab

Regulating Existing Power Plants under the U.S. Clean Air Act: Future Consequences of Current Choices  
**Brian C. Murray, Duke University**; Billy Pizer, Duke University; Martin Ross, Duke University

9:00 – 10:30 am      DEVELOPING CONTEMPORARY GUIDELINES FOR STATED PREFERENCE VALUATION      Executive Room

Chair: Robert Johnston, Clark University

Introduction: The Need for Contemporary Stated-Preference Guidelines  
**Michael Hanemann, Arizona State University**

Guidelines for Design and Testing of Stated-Preference Scenarios  
**Vic Adamowicz, University of Alberta**

Guidelines for the Analysis and Interpretation of Stated-Preference Data  
**Trudy Cameron, University of Oregon**

Procedures to Enhance and Evaluate Stated-Preference Validity  
**Robert J. Johnston, Clark University**

Guidelines for the Reporting and Use of Stated-Preference Estimates  
**Kevin J. Boyle, Virginia Tech**

Panel Discussion  
Moderator: **Catherine Kling, Iowa State University**

9:00 – 10:30 am      CLIMATE CHANGE I      Senate Room

Chair: Alice Favero, Georgia Institute of Technology

Optimal Regulation of Carbon and Co-pollutants with Spatially Differentiated Damages  
**Christine Crago, University of Massachusetts, Amherst**; John Stranlund, University of Massachusetts, Amherst

Global Warming as a Non-uniform Public Bad: the Differential Game Model Revisited  
**Louis Gaetan Giraudet, CIRED**

Mechanism Choice in Emission Allowance Auctions: an Empirical Analysis of the Sulfur Dioxide Allowance Auction  
**Rong Zhou, University of Connecticut**

The Role of Carbon Dioxide Removal Techniques to Counteract Anthropogenic Climate Change: BECCS vs. REDD  
**Alice Favero, Georgia Institute of Technology**; Robert Mendelsohn, Yale University; Brent Sohngen, Ohio State University

- 9:00 – 10:30 am REVEALED PREFERENCE I Sycuan Parlor  
 Chair: Adam Domanski, National Oceanic and Atmospheric Administration
- A Test of Proximity as a Proxy for Environmental Exposure in Hedonic Models  
**Taro Mieno, University of Minnesota**; John Braden, University of Illinois at Urbana-Champaign; Laura Taylor, North Carolina State University
- Learning in a Hedonic Framework: Valuing Brownfield Remediation  
**Lala Ma, University of Kentucky**
- Social-Ecological Dynamics of Aquatic Species Invasions on a Lake-Rich Landscape  
**Katherine Zipp, Penn State University**; David Lewis, Oregon State University; William Provencher, University of Wisconsin-Madison
- Assessing Economic Benefits Associated with Reductions in Marine Debris at Southern California Beaches: a Random Utility Travel Cost Model  
 Christopher Leggett, Statistics and Economics Consulting; Nora Scherer, Industrial Economics, Inc.; Timothy Haab, Ohio State University; Ryan Bailey, Industrial Economics, Inc.; Jason Landrum, United States Agency for International Development; **Adam Domanski, National Oceanic and Atmospheric Administration**
- 9:00 – 10:30 am GROWTH AND THE ENVIRONMENT I Horton Room  
 Chair: Don Fullerton, University of Illinois
- Environmental Policy and Structural Environmental Change  
**Christos Makridis, Stanford University**
- Demographic Change, the One-Child Policy, and Climate Change Mitigation in China  
**Da Zhang, Massachusetts Institute of Technology**; Valerie Karplus, Massachusetts Institute of Technology; Sebastian Rausch, ETH Zurich
- Environmental Engel Curves  
 Arik Levinson, Georgetown University; **James O'Brien, Gettysburg College**
- A Model of the Model: Unpacking CGE Results on Leakage from Climate Policy  
 Kathy Baylis, University of Illinois; **Don Fullerton, University of Illinois**; Daniel Karney, Ohio University

9:00 – 10:30 am

REGULATION AND COMPLIANCE I

Grant A

Chair: Valerie Karplus, Massachusetts Institute of Technology

The Clean Air Act Watch List: an Enforcement and Compliance Natural Experiment

**Mary Evans, Claremont McKenna College**

Harnessing Enforcement Leverage at the Border to Minimize Invasive Species Introductions from International Trade

Michael Springborn, University of California, Davis; **Amanda Lindsay, University of California, Davis**

Transportation, Partial Regulation, and Emissions Leakage: Evidence from the Fatality Analysis Reporting System

**Matthew Zaragoza-Watkins, Massachusetts Institute of Technology**

Firm Incentives and Environmental Control: Evidence from Chinese Cities

**Valerie Karplus, Massachusetts Institute of Technology**; Yasheng Huang, Massachusetts Institute of Technology; Da Zhang, Massachusetts Institute of Technology

9:00 – 10:30 am

TRANSPORTATION I

Grant B

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

Cars That Kill You? The Effect of Fuel Economy Standards on Vehicle Weight Dispersion

Antonio Bento, Cornell University; Kenneth Gillingham, Yale University; **Kevin Roth, University of California, Irvine**

Plug-in Vehicles and the Future of Road Infrastructure Funding in the United States

Matthew Kent, Indiana University & Purdue University Indianapolis; **Jerome Dumortier, Indiana University & Purdue University Indianapolis**; Seth Payton, Indiana University & Purdue University Indianapolis

Designing Policy Incentives for Cleaner Technologies: Lessons from California's Plug-in Electric Vehicle Rebate Program

J. DeShazo, University of California, Los Angeles; **Tamara Sheldon, University of California, San Diego**; Richard Carson, University of California, San Diego

Searching for Hidden Costs: a Technology-Based Approach to the Energy Efficiency Gap in Light-Duty Vehicles

**Gloria Helfand, U.S. Environmental Protection Agency**; Jean-Marie Revelt, U.S. Environmental Protection Agency; Lawrence Reichle, Oak Ridge Institute for Science and Education; Kevin Bolon, U.S. Environmental Protection Agency; Mandy Sha, RTI International; Amanda Smith, RTI International; Robert Beach, RTI International

9:00 – 10:30 am	<b>ENVIRONMENT AND DEVELOPMENT I</b> Chair: Martino Pelli, Université de Sherbrooke	Grant C
	The Effects of Fuel-Efficient Cookstoves on Fuel Use, Particulate Matter, and Cooking Practices: Results from a Randomized Trial in Rural Uganda Theresa Beltramo, Impact Carbon; Garrick Blalock, Cornell University; David Levine, University of California, Berkeley; <b>Andrew Simons, Cornell University</b>	
	Poverty Levels and Vulnerability to Extreme Weather Events in Guatemala: a Subjective Economic Well Being Approach <b>Juan Robalino, CATIE &amp; University of California, Riverside</b>	
	Where There's Smoke...: Measuring Preferences for Improved Cookstove Attributes Using Choice Experiments in Northern Ghana <b>Katherine Dickinson, National Center for Atmospheric Research</b>	
	Far Away from the Forest and Close to Town? Fuelwood Markets in Rural India Ujjayant Chakravorty, Tufts University; <b>Martino Pelli, Université de Sherbrooke</b> ; Anna Risch, Université de Savoie	
9:00 – 10:30 am	<b>ECOSYSTEMS I</b> Chair: David Aadland, University of Wyoming	Grant D
	Protected Areas and Deforestation: New Results from High Resolution Panel Data <b>Susmita Dasgupta, The World Bank</b>	
	Evaluating Heterogeneous Conservation Effects of Forest Protection in Indonesia <b>Payal Shah, Okinawa Institute of Science and Technology</b> ; Kathy Baylis, University of Illinois	
	The Optimal Control of Invasive Species in Heterogeneous Environments James Goodenberger, Ohio State University; H. Allen Klaiber, Ohio State University; <b>Sathya Gopalakrishnan, Ohio State University</b>	
	Optimal Wildlife Management in the Greater Yellowstone Ecosystem <b>David Aadland, University of Wyoming</b> ; David Finnoff, University of Wyoming; Jacob Hochard, University of Wyoming; Charles Sims, University of Tennessee	
10:30 – 11:00 am	<b>COFFEE AND SNACK BREAK</b>	Grant Foyer and Presidential Ballroom Foyer

## PARALLEL SESSION 2

11:00 am–12:30 pm FISHERIES I

Congressional Room

Chair: Quinn Weninger, Iowa State University

The Economic Cost of Ignoring Fishery Induced Evolution

**Amanda Faig, University of California, Davis;** James Sanchirico, University of California, Davis; James E. Wilen, University of California, Davis; Marissa Baskett, University of California, Davis

Hitting Capacity: Implications for Outdoor Recreation Valuation

**Christopher Steiner, University of California, San Diego;** James Hilger, U.S. National Marine Fisheries Service

Bayesian Fishery Management under Multiple Uncertainty

**David Kling, Oregon State University**

Spatial Search and Learning on the Sea

**Quinn Weninger, Iowa State University**

11:00 am–12:30 pm SPONSORED SESSION 1: FIELD EXPERIMENTS I

Executive Room

Chair: Karen Palmer, Resources for the Future

Helpful Tool or Spam? Smart Meters, Personalized Feedback, and Customer Retention

**David Byrne, University of Melbourne;** Leslie Martin, University of Melbourne

Discussant: David Rapson, University of California, Davis

The Long-Term Impact of Matching and Rebate Subsidies When Public Goods Are Impure: Field Experimental Evidence from the Carbon Offsetting Market

**Martin Kesternich, Centre for European Economic Research (ZEW);**

Daniel Römer, Centre for European Economic Research (ZEW); Andreas Löschel, Westfälische Wilhelms-Universität Münster

Discussant: Karen Palmer, Resources for the Future

Behavioral Nudges in Competitive Environments: a Field Experiment of Defaults and Social Comparisons in a Conservation Contracting Auction

Paul Ferraro, Georgia State University; **Kent Messer, University of Delaware**

Discussant: Molly Macauley, Resources for the Future

11:00 am–12:30 pm REVEALED PREFERENCE II

Senate Room

Chair: Kelly Bishop, Arizona State University

Anchoring and Property Prices: The Influence of Echelle Des Crus Ratings on Land Sales in the Champagne Region of France

Olivier Gergaud, Kedge-Bordeaux Business School; **Andrew Plantinga, University of California, Santa Barbara**; Aurelie Ringeval-Deluze, Universite de Reims Champagne-Ardenne

Measuring Willingness to Pay for Environmental Attributes in Seafood

James Hilger, U.S. National Marine Fisheries Service; Eric Hallstein, The Nature Conservancy of California; **Andrew Stevens, University of California, Berkeley**; Sofia Villas-Boas, University of California, Berkeley

Incorporating Dynamic Behavior into the Hedonic Model

**Kelly Bishop, Arizona State University**; Alvin Murphy, Arizona State University

11:00 am–12:30 pm ECOSYSTEMS II

Sycuan Parlor

Chair: Jared Woollacott, RTI International

Optimal Dynamic Contracts with Endogenous Social Norms in Payment for Environmental Services Programs

Thorsten Janus, University of Wyoming; **Botao Qin, University of Wyoming**

Spatial-Dynamic Externalities and Strategic Behavior in Disease Control

**Shady S. Atallah, Purdue University**; Jon Conrad, Cornell University; Miguel Gomez, Cornell University

Modeling Ecosystems in General Equilibrium

**Jared Woollacott, RTI International**

11:00am–12:30 pm TECHNOLOGICAL CHANGE I

Horton Room

Chair: Massimo Tavoni, Fondazione Eni Enrico Mattei

Necessity is the Mother of Invention: Directed Technical Change and the British Industrial Revolution

David Stern, Australian National University; **John Pezzey, Australian National University**; Yingying Lu, Australian National University

From Fossil Fuels to Renewables: the Role of Electricity Storage

**Itziar Lazkano, University of Wisconsin-Milwaukee**; Linda Nøstbakken, Norwegian School of Economics (NHH); Martino Pelli, Université de Sherbrooke

Biased Technological Change and the Prevention of a Global Warming Induced Environmental Disaster

John Boyce, University of Calgary; **Younes Ahmadi, University of Calgary**

Directed Technological Change and Energy Efficiency Improvements

Jan Witajewski Baltvilks, European University Institute; Elena Verdolini, Fondazione Eni Enrico Mattei; **Massimo Tavoni, Fondazione Eni Enrico Mattei**

11:00 am–12:30 pm POLITICAL ECONOMY AND THE ENVIRONMENT

Grant A

Chair: Lint Barrage, Brown University

More than NIMBY: Understanding Environmental Conflicts in Large Projects

**Sebastian Miller, Inter American Development Bank**; Raul O'Ryan, Universidad Adolfo Ibanez

Advertising, Media Coverage, and Public Opinion about Climate Change

**Graham Beattie, University of Toronto**

Bribes, Bureaucracies, and Blackouts: Towards Understanding How Corruption Impacts Electricity Reliability

**Jacquelyn Pless, Colorado School of Mines**; Harrison Fell, Colorado School of Mines

Is Regulatory Rulemaking State-Contingent? An Empirical Analysis

**Lint Barrage, Brown University**

11:00 am–12:30 pm POLLUTION CONTROL: TAXES

Grant B

Chair: Jared Carbone, Colorado School of Mines

The Implications of Heterogeneity for the Regulation of Energy-Consuming Durable Goods

Mark Jacobsen, UC San Diego; Christopher Knittel, Massachusetts Institute of Technology; James Saltee, University of Chicago; **Arthur van Benthem, University of Pennsylvania**

The Effects of Efficient Environmental Damage Pricing in the Power Sector

**Daniel Shawhan, Resources for the Future**

Fuel Prices, Restructuring, and Natural Gas Plant Efficiency

**Matthew Doyle, Colorado School of Mines**; Harrison Fell, Colorado School of Mines

An Evaluation of the Performance of Applied General Equilibrium Models on the Impacts of a Carbon Tax

**Jared Carbone, Colorado School of Mines**; Nicholas Rivers, University of Ottawa; Akio Yamazaki, University of Calgary; Hidemichi Yonezawa, University of Ottawa

11:00 am–12:30 pm TRADE AND THE ENVIRONMENT I

Grant C

Chair: J. Scott Holladay, University of Tennessee

The CO<sub>2</sub> Content of Consumption Across US Regions: a Multi-Regional Input-Output (MRIO) Approach

**Justin Caron, Massachusetts Institute of Technology**; Gilbert Metcalf, Tufts University; John Reilly, Massachusetts Institute of Technology

Green Innovation and Green Imports: Links between Environmental Policies, Innovation, and Trade

**Claire Brunel, Georgetown University**

Battle for Climate and Scarcity Rents: Beyond the Linear-Quadratic Case

**Mark Kagan, VU University Amsterdam**; Frederick van der Ploeg, University of Oxford; Cees Withagen, VU University Amsterdam

The Environmental Performance of Foreign Owned Manufacturing Establishments in the United States

**J. Scott Holladay, University of Tennessee**

Chair: Sahan Dissanayake, Colby College

Gaming the Baseline: Certified Timber Production in Cameroon  
**Jacqueline Doremus, University of Michigan**

It's Complicated: Direct vs. Incentive-Based Land Conservation in Mexico  
**Katharine Sims, Amherst College**; Jennifer Alix-Garcia, University of Wisconsin

Estimating the Cost of Reducing Deforestation from Agricultural Supply Chains: a Case Study in Kalimantan, Indonesia  
**Ruohong Cai, Environmental Defense Fund**; Ruben Lubowski, Environmental Defense Fund; Kemen Austin, Duke University

Preferences for REDD+ Contract Attributes: Examples from Choice Experiments in Ethiopia and Nepal  
**Sahan Dissanayake, Colby College**; Bhim Adhikari, IDRC; Abebe Beyene, Ethiopian Development Research Institute; Rajesh Bista, ForestAction Nepal; Randy Bluffstone, Portland State University and EfD; Initia Zenebe Gebreegziabher, Mekelle University; Prakash Jha, ForestAction Nepal; Harisharan Luintel, ForestAction Nepal and Portland State University; Peter Martinsson, University of Gothenburg; Alemu Mekonnen, Addis Ababa University; Naya Paudel, ForestAction Nepal; E. Somanathan, Indian Statistical Institute; Mike Toman, World Bank

12:30 – 12:45 pm BREAK

12:45 – 1:15 pm **LUNCH** Presidential Ballroom

1:15 – 2:00 pm **AERE AWARDS PROGRAM** Presidential Ballroom

2:00 – 2:45 pm **KEYNOTE ADDRESS** Presidential Ballroom  
**“THE BEGINNING OF THE END OF THE FOSSIL FUEL ERA?”**  
**PROFESSOR M. SCOTT TAYLOR**

2:45 – 3:00 pm **COFFEE BREAK** Grant Foyer and Presidential Ballroom Foyer

### PARALLEL SESSION 3

3:00 – 4:30 pm

EMPLOYMENT AND DISTRIBUTIONAL  
EFFECTS OF ENVIRONMENTAL POLICY

Congressional Room

Chair: Glenn Sheriff, U.S. Environmental Protection Agency

Labor Market Dynamics and the Heterogeneous Effects of Environmental Regulation

**Mark Curtis, Wake Forest University**

Pollution and Labor Supply in a Contest Environment: Evidence from Outdoor Tennis Tournaments in Beijing

Teng Li, National University of Singapore; Haoming Liu, National University of Singapore; Jingfeng Lu, National University of Singapore;

**Alberto Salvo, National University of Singapore**

Do Industries Pollute More in Poorer Neighborhoods? Evidence from Toxic Releasing Plants in Mexico

**Lopamudra Chakraborti, CIDE**; Michael Margolis, CIDE; Jaime Sainz, CIDE

Ranking Distributions of Environmental Outcomes

**Glenn Sheriff, U.S. Environmental Protection Agency**; Kelly Maguire, U.S. Environmental Protection Agency

3:00 – 4:30 pm

SPONSORED SESSION 2: EVIDENCE-BASED  
ECOSYSTEM MANAGEMENT

Executive Room

Chair: Catherine Kling, Iowa State University

The Evolution of Institutions in Local Mechanisms of PES. an Experimental Approach to the Mexican Matching Funds Program

Alex Pfaff, Duke University; **Luz Rodriguez, Duke University**; Elizabeth Shapiro, Duke University

Discussant: Katherine Sims, Amherst College

Agricultural Cost Sharing and Water Quality in the Chesapeake Bay: Estimating Substitution Effects among Conservation Practices

**Patrick Fleming, University of Maryland**

Discussant: Catherine Kling, Iowa State University

Evaluation of the Permanence of Land Use Change Induced by Payments for Environmental Services at Two Sites in Latin America

**Stefano Pagiola, World Bank**; Jordi Honey-Roses, University of British Columbia; Jaume Freire-González, ENT Environment and Management

Discussant: David Lewis, Oregon State University

3:00 – 4:30 pm

CLIMATE CHANGE II

Senate Room

Chair: Casey Wichman, University of Maryland

Adaptation to Climate Change through Crop Choice: a High Resolution Analysis

Ariel Ortiz-Bobea, Cornell University; **Haoying Wang, Cornell University**; Shun Chonabayashi, Cornell University

Targets, Taxes, and Learning: Optimizing Climate Policy under Knightian Damages

**Ivan Rudik, University of Arizona**

Economic Impacts of Climate Change on Chinese Agriculture: The Importance of Relative Humidity and Other Climatic Variables

**Peng Zhang, University of California, Santa Barbara**; Junjie Zhang, University of California, San Diego; Minpeng Chen, Chinese Academy of Agricultural Sciences

The Effect of Water Supply Shocks on the Electricity Generation Mix: Implications for Climate Change

**Casey Wichman, University of Maryland**; Jonathan Eyer, North Carolina State University

3:00 – 4:30 pm

STATED PREFERENCE I

Sycuan Parlor

Chair: Laura Taylor, North Carolina State University

WTP for Amazon Rainforest Protection

**Alan Krupnick, Resources for the Future**; Juha Siikamaki, Resources for the Future; Jon Strand, World Bank; Jeffrey Vincent, Duke University

Comparison of Wildland Urban Interface Households WTP for Public and Private Wildfire Risk Reduction in California and Florida: a Mixed Logit Analysis

José Sánchez, USDA Forest Service; John Loomis, Colorado State University; **Armando Gonzalez-Caban, USDA Forest Service**; Thomas Holmes, U.S. Department of Agriculture

Choice Set Formation for Outdoor Destinations: the Role of Motivations and Preference Discrimination in Site Selection for the Management of Public Expenditures on Protected Areas

**Mara Thiene, University of Padova**; Joffre Swait, University of Technology, Sydney; Riccardo Scarpa, University of Waikato

The Amenity Costs of Offshore Wind Farms: Evidence from a Choice Experiment

**Laura Taylor, North Carolina State University**; Daniel J. Phaneuf, University of Wisconsin; Sanja Lutzeyer, McKinsey & Co.

3:00 – 4:30 pm

SPATIAL ANALYSIS I

Horton Room

Chair: Kathy Baylis, University of Illinois

Optimal Management of Spatial-Dynamical Natural Resource Systems: the Addition of Dispersal Controls to Traditional Metapopulation Models

**Kailin Kroetz, Resources for the Future**; James Sanchirico, University of California, Davis

Coastal Land Use Regulation and Amenities

**Christopher Severen, University of California, Santa Barbara**; Andrew Plantinga, University of California Santa Barbara

There Will Be Blood: Crime Rates in Shale-Rich U.S. Counties

**Alexander James, University of Alaska Anchorage**

Goldilocks and the Grid: Selecting Spatial Scale when Evaluating Conservation Policies

Andre Avelino, University of Illinois; **Kathy Baylis, University of Illinois**; Jordi Honey-Roses, University of British Columbia

3:00 – 4:30 pm

REVISITING THE ENERGY PARADOX

Grant A

AND THE IMPLICATIONS OF EFFICIENCY STANDARDS: WHAT DO THE DATA SAY?

Chair: Michael Roberts, University of Hawaii

Can Energy Efficiency Standards Reduce Prices and Improve Quality? Evidence from the US Clothes Washer Market

**Arlan Zandro Brucal, University of Hawaii**; Michael Roberts, University of Hawaii

The Implications of Market Structure for Appliance Energy Efficiency Regulation

**C. Anna Spurlock, Lawrence Berkeley National Laboratory**

Revisiting the Energy Paradox: Do Price and Quantity of the Energy Efficient Appliances Respond to Changes in Energy Prices and Interest Rates?

Michael Roberts, University of Hawaii; **Hyun-gyu Kim, University of Hawaii**; Arlan Zandro Brucal, University of Hawaii

Do Minimum Standards Improve Quality? Evidence from a Revealed Preference Approach

**Sebastien Houde, University of Maryland**; C. Anna Spurlock, Lawrence Berkeley National Laboratory

3:00 – 4:30 pm

AGRI-ENVIRONMENTAL POLICY I

Grant B

Chair: Anita Chaudhry, California State University, Chico

Economic Valuation of Improved Water Quality and Ecosystem Services from Conservation Practices Targeted under Nutrient Reduction Strategies at the Watershed Level

**Mainul Hoque, Iowa State University**; Yongjie Ji, Iowa State University; Catherine Kling, Iowa State University

Costs of a Practice-Based Air Quality Regulation: Dairy Farms in the San Joaquin Valley

**Wei Zhang, Connecticut College**

Alternative Nutrient Management Policies and the Trade-offs between Agricultural Profits and Water Quality Improvements

Elena Irwin, Ohio State University; **Wendong Zhang, Ohio State University**

Determinants of Water Sales During Droughts: Evidence from Rice Farm-Level Data in California

**Anita Chaudhry, California State University, Chico**

3:00 – 4:30 pm

ENVIRONMENT AND DEVELOPMENT II

Grant C

Chair: Mushfiq Mobarak, Yale University

Electrification, Agricultural Productivity and Deforestation in Brazil

Juliano Assuncao, PUC-Rio; Molly Lipscomb, University of Virginia; Ahmed Mobarak, Yale University; **Dimitri Szerman, PUC-Rio and Climate Policy Initiative**

Supply Responses to Changes in Input Costs: Evidence from Sanitation Markets in Senegal

Jean Francois Houde, University of Pennsylvania; **Molly Lipscomb, University of Virginia**; Laura Schechter, UW Madison

Can a Rule-of-Thumb Tool Improve Fertilizer Management? Experimental Evidence from Bangladesh

**Mahnaz Islam, Harvard University**

Satellites, Self-reports, and Submersion: Exposure to Floods in Bangladesh

**Raymond Guiteras, University of Maryland**; Amir Jina, University of Chicago; Mushfiq Mobarak, Yale University

3:00 – 4:30 pm

POLLUTION CONTROL: OTHER INSTRUMENTS II  
Chair: Neha Khanna, Binghamton University

Grant D

Effects of Information-Based Regulation: Evidence from Hydraulic Fracturing

**T. Robert Fetter, Duke University**

Is Ignorance Bliss? Information Avoidance and Private Provision of Public Goods

**Yuanhao Li, University of Wyoming**; Jason Shogren, University of Wyoming; Klaas van 't Veld, University of Wyoming

Learning by Negligence - Novel Technologies, Environmental Harm and the Value of Information

Timo Goeschl, University of Heidelberg; **Tobias Pfrommer, Heidelberg University**

Voluntary Regulation Program and Government Regulation: Impacts of Responsible Care on OSHA Enforcement

Huan Li, SUNY-Binghamton; **Neha Khanna, Binghamton University**

5:00 – 8:00 pm

AERE BOARD MEETING  
By invitation only

Vintage Room

7:30 – 8:30 am      **CONTINENTAL BREAKFAST AND  
CONFERENCE REGISTRATION**      Presidential Ballroom Foyer

**PARALLEL SESSION 4**

8:30-10:00 am      HEALTH AND THE ENVIRONMENT      Congressional Room  
Chair: Vic Adamowicz, University of Alberta

Optimal Timing of Public Health Interventions in Response to Disease Outbreaks

**Charles Sims, University of Tennessee**

Unconventional Shale Gas Development, Risk Perceptions, and Averting Behavior: Evidence from Bottled Water Purchases

**Douglas Wrenn, Pennsylvania State University**; H. Allen Klaiber, Ohio State University; Edward Jaenicke, Pennsylvania State University

Pollution, Infectious Disease, and Infant Mortality: Evidence from the 1918-1919 Spanish Influenza Pandemic

**Karen Clay, Carnegie Mellon University**; Joshua Lewis, University of Montreal; Edson Severnini, Carnegie Mellon University

Marginal Willingness to Pay for Health Risk Reduction and Baseline Risk: Exogenous versus Endogenous Risks

Shelby Gerking, Tilburg University; **Vic Adamowicz, University of Alberta**; Mark Dickie, University of Central Florida; Marcella Veronesi, University of Verona and ETH Zurich

8:30-10:00 am      SPONSORED SESSION 3: BIG DATA      Executive Room  
Chair: Richard Carson, University of California, San Diego

The Value of Urgency: Evidence from Congestion Pricing Experiments

Antonio Bento, Cornell University; Kevin Roth, University of California, Irvine; **Andrew Waxman, Cornell University**

Discussant: Matthew Kahn, University of California, Los Angeles

Temperature and Temperament

**Patrick Baylis, University of California, Berkeley**

Discussant: Richard Carson, University of California, San Diego

Can High-frequency Data and Non-experimental Research Designs

Recover Causal Effects? Validation Using an Electricity Usage Experiment

Katrina Jessoe, University of California, Davis; **David Rapson, University**

**of California, Davis**; Doug Miller, University of California, Davis

Discussant: Severin Borenstein, University of California, Berkeley

8:30-10:00 am

WATER MANAGEMENT I

Senate Room

Chair: Ujjayant Chakravorty, Tufts University

Competition for Water: Farming vs. Fracking

Claudia Hitaj, U.S. Department of Agriculture; Andrew Boslett, University of Rhode Island; **Jeremy Weber, University of Pittsburgh**

Water Storage Capacities versus Conservation Efficiency: Substitutes or Complements?

**Yang Xie, University of California, Berkeley**; David Zilberman, University of California, Berkeley

Implications of Search Frictions for Tradeable Permit Markets

**Mani Rouhi Rad, University of Illinois**; Nicholas Brozovic, University of Illinois at Urbana-Champaign; Taro Mieno, University of Minnesota

Groundwater Depletion near Roads in the North China Plains

**Ujjayant Chakravorty, Tufts University**; Martino Pelli, Université de Sherbrooke

8:30-10:00 am

NATURAL DISASTERS

Sycuan Parlor

Chair: Francois Cohen, London School of Economics

An Imperfect Storm: FEMA, Insurance, and Climate Change

**David Kelly, University of Miami**; Marc Conte, Fordham University

Analyzing the Effect of Mobile Phone Alerts for Extreme Weather on Hazard Mitigating

**Jeffrey Ferris, University of Maryland**

How Should the US Spend Its \$6 Billion on Ebola Prevention?

**Kevin Berry, University of Wyoming**; David Finnoff, University of Wyoming; Peter Daszak, EcoHealth Alliance; Richard Horan, Michigan State University; Jason Shogren, University of Wyoming

Temperature and Mortality in Mexico

**Francois Cohen, London School of Economics**; Antoine Dechezlepretre, London School of Economics

8:30-10:00 am

TECHNOLOGICAL CHANGE II

Horton Room

Chair: Valentina Bosetti, FEEM, CASBS and Bocconi University

Is One Bird in the Hand Worth Two in the Bush? Second-Best Analysis of European Energy Policy Instruments

**Michael Huebler, Leibniz Universitaet Hannover;** Oliver Schenker, Centre for European Economic Research; Carolyn Fischer, Resources for the Future

Indirectly Induced Innovation: Consequences for Environmental Policy Analysis

**Steve Miller, University of California, Santa Barbara**

The Impact of CAFE Standards on the Technological Growth in the US Automobile Industry

**Yiwei Wang, Cornell University;** Antonio Bento, Cornell University; Kevin Roth, University of California, Irvine

Patent Transfer and Trade: the Case of Renewable Energy Generation

**Valentina Bosetti, FEEM, CASBS and Bocconi University;** Elena Verdolini, FEEM

8:30-10:00 am

CLIMATE CHANGE AND AGRICULTURE

Grant A

Chair: Jill Caviglia-Harris, Salisbury University

Climate Change Impacts on U.S. Agriculture: Accounting for the Option Value of Farmland in the Hedonic Approach

**Ariel Ortiz-Bobea, Cornell University**

Climate Change, Technical Change, and U.S. Corn Yields

**Jonathan McFadden, Iowa State University;** John Miranowski, Iowa State University

Adaptability of Irrigation to a Changing Monsoon in India: How Far Can We Go?

**Esha Zaveri, Pennsylvania State University;** Danielle Grogan, University of New Hampshire; Karen Fisher-Vanden, Pennsylvania State University; Steve Frolicking, University of New Hampshire; Douglas Wrenn, Pennsylvania State University

Choosing Between Intensive and Extensive Agricultural Practices in the Brazilian Amazon: Implications for Environmental Conservation

**Jill Caviglia-Harris, Salisbury University**

8:30-10:00 am

NON-RENEWABLE RESOURCES

Grant B

Chair: Linda Fernandez, Virginia Commonwealth University

Collusion in Mineral Commodity Markets: a Long-Run Perspective  
**Gordon Rausser, University of California, Berkeley;** Martin Stuermer,  
Federal Reserve Bank of Dallas

The Relationship Between Oil Price and Costs in the Oil and Gas Industry  
**Gerhard Toews, University of Oxford**

Understanding the 2001-2003 Boom in Natural Gas Capacity in the U.S.  
Electricity Sector  
**Kelly Stevens, Syracuse University**

Optimal Extraction of Natural Gas and Water Management in the  
Presence of Pollution Externalities and Resource Scarcity  
**Linda Fernandez, Virginia Commonwealth University;** Jens Schubert,  
Virginia Commonwealth University

8:30-10:00 am

ENVIRONMENT AND DEVELOPMENT III

Grant C

Chair: Randall Bluffstone, Portland State University

Migration and Climate Change in Rural Africa  
Cristina Cattaneo, FEEM; **Emanuele Massetti; Georgia Institute of  
Technology**

Agricultural Productivity, Labour Reallocation, and Industrial Production  
in the Short Run: Evidence from India  
**Jonathan Colmer, London School of Economics**

Deforestation and Smallholder Income: Evidence from Remittances to  
Nepal  
**Man Li, International Food Policy Research Institute;** Wei Zhang,  
International Food Policy Research Institute; Zhe Guo, International Food  
Policy Research Institute; Yanyan Liu, International Food Policy Research  
Institute; Prapti Bhandary, International Food Policy Research Institute

Does Collective Action Sequester Carbon? The Case of the Nepal  
Community Forestry Program  
**Randall Bluffstone, Portland State University;** Eswaran Somanathan,  
Indian Statistical Institute; Prakash Jha, ForestAction Nepal; Harisharan  
Luintel, ForestAction Nepal & Portland State University; Rajesh Bista,  
ForestAction Nepal; Mike Toman, World Bank; Naya Paudel, ForestAction  
Nepal; Bhim Adhikari, International Development Research Centre

8:30-10:00 am ENVIRONMENT AND THE FIRM Grant D  
 Chair: Klaas van 't Veld, University of Wyoming

Credit Constraints, Technology Upgrading, and the Environment  
**Dana Andersen, University of Alberta**

Financial Impact of Positive Environmental Media Release  
**Yanbing Wang, Purdue University**; Michael Delgado, Purdue University;  
 Neha Khanna, Binghamton University; Vicki Bogan, Cornell University

Firm Structure, Environmental Regulation, and Manufacturing Activities  
**Jingbo Cui, Wuhan University**

Overlapping Environmental and Financial Regulations: the Role of  
 Corporate Governance  
 Benjamin Gilbert, University of Wyoming; Sridhar Gogineni, University of  
 Wyoming; **Klaas van 't Veld, University of Wyoming**; Charlie Xu,  
 University of Wyoming

10:00 – 10:30 am **COFFEE AND SNACK BREAK** Grant Foyer and Presidential Ballroom Foyer

### PARALLEL SESSION 5

10:30am–12:00pm IRREVERSIBILITY, RISK AND UNCERTAINTY Congressional Room  
 Chair: Patricia Champ, U.S. Forest Service

Opposing Irreversibilities and Tipping Point Uncertainty in  
 Environmental Policy  
 Charles Sims, University of Tennessee; **David Finnoff, University of  
 Wyoming**

Controlling an Imported Disease in California Lettuce: a Dynamic  
 Structural Econometric Model of Short- vs. Long-Term Decision-Making  
**Christine Carroll, University of California, Davis**; Colin Carter,  
 University of California, Davis; C.-Y. Cynthia Lin, University of California,  
 Davis

Learning about a Moving Target in Resource Management: Optimal  
 Bayesian Disease Control  
**Matthew MacLachlan, University of California, Davis**; Michael  
 Springborn, University of California, Davis; Paul Fackler, North Carolina  
 State University

Risk Preferences and Wildfire Risk Mitigation  
**Patricia Champ, U.S. Forest Service**

10:30am–12:00pm ENVIRONMENTAL REGULATIONS AND EMPLOYMENT Executive Room  
Chair: Ronald Shadbegian, U.S. Environmental Protection Agency

How Will Climate Change Policies Affect Domestic Manufacturing?  
**Joseph Aldy, Harvard University**; William Pizer, Duke University

Unemployment and Environmental Regulation in General Equilibrium  
**Marc Hafstead, Resources for the Future**; Roberton Williams III,  
Resources for the Future & University of Maryland

Do Renewable Portfolio Standards Affect Manufacturing Activity Through  
Electricity Prices?

Ann Ferris, U.S. Environmental Protection Agency; **Wayne Gray, Clark  
University**; Ronald Shadbegian, U.S. Environmental Protection Agency;  
Ann Wolverton, U.S. Environmental Protection Agency

Ozone Regulations, Electricity Prices, and Labor Demand  
**Ronald Shadbegian, U.S. Environmental Protection Agency**

10:30am–12:00pm WATER MANAGEMENT II Senate Room  
Chair: Kenneth Baerenklau, University of California, Riverside

Water Use and Conservation in Manufacturing: Evidence from U.S.  
Microdata

**Randy Becker, U.S. Census Bureau**

How Do Population Growth and Climate Change Affect Water Use? An  
Econometric Analysis of Landscape Change  
**Daniel Bigelow, Oregon State University**; Andrew Plantinga, University  
of California, Santa Barbara; David Lewis, Oregon State University;  
Christian Langpap, Oregon State University

How Do Water Rights Institutions Affect Climate Change Impacts on  
Water Supply?

Karen Fisher-Vanden, Pennsylvania State University; Sheila Olmstead,  
University of Texas, Austin; **Renata Rimsaite, Pennsylvania State  
University**

Demand and Welfare Estimation under Block Rate Water Pricing  
**Kenneth Baerenklau, University of California, Riverside**

10:30am–12:00pm AIR POLLUTION

Sycuan Parlor

Chair: Junjie Zhang, University of California, San Diego

Severe Air Pollution and Labor Productivity

Teng Li, National University of Singapore; **Haoming Liu, National University of Singapore**; Alberto Salvo, National University of Singapore

What to Expect When You're Expecting: Estimating the Impact of Air Pollution on Theatrical Market

Xiaobo He, University of Adelaide; **Zijun Luo, Colgate University**; Junjie Zhang, University of California, San Diego

Air Pollution and Defensive Expenditures: Evidence from Particulate-Filtering Face Masks

Quan Mu, Peking University; **Junjie Zhang, University of California, San Diego**

10:30am–12:00pm REGULATION AND COMPLIANCE II

Horton Room

Chair: Jay Shimshack, University of Virginia

Price versus Quantity versus Hybrid Regulation in the Presence of Co-pollutants

**John Stranlund, University of Massachusetts, Amherst**; Insung Son, University of Massachusetts, Amherst

Price versus Quantities versus Indexed Quantities

**Frederic Branger, CIRED**; Philippe Quirion, CIRED

Local Economies and the Environment: Unemployment and State-level Enforcement of the Clean Water Act

Ryan Abman, University of California, Santa Barbara; **Katherine Grooms, Southwestern University**

Should Regulators Punish Frequent Violators more Severely? Evidence from Clean Water Act Enforcement

**Jay Shimshack, University of Virginia**; Michael Ward, Monash University

10:30am–12:00pm CLIMATE CHANGE III

Grant A

Chair: Christian Traeger, University of California, Berkeley

Climate Change and Coastal Development: Implications for Future  
Hurricane Damage and Federal Spending

**Terry Dinan, Congressional Budget Office**

Adaptation to Flooding Risk: Evidence on the Role of Technological  
Innovation and Social Learning

**Qing Miao, Syracuse University**

Adaptation to Climate Change: Extreme Events versus Gradual Changes  
**Sangjun Lee, Korea Energy Economics Institute**; Jinhua Zhao, Michigan  
State University

Analytic Integrated Assessment and Uncertainty

**Christian Traeger, University of California, Berkeley**

10:30am–12:00pm TRANSPORTATION II

Grant B

Chair: Steven Sexton, Duke University

Linking Housing and Automobile Purchase Decisions: Do Housing Supply  
Regulations Promote Green Cities?

Antonio Bento, Cornell University & NBER; **Joel Landry, Pennsylvania  
State University**; Edson Severnini, Carnegie Mellon University

The Impact of British Columbia's Carbon Tax: Estimating Heterogeneous  
Responses from Household Vehicle Fuel Use

**Vincent Thivierge, University of Ottawa**; Chad Lawley, University of  
Manitoba

When Buses Go to Market: Does Privatization Lower Costs?

Shanjun Li, Cornell University; **Matthew Kahn, University of California,  
Los Angeles**; Rhiannon Jerch, Cornell University

Estimating Indirect Emissions of Natural Gas Transportation Fuels: Are  
They Really Cleaner than Gasoline and Diesel?

**Steven Sexton, Duke University**

10:30am–12:00pm ENERGY I

Grant C

Chair: Jacob LaRiviere, University of Tennessee

Welfare and Distributional Implications of Unconventional Natural Gas  
**Catherine Hausman, University of Michigan**; Ryan Kellogg, University of Michigan

Federal Environmental Protection and the Distorted Search for Oil and Gas  
**Eric Lewis, University of Michigan**

Fracking, Farms and Property rights: the Impact of Unconventional Oil and Gas Development on Agriculture  
Timothy Fitzgerald, Montana State University; **Yusuke Kuwayama, Resources for the Future**; Sheila Olmstead, University of Texas, Austin

Quantifying Environmental Benefits of Fracking: the Decline of Coal & Air Quality  
**Jacob LaRiviere, University of Tennessee**; Nathan Tefft, Bates College; Hendrik Wolff, University of Washington

10:30am–12:00pm FOREST RESOURCES II

Grant D

Chair: Brent Sohngen, Ohio State University

The Conservation versus Production Trade-off: Does Livestock Intensification Increase Deforestation? Evidence from the Brazilian Amazon  
**Petterson Vale, London School of Economics**

The Impact of Brazil's Action Plan for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAM) on Reducing Deforestation: Lessons for REDD from a Synthetic Control Evaluation Design  
Paul Ferraro, Georgia State University; **Rhita Simorangkir, Georgia State University**; Jonah Busch, Center for Global Development; Jens Engelmann, Center for Global Development

Forest Law Enforcement through District Blacklisting in the Brazilian Amazon  
**Sophie Lian Zhou, University of Bonn**; Elias Cisneros, University of Bonn; Jan Boerner, University of Bonn

Will US Forests Continue to be a Carbon Sink?  
**Brent Sohngen, Ohio State University**; Justin Baker, RTI International

12:00 – 1:30 pm **BOXED LUNCH**

Presidential Ballroom Foyer

## POSTER SESSION

12:00 - 1:30 pm

Presidential Ballroom Foyer

Crop Choice, Rotational Effects and Water Quality Consequence in the Upper-Mississippi River Basin: Connecting Environmental Assessment Tools with a Dynamic Land Use Model

Yongjie Ji, Iowa State University; **Cathy Kling, Iowa State University**; Sergey Rabotyagov, University of Washington

The Impact of Relative Energy Prices on Firms' Performance

**Antoine Dechezleprêtre, Grantham Research Institute, London School of Economics**; Ralf Martin, Imperial College London; Misato Sato, Grantham Research Institute, London School of Economics

Bayesian Learning in Dynamic Stochastic Integration of Climate and Economy

**Yongyang Cai; University of Chicago**

Credit Constraints and Investments in Energy Efficiency: German Manufacturing in Close-up

Benjamin Lutz, Centre for European Economic Research; **Philipp Massier, Centre for European Economic Research**

Alerts Work! Air Quality Warnings and Cycling

**Soodeh Saberian, University of Ottawa**; Anthony Heyes, University of Ottawa; Nicholas Rivers, University of Ottawa

Negative Leakage in Subnational Climate Policy

Harrison Fell, Colorado School of Mines; **Peter Maniloff, Colorado School of Mines**

Agricultural Practice Adjustments to Policies Aiming to Mitigate Water Pollution

**Shanxia Sun, Purdue University**; Michael Delgado, Purdue University; Juan Sesmero, Purdue University

The Effects of Seawall in the Wake of Hurricane Ike: a Spatial Difference-in-Difference Approach

**Meri Davlasheridze, Texas A&M University**; Qin Fan, California State University, Fresno

Estimating the Impact of Water Quality Change Using Coupled Hydrological-Economic Model in the Upper Big Walnut Creek Watershed in Ohio

**Hongxing Liu, The Ohio State University**; Sathya Gopalakrishnan, The Ohio State University; Drew Browning, The Ohio State University

Evaluating the Effect of Stream Restorations: an Application in Switzerland

**Michele Baggio, University of Connecticut;** Charles Towe, University of Connecticut

Exploring Systematic Differences in the Value to Birders of Species Biodiversity: a Random Utility of Site Choice by eBird Participants

**Sonja Kolstoe, University of Oregon;** Trudy Ann Cameron, University of Oregon

Measuring the Value of Mercury and Acid Pollution in New York State through Property Values

**Chuan Tang, Clarkson University;** Martin Heintzelman, Clarkson University

A Study of Engel Curves and the Effects of Different Demographic Cohorts

**Jeffrey Englin, Arizona State University**

Optimal Stormwater Runoff Management Policy in a Dynamic Setting

**Olesya Savchenko, University of Illinois;** Amy Ando, University of Illinois

Flaring of Associated Natural Gas in the Bakken Shale

**Timothy Fitzgerald, Montana State University;** Case Stiglbauer, Montana State University

Agricultural Productivity and Soil Carbon Dynamics: a Bioeconomic Model

**Julia Berazneva, Cornell University;** Jon Conrad, Cornell University; David Guereña, Cornell University; Johannes Lehmann, Cornell University

Environmental Justice Viewed from Outer Space: Does Growing Income Inequality Affect the Distribution of Pollution Exposure?

**John Voorheis, University of Oregon**

## PARALLEL SESSION 6

1:30 - 3:00 pm POLLUTION CONTROL: OTHER INSTRUMENTS III Congressional Room  
Chair: James Bushnell, University of California, Davis

The Private Benefits of Residential Solar PV, and Who Gets Them  
**Severin Borenstein, University of California, Berkeley**

Using Smart Meter Data to Evaluate the Returns to Energy Efficiency Investments

**Kevin Novan, University of California, Davis;** Aaron Smith, University of California, Davis

Investment versus Output Subsidies: the Implications of Alternative Subsidies for Wind Investment

Joseph Aldy, Harvard University; **Todd Gerarden, Harvard University;** Rich Sweeney, Harvard University

Strategic Policy Choice in State-Level Regulation: the EPA's Clean Power Plan

**James Bushnell, University of California, Davis;** Stephen Holland, University of North Carolina, Greensboro; Jonathan Hughes, University of Colorado; Christopher Knittel, Massachusetts Institute of Technology

1:30 - 3:00 pm SPONSORED SESSION 4: FIELD EXPERIMENTS II Executive Room  
Chair: J.R. DeShazo, University of California, Los Angeles

Social Learning and Solar Photovoltaic Adoption: Evidence from a Field Experiment

**Kenneth Gillingham, Yale University;** Bryan Bollinger, Duke University; Hilary Staver, Energy + Environmental Economics (E3)  
Discussant: J.R. DeShazo, University of California, Los Angeles

A Field Experiment on Dynamic Electricity Pricing in Los Alamos: Opt-in versus Opt-out

**Wenjie Wang, Kyoto University**  
Discussant: Daniel Kaffine, University of Colorado, Boulder

Economics of a Light Bulb: Experimental Evidence on CFLs and End-User Behavior

**Robyn Meeks, University of Michigan**  
Discussant: Michael Roberts, University of Hawaii

1:30 - 3:00 pm

FISHERIES II

Senate Room

Chair: Dale Squires, National Marine Fisheries Service

Do Catch Shares Increase Ex-vessel Prices in U.S. Fisheries?

**Anna Birkenbach, Duke University**; David Kaczan, Duke University;  
Martin Smith, Duke University

Diversification or Specialization: the Impact of U.S. West Coast Trawl  
Rationalization on Multiregional Fishery Participation and Effort

**Lily Hsueh, Arizona State University**; Stephen Kasperski, National  
Oceanic Atmospheric Administration

A Global Game of Capital Divestment in a Quota-Managed Fishery

**Rajesh Singh, Iowa State University**; Quinn Weninger, Iowa State  
University

The Microeconomic Foundations of Renewable Resource Problems:  
Rethinking the Commons Problem

**Dale Squires, National Marine Fisheries Service**; Niels Vestergaard,  
University of Southern Denmark

1:30 - 3:00 pm

CLIMATE CHANGE IV

Sycuan Parlor

Chair: David Anthoff, University of California, Berkeley

Resolving Intertemporal Conflicts: Economics vs. Politics

**Antony Millner, London School of Economics**; Geoffrey Heal, Columbia  
University

The Climate Risk Premium

**Derek Lemoine, University of Arizona**

Individual Time Preferences and Energy Efficiency

**Richard Newell, Duke University**; Juha Siikamaki, Resources for the  
Future

Inequality and the Social Cost of Carbon

**David Anthoff, University of California, Berkeley**; Johannes  
Emmerling, Fondazione Eni Enrico Mattei

1:30 - 3:00 pm

GROWTH AND THE ENVIRONMENT II  
Chair: Mike Toman, World Bank

Horton Room

Learning, Fat-Tailed Uncertainty and Irreversible Green Capital Investment

**David Kelly, University of Miami**; Zhuo Tan, Hong Kong Baptist University

Assessing Future Sustainability by Forecasting Paths: Comparison of Genuine Savings and Inclusive Wealth

**Koji Tokimatsu, Tokyo Institute of Technology**; Rieko Yasuoka, System Research Center Co., LTD.; Masahiro Nishio, National Institute of Advanced Science and Technology

Economic Transformation Under Climate Uncertainty and Uncertain Return for New Technologies

**Mike Toman, World Bank**

1:30 - 3:00 pm

STATED PREFERENCE II  
Chair: Lynne Lewis, Bates College

Grant A

The Influence of Baseline Conditions on Stated Willingness to Pay

**Chris Moore, U.S. Environmental Protection Agency**; Chris Dockins, U.S. Environmental Protection Agency; Kelly Maguire, U.S. Environmental Protection Agency; Nathalie Simon, U.S. Environmental Protection Agency

Seemingly Irrelevant Attributes within Choice Experiments: Implications for Scenario Design and Welfare Analysis

**Robert Johnston, Clark University**; Christos Makriyannis, Clark University; Adam Whelchel, The Nature Conservancy

A Generalized Latent Class Logit Model of Discontinuous Preferences in Discrete Choice Data

**Zachary Brown, North Carolina State University**; Katherine Dickinson, National Center for Atmospheric Research

Spatial Decay in Willingness to Pay for Ecosystem Services: Does Perception of Distance Matter?

**Lynne Lewis, Bates College**

1:30 - 3:00 pm

POLLUTION CONTROL: TRADABLE PERMITS I

Grant B

Chair: Maureen Cropper, University of Maryland

Assessing the Additionality of the Clean Development Mechanism: Quasi-Experimental Evidence from India

**Antoine Dechezlepretre, London School of Economics**; Jonathan Colmer, London School of Economics; Caterina Gennaioli, Grantham Research Institute; Matthieu Glachant, Mines Paris Tech

The Impact of Heterogeneous NO<sub>x</sub> Regulations on Distributed Generation in U.S. Manufacturing

**Jonathan Lee, East Carolina University**

The Impact of Carbon Trading on Industry: Evidence from German Manufacturing Firms

**Sebastian Petrick, Kiel Institute for the World Economy**; Ulrich Wagner, Universidad Carlos III de Madrid

The Net Benefits of the Acid Rain Program: What Can We Learn from the Grand Policy Experiment?

Ron Chan, University of Manchester; Benjamin Chupp, Georgia Institute of Technology; **Maureen Cropper, University of Maryland**; Nicholas Muller, Middlebury College

1:30 - 3:00 pm

TRADE AND THE ENVIRONMENT II

Grant C

Chair: Reed Walker, University of California, Berkeley

Does Trade Make Firms Cleaner? Theory and Evidence From Indian Manufacturing

**Geoffrey Barrows, University of California, Berkeley**

International Outsourcing and Innovation in Clean Technologies

Antoine Dechezlepretre, London School of Economics; **Damien Dussaux, Mines Paris Tech**; David Hemous, INSEAD; Mirabelle Muuls, Imperial College London

Optimal Environmental Border Adjustments under the General Agreement on Tariffs and Trade

Edward Balistreri, Colorado School of Mines; Daniel Kaffine, University of Colorado, Boulder; **Hidemichi Yonezawa, University of Ottawa**

Why is Pollution from U.S. Manufacturing Declining? The Roles of Trade, Regulation, Productivity, and Preferences

**Reed Walker, University of California, Berkeley**

- 1:30 - 3:00 pm      ECOSYSTEMS III      Grant D  
 Chair: Christian Langpap, Oregon State University
- Beyond Biomass: Valuing Genetic Diversity in Natural Resource Management  
**Michael Springborn, University of California, Davis;** Amanda Faig, University of California, Davis; Marissa Baskett, University of California, Davis
- Implementing the Optimal Provision of Ecosystem Services under Climate Change  
**David Lewis, Oregon State University**
- Using Behavioral Ecology for Management of Ecosystem Services  
**David Finnoff, University of Wyoming**
- Preemptive Conservation of Endangered Species  
**Christian Langpap, Oregon State University;** JunJie Wu, Oregon State University

3:00 – 3:15 pm      **COFFEE BREAK**      Grant Foyer and Presidential Ballroom Foyer

### PARALLEL SESSION 7

- 3:15 - 4:45 pm      INTERNATIONAL ENVIRONMENTAL AGREEMENTS      Congressional Room  
 Chair: Gernot Wagner, Environmental Defense Fund
- Bargaining in Multilateral Negotiations  
**Alessandro Tavoni, London School of Economics**
- Climate Change Adaptation and International Environmental Agreements with Heterogeneous Agents  
**Horatiu Rus, University of Waterloo**
- Adaptation to Climate Change: How Does Heterogeneity in Adaptation Costs Affect Climate Coalitions?  
 Itziar Lazkano, University of Wisconsin, Milwaukee; **Walid Marrouch, Lebanese American University;** Bruno Nkuiya, University of California, Santa Barbara
- India in the Coming Climate G2?  
 Jonathan Camuzeaux, Environmental Defense Fund; Thomas Sterner, University of Gothenburg; **Gernot Wagner, Environmental Defense Fund**

3:15 - 4:45 pm      NEW APPLICATIONS OF SPATIAL ANALYSIS TO      Executive Room  
CLIMATE CHANGE ISSUES  
Chair: Adele Morris, Brookings Institution

Do Gasoline Prices Affect Residential Property Values?  
**Adele Morris, Brookings Institution**; Helen Neill, University of Nevada  
Las Vegas

How Do Housing Markets Evaluate Hurricane 'Near Misses'?  
**Margaret Walls, Resources For The Future**

Adaptation to Climate Change through Migration  
**Margarita Portnykh, University of California, Santa Barbara**

Household Demand for Low Carbon Policies: Evidence from California  
**Matthew Kahn, University of California, Los Angeles**

3:15 - 4:45 pm      WATER POLLUTION      Senate Room  
Chair: Dietrich Earnhart, University of Kansas

Consequences of the Clean Water Act  
**David Keiser, Iowa State University**; Joseph Shapiro, Yale University

Impacts of Information Resolution and Frequency on Non-point Source  
Polluter Behavior under an Ambient Tax/Subsidy Instrument  
**Haoran Miao, University of Rhode Island**

Stormwater Management and Suburban House Prices  
**Nicholas B. Irwin, Ohio State University**; H. Allen Klaiber, Ohio State  
University; Elena G. Irwin, Ohio State University

Coercion or Cooperation? An Analysis of Environmental Enforcement  
Strategy  
**Zach Raff, University of Kansas**; **Dietrich Earnhart, University of  
Kansas**

3:15 - 4:45 pm

SPATIAL ANALYSIS II

Horton Room

Chair: David Newburn, University of Maryland

The Effect of Downzoning for Managing Exurban Development

**David Newburn, University of Maryland;** Jeffrey Ferris, University of Maryland

Valuing the Open Spaces: Development Alternatives for Coastal Georgia

**Ajita Atreya, University of Pennsylvania;** Warren Kriesel, University of Georgia

The Determinants of Non-residential Real Estate Values with Special Reference to Local Environmental Goods

**Sofia Franco, Universidade NOVA de Lisboa; Bowman Cutter, Pomona College**

Testing the Effect of New Neighboring Open Space on Development

**Charles Towe, University of Connecticut**

3:15 - 4:45 pm

POLLUTION CONTROL: TRADABLE PERMITS II

Grant A

Chair: Ulrich Wagner, Universidad Carlos III de Madrid

Carbon Dating: When is it Beneficial to Link ETSs?

**Baran Doda, London School of Economics;** Luca Taschini, London School of Economics and Political Science

Searching for Carbon Leaks in Multinational Companies

Antoine Dechezlepretre, London School of Economics; Caterina Gennaioli, Grantham Research Institute; Ralf Martin, Imperial College; **Mirabelle Muuls, Imperial College London**

Stuck in Low Gear: Experimental Evidence on Proposals for Raising Allowance Prices in the European Union Emission Trading Scheme

**William Shobe, University of Virginia**

The Co-benefits of Climate Policy: an Empirical Analysis of the EU Emissions Trading Scheme

**Ulrich Wagner, Universidad Carlos III de Madrid**

3:15 - 4:45 pm

AGRI-ENVIRONMENTAL POLICY II

Grant B

Chair: Jeremy Weber, University of Pittsburgh

Does Federal Crop Insurance Increase Environmental Externalities from Agriculture?

**Jeremy Weber, University of Pittsburgh;** Nigel Key, U.S. Department of Agriculture; Erik O'Donoghue, U.S. Department of Agriculture

Participation and Distributional Impacts of Federal Crop Insurance Program

**Jialing Yu, Oregon State University**

Nitrogen Management under Uncertainty: an Investigation of Subjective Decision Processes

**Sandip Agarwal, Iowa State University**

Achieving Sustainability in Irrigated Systems: Modeling Groundwater Quantity-Quality Tradeoffs in Agricultural Production

**Duncan MacEwan, ERA Economics**

3:15 - 4:45 pm

ENERGY II

Grant C

Chair: Laura Grant, University of Wisconsin, Milwaukee

Capitalization of Residential Energy Efficiency

**Erdal Aydin, Tilburg University;** Dirk Brounen, Tilburg University; Nils Kok, Maastricht University

Measuring the Accuracy of Engineering Models in Predicting Energy Savings from Home Retrofits: Evidence from Monthly Billing Data

**Joseph Maher, University of Maryland**

Setting the Standard: Commercial Electricity Consumption Responses to Energy Codes

**Maya Papineau, Carleton University**

The Power of Army Green: Prices versus Social Norms in Residential Energy Conservation

**Laura Grant, University of Wisconsin, Milwaukee**

3:15 - 4:45 pm

FOREST RESOURCES III

Grant D

Chair: Patrick Walsh, U.S. Environmental Protection Agency

Who Drives Current Amazon Deforestation? Evidence from the Rural Environmental Registry in Mato Grosso and Pará

Juliano Assuncao, Climate Policy Initiative / PUC-Rio; **Clarissa Gandour, Climate Policy Initiative / PUC-Rio**; Pedro Pessoa, PUC-Rio; Romero Rocha, UFRJ

Getting Greener by Going Black: the Priority Municipalities in Brazil

**Romero Rocha, UFRJ**; Juliano Assunção, PUC-Rio / CPI-Ri

Local Politics and Deforestation in the Brazilian Amazon

**Sharon Pailler, Clark University**

The Impact of Social Interaction on Land Use Choice in the Amazon

**Patrick Walsh, U.S. Environmental Protection Agency**

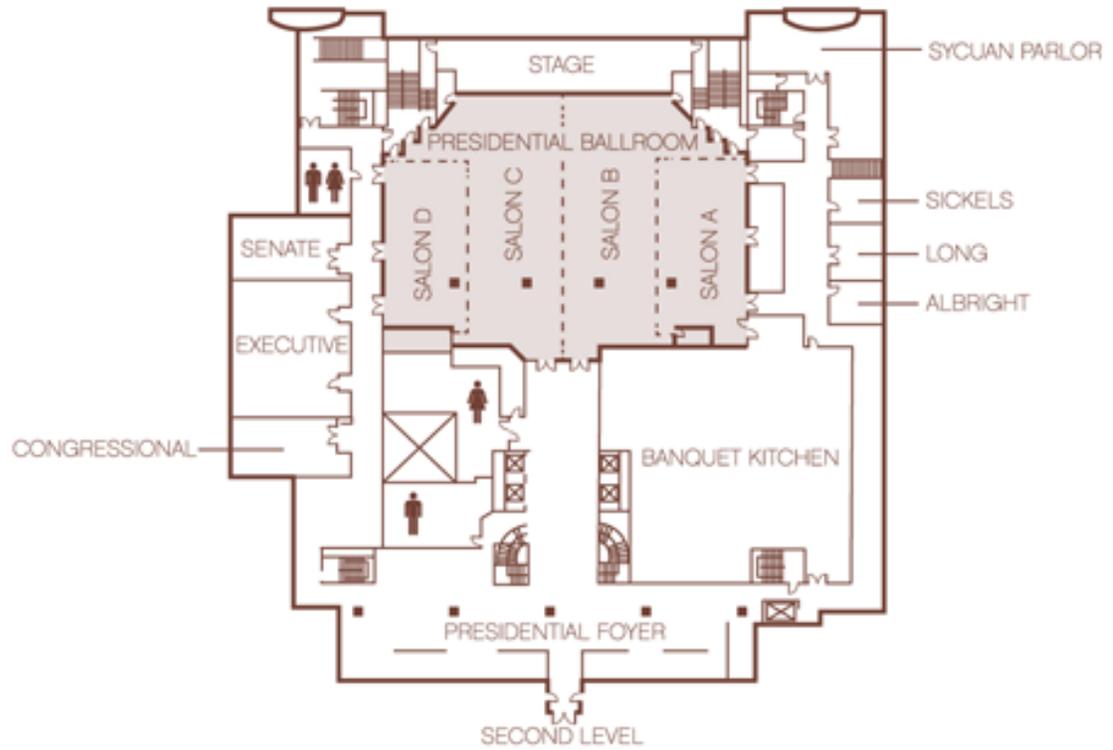
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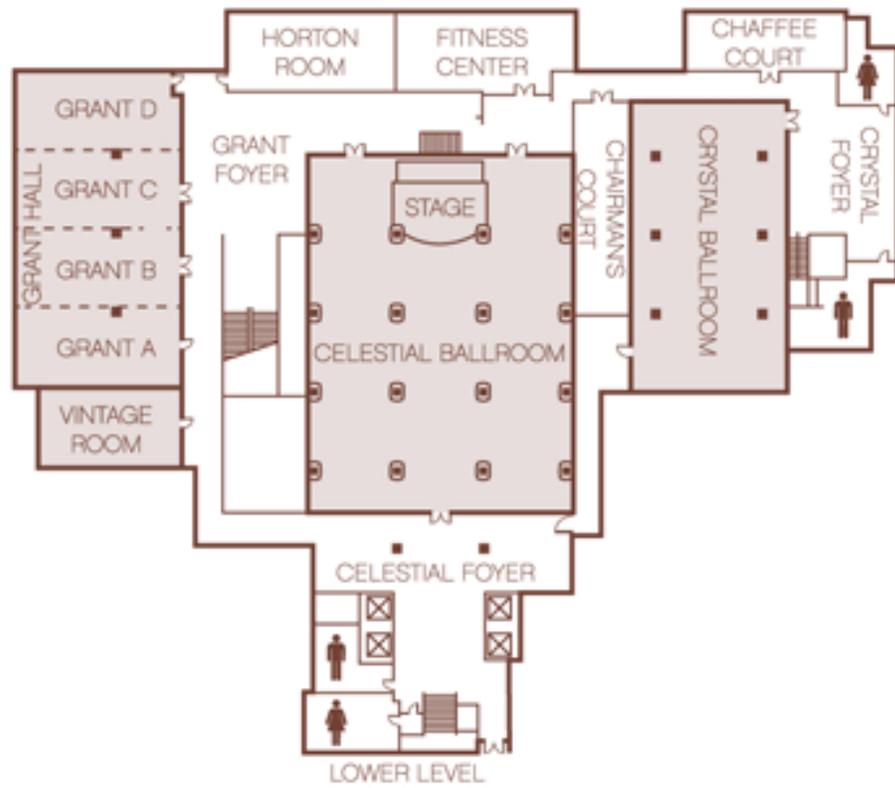
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# U.S. GRANT—SECOND LEVEL



# U.S. GRANT—LOWER LEVEL

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Wenjie	Wang	Kyoto University
Yiwei	Wang	Cornell University
Yanbing	Wang	Purdue University
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Hidemichi	Yonezawa	ETH Zurich
Jialing	Yu	Oregon State University
Matthew	Zaragoza-Watkins	Massachusetts Institute of Technology
Esha	Zaveri	Penn State University
Da	Zhang	Massachusetts Institute of Technology
Junjie	Zhang	University of California, San Diego
Wei	Zhang	University of California, Davis
Wendong	Zhang	The Ohio State University
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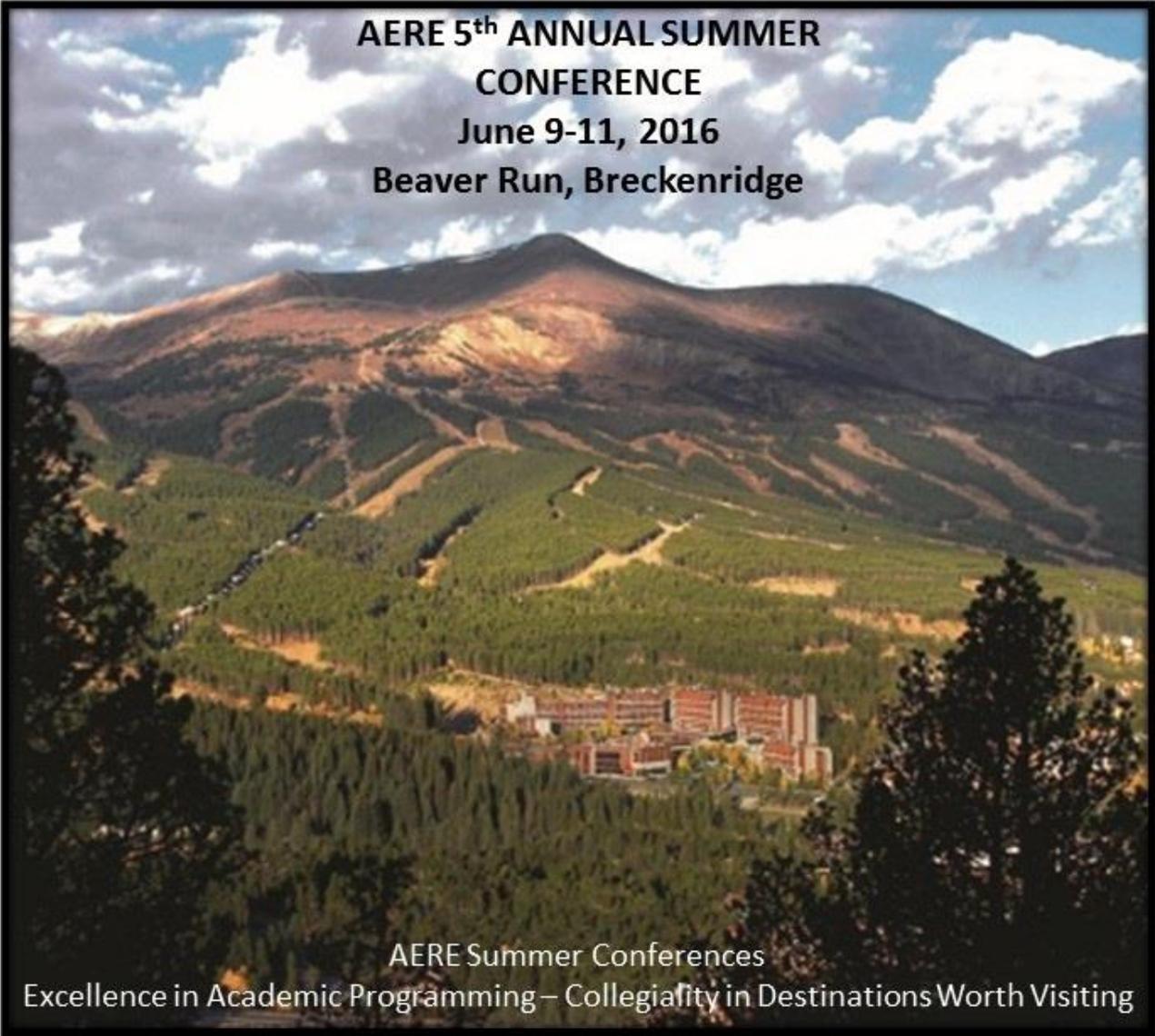
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