

## FROM THE PRESIDENT...

Greetings, friends and colleagues. I hope that those of you who joined me in attending the AERE Summer Conference agree that we have hit our stride with a second, outstanding annual event. This year we visited lovely Asheville, North Carolina and were treated to a superb venue and full range of outstanding papers. Don Fullerton and Joe Herriges served the profession as co-chairs of the organizing committee with Billy Pizer and Antonio Bento stepping up to organize the sponsored sessions and graduate student sessions, respectively. These colleagues have performed a terrific service so please thank them when you get a chance. (Indeed, your thanks is the only compensation they will receive so pile it on, if you please.) In a new addition to the program, Stratus Consulting sponsored a set of graduate student sessions which allowed us to encourage young talent and welcome new participants to our profession. This year, we were extremely fortunate to have one of the most influential resource economists of our time, Dr. Robert S. Pindyck, provide the keynote address entitled "The Climate Policy Dilemma." As anticipated, his talk generated extensive discussion, both immediately following the talk and throughout the remainder of the conference. The post-conference workshop sponsored by the Duke University Energy Initiative was a big success. AERE gratefully acknowledges the funding provided for the Sponsored Sessions by the Economic Research Service, U.S. Department of Agriculture; National Oceanic and Atmospheric Administration, U.S. Department of Commerce; and the Fish and Wildlife Service, U.S. Department of the Interior. The complete program and submitted papers can be accessed at: [www.aere2012.com/index.html](http://www.aere2012.com/index.html).

At the main luncheon, it was my privilege to preside over the Awards Ceremony where we honored two papers with the 2011 Publication of Enduring Quality Award. Andrew Solow, Stephen Polasky, and James Broadus were singled out for their paper: "On the Measurement of Biological Diversity," *Journal of Environmental Economics and Management* 24, 1(1993): 60-68, as was Martin Weitzman for his contribution: "The Noah's Ark Problem," *Econometrica* 66, 6 (1998): 1279-98. Additionally, the Ralph C. d'Arge and Allen V. Kneese Award for Outstanding Publication in the *Journal of Environmental Economics and Management* was presented to Garth Heutel for his

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paper: "Plant Vintages, Grandfathering, and Environmental Policy," *JEEM*, 61, 1 (2011): 36-51. If you have not already read these outstanding contributions to the literature, I urge you to do so. They represent the best of both our current intellectual contributions and our deep heritage. Finally, we celebrated the class of 2011 AERE Fellows: Drs. Trudy Ann Cameron, William D. Nordhaus, and James Wilen. Our web site lists our current and past Fellows as well as the winners of our publication awards; the breadth and depth of contributions of the finest minds in our profession is truly inspirational.

Even before the successful conclusion of our second AERE conference, we began to plan for next year's conference. I was pleased to be able to introduce the organizing team for 2013 at the AERE luncheon: Vic Adamowicz and Ujjayant Chakravorty will be taking the lead in the effort and will be joined by Carolyn Fischer and Brian Murray. The conference will be held from June 6-8 at The Banff Centre in Banff, Alberta, Canada so all non-Canadian members please dust off your passports and plan to join us in the beautiful Canadian Rockies! Be sure and read the call for papers elsewhere in this newsletter to note the dates and requirements for paper submissions.

Plans are also being completed for our 2013 annual luncheon held in conjunction with the ASSA meeting. This year we will gather on Saturday, January 5, at 12:15 p.m. at the Manchester Grand Hyatt San Diego - Manchester G. In addition to a chance to greet old friends and meet new colleagues in our profession, I am delighted to inform you that Professor Michael Hanemann has agreed to deliver the Fellow's Talk. Michael has a fascinating cadre of stories and experience to share—I am certain he will deliver an insightful talk. Be sure and sign up for the luncheon on-line at [www.aere.org](http://www.aere.org) by December 21st.

Last, but far from least, I want to update our members and friends on the continuing discussions regarding the possibility of AERE sponsoring a new academic journal. Those of you who were able to attend the luncheon at our summer conference in Asheville will recall the very useful panel presentations and ensuing discussions regarding this topic. The AERE Board met in Asheville and decided on a course of action with the following components: 1) set up a web discussion board for members and friends to continue the conversation concerning the pros and cons of establishing a new journal; 2) create a subcommittee chaired by AERE President-elect Alan Krupnick to develop a statement identifying the primary goals for AERE's flagship research journal; 3) use that document to engage our

current publisher, Elsevier, in discussions; and 4) hold an AERE Board conference call to decide upon next steps. I am happy to report that each of these actions has been accomplished (although not quite on the ambitious time schedule we originally had hoped). The web discussion took place throughout June and July with about 35 posts and 793 unique views (2013 views in total). Thanks to all of you who contributed thoughtful comments. Second, the Board approved the goals statement that Alan Krupnick and colleagues produced as a document with the understanding that it would be used to guide discussions with Elsevier and to provide input into the development of an RFP seeking bids from a publisher (take a look if you're interested: <http://www.card.iastate.edu/temp/GOALS-FOR-AERE-journal.pdf>). Third, at the Board conference call held this fall, we appointed a subcommittee to begin developing just such an RFP. We agreed that the development of an RFP would not commit us to launching a new journal, but that by doing so we would have more information on which to make sound decisions on behalf of the profession. We have another Board conference call scheduled for November where the Board will be updated on the RFP writing process, any information that has been communicated to us from Elsevier, and we will consider the possibility of hiring a consultant to provide guidance on the process of seeking a publisher, should we decide to go that route. This topic will again be on the Board's agenda for the January meeting in San Diego. I very much appreciate the effort that many individuals have put into considering the possibilities concerning the costs and benefits to AERE and its members from making a change in our journal portfolio.

Have a great fall; I hope to see you in San Diego at the AERE Luncheon where Alan will be taking over the joys and responsibilities of AERE President.

Best regards to all.

Cathy

**Catherine Kling**  
**AERE President**  
**Department of Economics**  
**Iowa State University**  
**Ames, Iowa 50014**  
**Office phone: 515-294-5767**  
[ckling@iastate.edu](mailto:ckling@iastate.edu)

## AERE NEWS

### AERE BOARD OF DIRECTORS MEETING

The AERE Board Meeting will be held on **Friday, January 4, 2013, from 5:30 – 8:30 p.m.** at the Manchester Grand Hyatt – George Bush Room. Anyone with matters to be brought before the Board should contact the president:

**Alan J. Krupnick**  
**Resources for the Future**  
**1616 P Street NW**  
**Washington, DC 20036**  
**[Krupnick@rff.org](mailto:Krupnick@rff.org)**  
**Office phone: 202-328-5107**

### AERE ELECTION

All 2012 AERE members are eligible to vote in this year's election for two new members of the Board of Directors. The ballot information was sent via email from [info@aere.org](mailto:info@aere.org) on October 15<sup>th</sup> along with the biographical sketches submitted by each candidate. AERE Vice President Don Fullerton, Jay Shogren, and Trudy Ann Cameron have put together an outstanding slate of candidates. Please remember to cast your vote **by December 1st**. Questions regarding the on-line election process should be directed to: [info@aere.org](mailto:info@aere.org).

### AERE LUNCHEON AND BUSINESS MEETING

The AERE Luncheon and Business Meeting with AERE Fellow Talk by W. Michael Hanemann (Arizona State University) will be held on **Saturday, January 5, 2013, from 12:15 - 2:15 p.m.** at the Manchester Grand Hyatt - Manchester G.

Luncheon reservations can be made online at: [www.aere.org](http://www.aere.org). The deadline to guarantee your reservation at this popular event is **Friday, December 21, 2012, 5:00 p.m. EST**. Please direct questions to: [info@aere.org](mailto:info@aere.org).

### AERE PUBLICATION OF ENDURING QUALITY AWARD 2012

#### Call for Nominations

The AERE Board of Directors will present the annual award (to co-authors if appropriate) for a publication of enduring quality that appeared at least five years prior to the year of the award. Nominated works are to be evaluated on their seminal nature and enduring value. Place and type of publication are unrestricted but posthumous awards will not be given. Nominees may include individuals who are not members of AERE.

Evaluation of nominated works and final selection for the 2012 award will be undertaken by a three-person committee: (Chair) Frank Asche, University of Stavanger, Norway; James Wilen, University of California, Davis; and Klaas Van't Veld, University of Wyoming. Nomination packages should consist of three copies each of a cover letter, a document supporting the nomination, and the publication itself. The supporting document (not to exceed three pages) should include quantitative as well as qualitative information (e.g., number of citations or copies printed). Nominations should be sent to arrive no later than **December 31, 2012**. This is an important award for AERE and for the recipients. Please give serious consideration to nominating a publication and to observing the submission requirements.

The author(s) will be notified by March 1, 2013 to provide ample time to make travel arrangements to attend the Awards Program at the June 2013 AERE Summer Conference at The Banff Centre, Banff, Alberta, Canada.

**Prof. Frank Asche**  
**University of Stavanger**  
**Box 8002 Ullandhaug**  
**Stavanger, 04036**  
**Norway**  
**Email: [frank.asche@uis.no](mailto:frank.asche@uis.no)**  
**Subject Line: AERE PEQ Award**

## **AERE FELLOWS 2012**

### **Call for Nominations**

This program recognizes outstanding contributions to the field by members of the association. The 2012 AERE Fellows will be announced at the 2013 AERE Summer Conference at The Banff Centre, Banff, Alberta, Canada.

**Criteria:** Awardees will have demonstrated a significant contribution to the advancement of the profession of environmental and resource economics. A candidate must be living at the time of nomination; membership in AERE is not required.

**Nomination Process:** Any member of AERE may nominate a candidate for Fellow. A nomination packet should include a vita of the nominee, a two-page nomination letter outlining what contributions the individual has made that warrant the award, and at least one additional letter of support from a second individual. In addition, members of the AERE Board of Directors may consider candidates that have not been otherwise nominated that they feel are especially worthy.

**Selection Process:** Nomination packages are to be submitted by **December 31, 2012**, to:

**Dr. Catherine Kling**  
**Department of Economics**  
**Iowa State University**  
**Ames, Iowa 50014**  
[ckling@iastate.edu](mailto:ckling@iastate.edu)  
**Subject Line: AERE Fellows Award**  
**Office phone: 515-294-5767**

The president will distribute copies to each of the AERE Officers and Board members who will select newly appointed Fellows from the set of nominations. Newly elected Fellows will be notified by March 1, 2013 to provide ample time to make travel arrangements to attend the Awards Program at the AERE Summer Conference in Banff, Canada. In future years, a separate Fellows Committee may be impaneled to aid in the initial screening of candidates.

**Maximum Number of Awards:** Three for 2012

### **Inaugural AERE Fellows 2005**

Maureen L. Cropper  
W. Michael Hanemann  
Karl-Göran Mäler  
Wallace E. Oates  
V. Kerry Smith  
Tom Tietenberg

### **AERE Fellows 2006**

Richard C. Bishop  
Nancy E. Bockstael  
Ronald G. Cummings  
Anthony (Tony) C. Fisher  
Geoffrey M. Heal  
Clifford S. (Cliff) Russell

### **AERE Fellows 2007**

Daniel W. Bromley  
Gardner M. Brown, Jr.  
Charles W. (Chuck) Howe  
Kenneth E. (Ted) McConnell  
Kathleen Segerson  
David Zilberman

### **AERE Fellows 2008**

Thomas Crocker  
A. Myrick Freeman III  
Alan Randall

### **AERE Fellows 2009**

Richard T. Carson  
Charles D. Kolstad  
Robert N. Stavins

### **AERE Fellows 2010**

Alan J. Krupnick  
Stephen Polasky  
Martin L. Weitzman

### **AERE Fellows 2011**

Trudy Ann Cameron  
William D. Nordhaus  
James Wilen

## BEST *JEEM* PAPER 2012

### Call for Nominations

AERE instituted a new award in 2009, the “Ralph C. d’Arge and Allen V. Kneese Award for Outstanding Publication in the *Journal of Environmental Economics and Management*,” to recognize an exemplary research paper published in *JEEM* during the past year.

**Criteria:** Any article published in calendar year 2012, that is, v63 (January, March, May issues) and v64 (July, September, November issues) of *JEEM* is eligible for this award. There is no requirement that the author(s) be a member of AERE.

**Nomination Process:** Any current member of AERE may nominate an article. The nomination should be submitted in a letter that briefly describes why the nominator believes the paper is deserving of this award. Letters of nomination should be submitted **by December 31, 2012** to:

**Dr. Daniel J. Phaneuf**  
**University of Wisconsin-Madison**  
**Department of Agricultural and Applied**  
**Economics**  
**Taylor Hall**  
**Madison, WI 53706-1503**  
**Email: [dphaneuf@wisc.edu](mailto:dphaneuf@wisc.edu)**  
**Subject Line: Best *JEEM* Paper**

**Selection Process:** The winner of the award will be selected by a three-person selection committee comprised of the editor of *JEEM* (Dan Phaneuf, University of Wisconsin-Madison), one AERE representative (Junjie Wu, Oregon State University), and one associate editor of *JEEM*. The author(s) will be notified by March 1, 2013 to provide ample time to make travel arrangements to attend the Awards Program at the June 2013 AERE Summer Conference at The Banff Centre, Banff, Alberta, Canada.

## 5<sup>TH</sup> WORLD CONGRESS OF ENVIRONMENTAL AND RESOURCE ECONOMISTS



**Istanbul, Turkey**  
**June 28 – July 2, 2014**

The Association of Environmental and Resource Economists (AERE) and the European Association of Environmental and Resource Economists (EAERE), in cooperation with the East Asian Association of Environmental and Resource Economics (EAAERE), announce that the 5th World Congress of Environmental and Resource Economists will be held in Istanbul, Turkey, from June 28 -- July 2, 2014. The Congress will be organized by the Istanbul Technical University, with Prof. Ozgur Kayalica chairing the Local Organizing Committee. The Program Committee co-chairs are: Mark Cohen (Vanderbilt University), Timo Goeschl (University of Heidelberg), and Prof. Erinc Yeldan (Bilkent University).

### AERE REPRESENTATIVE TO THE EAERE

AERE member Edward B. Barbier is now serving as the U.S. representative to the European Association of Environmental and Resource Economics (EAERE). In that capacity, he invites AERE members to contact him about any issue that they would like him to bring to EAERE’s attention, or concerning environmental economics in Europe in general. Barbier spent 21 years in Europe and is very familiar with various institutions and research groups.

**Edward B. Barbier**  
**Department of Economics & Finance**  
**University of Wyoming, College of Business**  
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## AERE MEMBERSHIP OPTIONS

AERE membership rates for 2013 remain the same. Please renew your membership now and take advantage of the three-year payment plan! Discounted rates are available for students as well as individual residents of low, lower-middle, and upper-middle income countries in accordance with the definition provided by the World Bank at:

<http://data.worldbank.org/about/country-classifications/country-and-lending-groups>.

AERE also invites colleges, universities, and university research centers to become University Members of AERE and research institutions, nonprofit organizations, government agencies, and corporations to become Institutional Members of AERE.

To become a **University Member** of AERE, a contribution of \$350 is required. With this contribution, colleges and universities:

- may designate one person to receive a 2013 individual membership in AERE (which includes an electronic subscription to *REEP*, reduced rate for *JEEM*, and a reduced fee for submitting an article to *JEEM*). Please see the complete listing of membership benefits on the AERE web page.
- are entitled to a sponsorship listing on the AERE Web page ([www.AERE.org](http://www.AERE.org)) and in the *AERE Newsletter* and *JEEM*;
- will receive one free advertisement on the AERE Web page and in the *AERE Newsletter* for the calendar year (a savings of \$250).

To become an **Institutional Member** of AERE, a contribution of \$1,000 is required. With this contribution, institutions receive the above benefits plus:

- two nontransferable tickets for institution staff to the annual AERE luncheon in Philadelphia, Pennsylvania in January 2014;
- one nontransferable registration to the AERE 2013 Summer Conference at The Banff Centre, Banff, Alberta, Canada, June 6–8, 2013;
- recognition at the annual AERE Business Meeting and Luncheon at the ASSA meeting.

## AERE MEMBERSHIP SERVICES

Please direct any questions or requests regarding your membership, subscriptions to *REEP*, luncheon or AERE Conference registrations, receipts, or related membership matters to:

AERE Membership Services  
VanDer Management  
13006 Peaceful Terrace  
Silver Spring, MD 20904  
[info@aere.org](mailto:info@aere.org)  
Telephone: 202-559-8998  
Fax: 202-559-8998

Marilyn M. Voigt, AERE Executive Director, can be reached at:

AERE  
1616 P Street NW, Suite 600  
Washington, DC 20036-1400  
[voigt@rff.org](mailto:voigt@rff.org)  
Telephone: 202-328-5125

## AERE NEWSLETTER

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## 2012 INSTITUTIONAL AND UNIVERSITY MEMBERS OF AERE

### Institutional Members

<p>Environmental Defense Fund – EDF*</p> <p>Fondazione Eni Enrico Mattei – FEEM</p> <p>Industrial Economics, Inc.</p> <p>Resources for the Future</p> <p>Rocky Mountain Research Station, U.S.F.S.*</p>	<p>RTI International</p> <p>Stratus Consulting</p> <p>The Brattle Group</p> <p>W.H. Desvousges and Associates, Inc.</p>
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### University Members

<p>Appalachian State University Department of Economics</p> <p>Clark University Department of Economics</p> <p>Cornell University, Charles Dyson School of Applied Economics and Management</p> <p>Duke University Nicholas School of the Environment and Nicholas Institute for Environmental Policy Solutions</p> <p>Georgia State University Department of Economics</p> <p>Iowa State University Department of Economics</p> <p>Massachusetts Institute of Technology Department of Economics</p> <p>Middlebury College Environmental Studies</p> <p>Mississippi State University* Department of Agricultural Economics</p> <p>The Ohio State University* Department of Agricultural, Environmental and Development Economics</p> <p>Oregon State University Department of Agriculture &amp; Resource Economics</p> <p>Purdue University* Department of Agricultural Economics</p> <p>University of Alaska, Anchorage* Department of Economics</p>	<p>University of California, Berkeley Department of Agriculture and Resource Economics</p> <p>University of California, San Diego Department of Economics</p> <p>University of Central Florida Department of Economics</p> <p>University of Connecticut Department of Agricultural and Resource Economics</p> <p>University of Hawaii at Manoa* Department of Economics</p> <p>University of Illinois Agricultural &amp; Consumer Economics</p> <p>University of Maine School of Economics</p> <p>University of Michigan ERB Institute for Global Sustainable Enterprise</p> <p>University of Michigan School of Natural Resources and Environment</p> <p>University of Minnesota Department of Applied Economics</p> <p>University of North Carolina at Greensboro* The Bryan School of Business and Economics</p> <p>University of Oregon Department of Economics</p> <p>University of Tennessee Department of Economics</p> <p>University of Wyoming Economics and Finance Department</p>
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*\*Denotes new member in 2012*

## CALLS FOR PAPERS

### AERE Summer Conference 2013



Banff Lake Louise Tourism

AERE is excited to announce the third annual AERE Summer Conference to be held at The Banff Centre in the spectacular Canadian Rockies in Banff, Canada from Thursday, June 6, to Saturday, June 8. An all-day pre-conference workshop will be held on Thursday, June 6, entitled "Recent Advances in Program and Policy Evaluation" with Paul Ferraro (Georgia State University) and Dan Millimet (Southern Methodist University). (See complete workshop details on page 16.) The conference itself will begin with an informal reception on Thursday evening; the academic program takes place on Friday and Saturday. The program will provide ample opportunities for discussion and interaction among authors, discussants, and the audience.

The conference will feature **General Sessions** open to all topics of interest to environmental and natural resource economists, **Sponsored Sessions** (whose theme this year is *Mixing Oil and Water: The Nexus Between Energy and Water Resources*) and one track of **Graduate Student Sessions** that will extend throughout the two-day conference.

#### Abstract Submission for General Sessions

An author who wants to present a paper in one of the **General Sessions** should submit his/her abstract to the conference website (go to [www.aere.org](http://www.aere.org) and click on the conference link). The submitter should plan to attend and present. Each submission requires an abstract of no more than 1,000 words (not including references) that

describes the paper. Each potential presenter may submit a maximum of two abstracts (though may be a co-author of papers to be presented by others), although only one will be accepted. If two papers are submitted, the papers must be ranked by the presenter at the time of submission (1, 2). We will follow a strict rule of one presentation per individual. All participants must register for the conference by April 15, 2013 in order to be included in the final program.

Submissions will be accepted starting December 15, 2012 and the deadline for submissions is **January 15, 2013** (midnight eastern standard time). Electronic acknowledgement of submissions will be sent to all submitters. We expect to notify authors by February 28, 2013. Proposals for complete sessions are also encouraged. Organizers of proposed sessions should submit complete information for each of the papers. The submission form on the conference website includes a space in which to indicate that papers are part of an organized session. Papers submitted as part of a proposed session may be accepted or rejected on an individual basis unless the organizer specifically requests the session be considered only in its entirety.

Authors in the General Sessions must be prepared to provide full papers to discussants by May 15, 2013. Accepted papers must not be published before the time of the conference. Please note that all selected paper presenters must be 2013 AERE members.

#### Abstract Submission for Sponsored Sessions

The theme of this year's **Sponsored Sessions** is *Mixing Oil and Water: The Nexus Between Energy and Water Resources*. Water and energy mix in several important ways, relating both to energy and water availability, quality, and related challenges to ecosystems. Papers on any aspect of this energy-water nexus are invited, including theoretical or applied papers. There will be eight to ten papers presented in the Sponsored Sessions and all papers will have discussants.

An author who wants to present a paper in one of the Sponsored Sessions should submit his/her abstract to the conference website (go to [www.aere.org](http://www.aere.org) and click on the conference link). The submitter should plan to attend and present. Each submission requires an abstract of no more than 1,000 words (not including references) that describes the paper. Only one submission per author will be accepted for Sponsored Sessions. All participants



must register for the conference by April 15, 2013 in order to be included in the final program.

Submissions will be accepted starting December 15, 2012. The deadline for submissions is **January 15, 2013** (midnight eastern standard time). Electronic acknowledgement of submissions will be sent to all submitters. We expect to notify authors by February 28, 2013. Abstracts submitted for the Sponsored Sessions will also be considered for the General Sessions unless requested otherwise by the author.

Authors in the Sponsored Sessions must be prepared to provide full papers to discussants by May 15, 2013. Accepted papers must not be published before the time of the conference. Please note that all selected paper presenters must be 2013 AERE members. For Sponsored Sessions, registration and travel costs (up to a maximum of \$1,250) for one presenter per paper will be covered.

AERE gratefully acknowledges the funding provided for the Sponsored Sessions by the Economic Research Service, U.S. Department of Agriculture; National Oceanic and Atmospheric Administration, U.S. Department of Commerce; and the Fish and Wildlife Service, U.S. Department of the Interior.

#### **Abstract Submission for Graduate Student Sessions**

At the second annual AERE summer conference in Asheville, we introduced a new series of sponsored sessions targeting graduate students entering the market, as well as very junior assistant professors (one–two years out of graduate school). These sessions were very successful and we will once again offer them at the conference in Banff. The graduate student sessions will focus on a variety of topics, reflecting more broadly the current trends and latest advances in environmental and natural resources research, and will include eight to ten papers, with a discussant for each paper.

An author who wants to present a paper in one of the **Graduate Student Sessions** should submit his/her abstract to the conference website (go to [www.aere.org](http://www.aere.org) and click on the conference link). The submitter should plan to attend and present. Each submission requires an abstract of no more than 1,000 words (not including references) that describes the paper. Only one submission per author will be accepted for Graduate Student Sessions. All participants must register for the conference by April 15, 2013 in order to be included in the final program.

Submissions will be accepted starting December 15, 2012 and the deadline for submissions is **January 15, 2013** (midnight eastern standard time). Electronic acknowledgement of submissions will be sent to all submitters. We expect to notify authors by February 28, 2013.

Authors in the Graduate Student Sessions must be prepared to provide full papers to discussants by May 15, 2013. Accepted papers must not be published before the time of the conference. Please note that all selected paper presenters must be 2013 AERE members.

AERE looks forward to welcoming you to The Banff Centre—an arts and educational center whose mission is *Inspiring Creativity*. We are certain that the wonderful natural surroundings and the excellent scholarship will help inspire all of us at this year's AERE summer conference. Additional details about the conference will be available at: [www.aere.org](http://www.aere.org).

#### **Conference Organizing Committee:**

**Co-Chair, Vic Adamowicz, University of Alberta**

**Co-Chair, Ujjayant Chakravorty, Tufts University**

**Carolyn Fischer, Resources for the Future**

**Brian Murray, Duke University**

Questions should be directed to the Co-Chairs at the following address: [aereconference@gmail.com](mailto:aereconference@gmail.com)

**AGRICULTURAL & APPLIED  
ECONOMICS ASSOCIATION (AAEA)**

**August 4 - 6, 2013  
Washington, DC**

**Call for Papers: AERE Sessions**

The 2013 Agricultural & Applied Economics Association (AAEA) and CAES Joint Annual Meeting will be held in Washington, DC from August 4 – 6, 2013. The AERE Program Committee will organize AERE sessions. The committee includes Antonio Bento, Chair (Cornell University), Josh Graff Zivin (University of California, San Diego) and Meredith Fowlie, (University of California, Berkeley).

Authors wishing to have a paper considered for the AERE sessions should send a .pdf file by e-mail to:

**Dr. Antonio Bento, Cornell University**

**Email:** [amb396@cornell.edu](mailto:amb396@cornell.edu)

**Subject Line:** AERE ASSA

The deadline to submit is **January 15, 2013**. Only .pdf files will be accepted as electronic format. No submissions will be accepted via fax or postal mail. Abstracts cannot be jointly considered for inclusion in AERE sessions and in sessions sponsored by other associations at the AAEA-CAES meeting.

Files should be sent by the proposed presenter, who will be the contact for correspondence. No more than one submission will be accepted per presenter. The file must provide the following information according to the following format:

- (I) name and institutional affiliation of paper presenter and co-author(s);
- (II) title of paper;
- (III) mailing address and e-mail address of paper presenter;
- (IV) up to six key words;
- (V) JEL codes;
- (VI) long abstract of the paper containing no more than 1,000 words, along with a word count;
- (VII) references.

The total file length should be two to three pages, with a maximum of three pages, including all of the required information. Papers submitted without all of the required information will not be considered. Electronic acknowledgements of submissions will be sent to all submitters. Proposals for complete sessions are also encouraged. Organizers of proposed sessions should

submit complete information for EACH of the papers following the above instructions. Papers may be accepted or rejected on an individual basis unless the organizer specifically requests the session be considered only in its entirety.

Please note that all selected presenters must be 2013 AERE members and priority consideration for discussants will be given to current AERE members.

**ALLIED SOCIAL SCIENCE ASSOCIATIONS  
(ASSA)**

**January 3 - 5, 2014  
Philadelphia, Pennsylvania**

**Call for Papers: AERE Sessions**

The 2014 annual winter meeting of the ASSA will be held in Philadelphia, Pennsylvania on January 3 - 5, 2014. The AERE Program Committee will organize AERE sessions. The committee includes Antonio Bento, Chair (Cornell University), Josh Graff Zivin (University of California, San Diego), and Meredith Fowlie (University of California, Berkeley).

Authors wishing to have a paper considered for the AERE sessions should send a .pdf file by e-mail to:

**Dr. Antonio Bento, Cornell University**

**Email:** [amb396@cornell.edu](mailto:amb396@cornell.edu)

**Subject Line:** AERE ASSA

The deadline to submit is **April 15, 2013**. All submissions are to be sent electronically via e-mail. Only .pdf files will be accepted as electronic format. No submissions will be accepted via fax or postal mail. Abstracts cannot be jointly considered for inclusion in AERE sessions and in sessions sponsored by other associations at the ASSA meetings (e.g., general AEA sessions).

Files should be sent by the proposed presenter, who will be the contact for correspondence. No more than one submission will be accepted per presenter. The file must provide the following information according to the following format:

- (I) name and institutional affiliation of paper presenter and co-author(s);
- (II) title of paper;
- (III) mailing address and e-mail address of paper presenter;

- (IV) up to six key words;
- (V) JEL codes;
- (VI) long abstract of the paper containing no more than 1,000 words, along with a word count;
- (VII) references.

The total file length should be two to three pages, with a maximum of three pages, including all of the required information. Papers submitted without all of the required information will not be considered. Electronic acknowledgements of submissions will be sent to all submitters.

Proposals for complete sessions are also encouraged. Organizers of proposed sessions should submit complete information for EACH of the papers following the above instructions. Papers may be accepted or rejected on an individual basis unless the organizer specifically requests the session be considered only in its entirety.

Please note that all selected presenters must be 2014 AERE members and priority consideration for discussants will be given to AERE members.

**5<sup>TH</sup> WORKSHOP OF THE EUROPEAN  
ASSOCIATION OF AGRICULTURAL  
ECONOMICS (EAAE)**

**May 29-31, 2013  
Leuven, Belgium**

**Call for Papers**

Workshop on *Agricultural, Food, Rural and Resource Economics* is organized by the Belgian Association of Agricultural Economics. The scientific element of the PhD-workshop follows the standards of an academic conference, with invited presentations by renowned international keynote speakers and contributed presentations in parallel sessions. All submissions will be reviewed by a panel of senior researchers from the broad field of agricultural, food and natural resource economics.

The organizing committee invites submissions for paper sessions and/or pitch/poster sessions. We accept submissions from PhD researchers only. Those who will have finished their PhD before the workshop can submit as well if they will not finish their PhD earlier than December 2012. Submissions will be reviewed and accepted on the basis of an extended abstract, by an international panel of senior researchers. For author guidelines and more information on how to submit your extended abstract, please visit [www.bvle-aber.be/eaee](http://www.bvle-aber.be/eaee)

**Deadline: December 3, 2012**

## EAERE 20TH ANNUAL CONFERENCE



**June 26 – 29, 2013  
Toulouse, France**

### **Call for Papers**

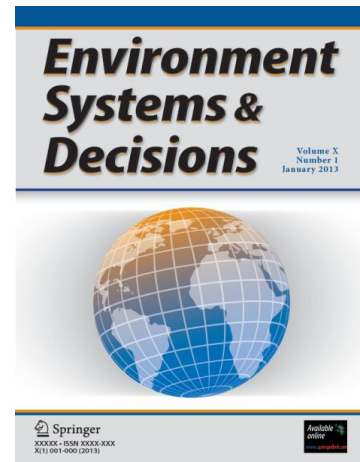
Organizers: EAERE and  
Toulouse School of Economics (TSE)

Each summer, EAERE organizes its Annual Conference, an invaluable opportunity for meeting, exchanging and debating current topics in environmental and resource economics. With approximately 700 individual participants attending from all over the world, international researchers, scholars, economists and students convene at the EAERE Annual Conferences in the spirit of economic discovery, research, analysis and collaboration. The Conference activities include keynote speeches and policy panels, the [David Pearce Lectures](#), paper presentations, discussions and round tables. Economists, including those who are not currently members of the EAERE, are invited to submit papers for presentation at the Annual Conferences. It is hoped that papers presented represent a broad spectrum of environmental and resource economics.

**Deadline: February 1, 2013**

**Website:** [www.eaere2013.org/](http://www.eaere2013.org/)

## **ENVIRONMENT, SYSTEMS, AND DECISIONS VALUE OF INFORMATION: THEORY AND APPLICATION**



### **Call for Papers**

#### **Value of Information: Theory and Application**

The Editorial Board of the journal *Environment, Systems, and Decisions*, (formerly titled *The Environmentalist*), published by Springer, announces a special Call for Papers addressing the theoretical underpinnings and methodological applications of Value of Information (VoI) analysis.

#### **Prospectus**

Decisions made under conditions of uncertainty and/or low quality data are frequently made in a wide range of disciplines, from environmental management to business strategy to military operations. VoI is a tool that informs how decisions may change in light of additional information. In practice, VoI can be used to inform additional research or data gathering efforts, and its use has been increasing over recent years.

This special issue of *Environment, Systems, and Decisions* will explore the theory, methods, and applications of Value of Information analysis with linkages to other subject areas such as risk management and strategic decisionmaking. Papers are encouraged in, *but not limited to*, the following areas:

- Novel theoretical advancements made in the field of VoI
- Cross-cutting research regarding both perfect information and sample information
- VoI applied to risk reduction decisions
- Linkages between VoI with other analytic methods
- Benefits, challenges, and the future of VoI applied in practice

### Contact Details & Schedule

Inquiries regarding this Call for Papers should be directed to the Guest Editors:

**Jeffrey M. Keisler, University of Massachusetts Boston, [jeff.keisler@umb.edu](mailto:jeff.keisler@umb.edu)**

**Roger M. Cooke, Resources for the Future, [Cooke@rff.org](mailto:Cooke@rff.org)**

General inquiries can be directed to the Editors-in-Chief:

**Igor Linkov, US Army Engineer Research & Development Center, [Igor.Linkov@usace.army.mil](mailto:Igor.Linkov@usace.army.mil)**

**James H. Lambert, University of Virginia, [lambert@virginia.edu](mailto:lambert@virginia.edu)**

We welcome the submission of your abstracts anytime, with your papers by **1 March 2013** leading to publication of a special issue of *Environment, Systems and Decisions* in Spring 2014.

### INTERNATIONAL CHOICE MODELING CONFERENCE 2013

**July 3 – 5, 2013  
Sydney, Australia**

The International Choice Modeling Conference brings together leading researchers and practitioners from across different areas of study, with presentations looking both at state of the art methodology as well as innovative real world applications of choice models.

Following on from the success of the second Conference held in Leeds 2011, the third International Choice Modeling Conference will be organized jointly by the Centre for the Study of Choice (CenSoC) at the University of Technology Sydney (UTS) and the Institute of Transport and Logistics Studies (ITLS) at the University of Sydney.

Information on how to submit an abstract is available at [www.icmconference.org.uk](http://www.icmconference.org.uk). The conference will use a two-stage peer review process, with an abstract submission deadline of **November 30, 2012**.

### NORTHEAST AGRICULTURAL AND RESOURCE ECONOMICS ASSOCIATION (NAREA)

**Annual Meeting  
June 23 – 25, 2013  
Ithaca, New York**

The Northeast Agricultural and Resource Economics Association (NAREA) will hold its 2013 annual meeting at the Holiday Inn in Ithaca, NY, June 23-25, 2013. Detailed information about the annual meeting and the post-conference ecosystems workshop is available at:

[www.narea.org/2013/](http://www.narea.org/2013/).

**Call for Selected Papers:** Selected paper submissions involve an extended abstract of no more than 500 words. For more information about the abstract format and how to submit an abstract, visit:

[www.narea.org/2013/](http://www.narea.org/2013/).

**Call for Symposium Proposals:** For information about the proposal format and how to submit a symposium proposal, visit [www.narea.org/2013/](http://www.narea.org/2013/).

**Submission Deadline: February 1, 2013:** Submission questions can be directed to program chair and president-elect Josh Duke ([duke@udel.edu](mailto:duke@udel.edu)).

Local arrangements questions can be directed to local arrangements chair Harry Kaiser ([hmk2@cornell.edu](mailto:hmk2@cornell.edu)).



**5<sup>TH</sup> ANNUAL CONFERENCE OF THE  
SOCIETY FOR BENEFIT-COST ANALYSIS**

**February 21-22, 2013  
Washington, DC**

**Call for Papers  
*Increasing the Utility of Benefit-Cost Analysis***

The Society of Benefit-Cost Analysis promotes the development and appropriate application of benefit-cost analysis to a broad range of public policy issues. In 2013, our fifth annual conference and meeting will continue to focus on the practical use of benefit-cost analysis (BCA) in a variety of institutional and national settings. As always, we welcome abstracts and panel proposals on any topic related to improving the use of benefit-cost analysis, cost-effectiveness analysis, risk-benefit analysis, applied welfare economics, and damage assessment in policy settings, from scholars, practitioners, and others interested in these areas who wish to present research at the conference.

Abstracts should be 200–300 words in length and provide adequate detail on the content of the research. Proposals for panels that include three to four speakers are also welcome, and should include a summary of the overall focus of the panel as well as a 200–300 word abstract for each presentation. Note that the program committee reserves the right to select the panel abstracts and to reorganize the panels as needed. Submission of a paper/panel is viewed as a firm commitment to participate in the conference if accepted. [Download the full call for papers](#) as a PDF file or click below to submit online:

[Submit your abstract or panel proposal online](#)

**Abstracts due: November 26, 2012**

For more information about the annual conference or the Society in general, please visit our website at [www.benefitcostanalysis.org](http://www.benefitcostanalysis.org) or contact

**SOUTHERN ECONOMIC ASSOCIATION  
(SEA) ANNUAL MEETING**

**November 23-25, 2013  
Tampa Florida**

**Call for Papers: AERE Sessions**

The SEA 2013 Annual Meeting will be held November 23-25, 2013 (Saturday through Monday) at the Tampa Marriott Waterside Hotel and Marina in Tampa, Florida. Authors wishing to have a paper considered for the AERE sessions should send a .pdf file by e-mail to:

**Dr. John Whitehead**  
**Appalachian State University**  
**Email: [whiteheadjc@appstate.edu](mailto:whiteheadjc@appstate.edu)**  
**Subject Line: AERE SEA**

Deadline to submit is **March 1, 2013**. Files should be sent by the proposed presenter who will be the contact for correspondence. The file should contain the following information:

1. Author's (and co-author's) name, address, affiliation, telephone number, and e-mail address.
2. Title of paper.
3. Abstract of no more than 100 words.
4. JEL codes.

Papers submitted without all the required information will not be considered. Electronic acknowledgements of submissions will be sent to all submitters. Proposals for complete sessions are also encouraged. Organizers of proposed sessions should submit abstracts for EACH of the papers following the above instructions. Papers may be accepted or rejected on an individual basis unless the organizer specifically requests the session be considered only in its entirety.

Please note that all selected presenters must be 2013 AERE members and priority consideration for discussants will be given to current AERE members.

**WESTERN ECONOMIC ASSOCIATION  
INTERNATIONAL (WEAI)  
ANNUAL CONFERENCE**

**June 28 - July 2, 2013  
Seattle, Washington**

**Call for Papers—AERE Sessions  
June 29 - July 1, 2013**

AERE will sponsor up to twelve conference sessions during Saturday through Monday, June 29–July 1, within the 88th Annual Conference of the Western Economic Association International (WEAI). These sessions are intended to provide an accessible conference option for AERE’s western members and to ensure that interesting research in our field continues to appear on the program of a major general-interest conference in economics. All paper presenters must be 2013 AERE members but need not join WEAI to attend.

Submissions will open starting December 10, 2012. .  
*[Note: AERE is looking into the technology needed to accept online submissions of abstracts so complete instructions for submission will be provided soon on the AERE web.]*

For full consideration by the selection committee, a submission must be received by **January 10, 2013**. Submissions should be sent by the proposed presenter who will be the contact for correspondence. The selection committee will consider only one submission per presenter. A submission will require the following information:

1. Name, professional affiliation, mailing address, telephone number and e-mail address for presenter and all co-authors. (Please identify cases where the presenter is a graduate student or may have limited experience in academic conference settings. We heartily encourage new talent but also appreciate that mentorship attention is sometimes helpful to ensure successful presentations.)

2. Title of paper (maximum 60 characters).

3. A one-page expanded abstract with sufficient detail to allow the selection committee to fully assess the nature of the research.

4. The URL for a link to a current version of the paper or draft manuscript, if available.

Papers submitted without all the required information will not be considered. Electronic acknowledgements of submissions will be sent to all submitters.

Proposals for complete sessions are also encouraged. Each 1 hour and 45 minute session will typically consist of four short presentations with discussants and a chair. Proposals for panel discussions will also be entertained.

Submitters of proposed sessions will submit abstracts for EACH of the papers following the above instructions, along with a roughly 200-word description of the session’s theme that would motivate potential audience members to attend. Papers may be accepted or rejected on an individual basis unless the organizer specifically requests the session be considered only in its entirety.

All selected presenters must be 2013 AERE members but need not also join WEAI to participate in the conference. Discussants and session chairs need not be current AERE members, although priority consideration will be given to those who are. All participants must register for the conference and AERE members will enjoy “WEAI member” rates. See [www.weai.org/AnnualConf](http://www.weai.org/AnnualConf) for registration information as it becomes available. Note that AERE-coordinated sessions qualify as “organized sessions” rather than “volunteer papers,” so there is no contributed-paper submission fee. In planning their calendars, submitters should be aware that the 2013 AERE Summer Conference will be held on June 6-8 in Banff, Alberta, Canada (be sure you have a passport). However, the WEAI/AERE event will again overlap with the EAERE Annual Conference to be held June 26-29 in Toulouse, France, so please plan accordingly.

**Dr. Trudy Ann Cameron**  
**R.F. Mikesell Professor of Environmental and  
Resource Economics**  
**University of Oregon**  
**Email: [cameron@uoregon.edu](mailto:cameron@uoregon.edu)**  
**Telephone: 541-346-1242**

# CONFERENCES, MEETINGS, AND WORKSHOPS

## ACES AND ECOSYSTEM MARKETS 2012

**December 10 - 14, 2012  
Ft. Lauderdale, Florida**

CES and Ecosystem Markets 2012 is an international collaboration of three dynamic communities—A Community on Ecosystem Services (ACES), the Ecosystem Markets Conference, and the Ecosystem Services Partnership (ESP). The conference will provide an open forum to share experiences and state-of-the-art methods, tools, and processes for assessing and incorporating ecosystem services into public and private decisions. The focus of the conference will be to link science, practice, institutions and resource sustainable decision making by bringing together ecosystem services communities from around the United States and the globe. ACES and Ecosystem Markets 2012 will bring together leaders in government, NGOs, academia, tribal organizations, and the private sector to advance the use of ecosystem services science and practice in conservation, restoration, resource management, and development decisions. To facilitate discussion, a variety of presentation methods including organized sessions, world café discussions, town hall meetings, oral and poster presentations, and hands-on workshops will be incorporated into the conference structure. Topics and themes from previous ACES, Ecosystem Markets, and ESP events will be integrated to provide the most comprehensive event on the ecosystem services.

For registration information:

[www.conference.ifas.ufl.edu/aces/registration.html](http://www.conference.ifas.ufl.edu/aces/registration.html)  
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## AERE PRE-CONFERENCE WORKSHOP

*Recent Advances in Program and Policy Evaluation*

**Paul Ferraro (Georgia State University)  
Dan Millimet (Southern Methodist University)**

**June 6, 2012  
The Banff Centre  
Banff, Alberta, Canada  
8:30 a.m. – 5:00 p.m.**

In the last two decades, great strides have been made in developing a unified methodological framework based on the counterfactual model of causality. The last decade in particular has seen substantial growth in the social science and statistics literature dedicated to developing creative empirical strategies for causal inference from experimental and non-experimental (observational) data.

This 8.5-hour workshop will cover seven topics in lectures ranging from 30 to 60 minutes, including time for discussion and small group work with real data. There will be 15-minute coffee breaks in the morning and in the afternoon, and a one-hour lunch.

### **Schedule:**

1. Partial identification: estimating bounds rather than points. [1 hour lecture including small group work with real data]
2. a. Recent advances and recommendations in using matching methods. [1 hour lecture including small group work with real data]  
  
b. Regression versus matching: what's the difference? [1/2 hour lecture]
3. Interpreting instrumental variable estimates. [1/2 hour lecture]
4. Mechanism-based, “front-door” identification strategies. [45-minute lecture]
5. Measuring the sensitivity of treatment effect estimates to unobservable heterogeneity (tests of hidden bias) [45-minute lecture including plenary work with real data]

6. Synthetic controls for comparative case studies. [1 hour lecture including small group work with real data]

7. Recent advances in designing randomized field experiments. [1 hour lecture]

The workshop will emphasize the key assumptions underlying these empirical strategies, the ways in which they complement better known designs and methods, and software for implementing them, when available. Note that there will be a separate registration fee for the pre-conference workshop. This will include lunch and refreshment breaks. Registration information will be posted on the AERE web Page: [www.aere.org](http://www.aere.org)

**ALLIED SOCIAL SCIENCE  
ASSOCIATIONS (ASSA)**

**Annual Meeting  
January 4-6, 2013  
San Diego, California**

***AERE Sessions***

*Editor's Note: Presenters are indicated in bold face type.*

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**Jan 04, 2013 10:15 a.m.**

**Manchester Grand Hyatt, Maggie**

**Forests and Agriculture (Q10; Q15; Q23; Q53)**

**Presiding:** Michael Roberts (*North Carolina State University*)

**Agglomeration in Agriculture: A Quasi-Experiment in the Corn Belt**

**Michael McWilliams** (*University of Michigan*)

Michael R. Moore (*University of Michigan*)

**The Effect of Ground-level Ozone on US Maize Yields**

**Christopher Boone** (*Columbia University*)

Wolfram Schlenker (*Columbia University*)

Juha Siikamaki (*Resources for the Future*)

**Empirically Testing the Determinants of Leakage in a General Equilibrium Model of Deforestation**

**Payal Shah** (*University of Illinois at Urbana-Champaign*)

Kathy Baylis (*University of Illinois at Urbana-Champaign*)

Don Fullerton (*University of Illinois at Urbana-Champaign*)

**Does Land Titling Stem Forest Damage? Native Communities in the Peruvian Amazon**

**Allen Blackman** (*Resources for the Future*)

Greg Asner (*Carnegie Institution for Science*)

Leonardo Corral (*InterAmerican Development Bank*)

Erivelthon Santos (*InterAmerican Development Bank*)

**Discussants:**

Barrett Kirwan (*University of Illinois*)

Michael Roberts (*North Carolina State University*)

Jarrod Welch (*National Bureau of Economic Research*)

Erica Field (*Duke University*)

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**Joint AEA-AERE Session / Panel Discussion  
Designing a US Carbon Tax (Q4; Q5)**

**Jan 05, 2013 10:15 a.m.**

**Manchester Grand Hyatt, Elizabeth Ballroom C**

**Moderators:**

Alan Krupnick (*Resources for the Future*)

Ian Parry (*International Monetary Fund*)

**Panelists:**

Joe Aldy (*Harvard University*)

Lawrence Goulder (*Stanford University*)

William Pizer (*Duke University*)

Roberton Williams (*University of Maryland and Resources for the Future*)

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**Jan 04, 2013 8:00 a.m.**

**Manchester Grand Hyatt, Maggie**

**Ecosystems and Common-Pool Resources (Q22; Q23; Q28; Q32)**

**Presiding:** Charles Mason (*University of Wyoming*)

**Taming the Lionfish**

**David M. Kling** (*University of California, Davis*)

James N. Sanchirico (*University of California, Davis*)

**Evaluating the Impact of Sector Management in the New England Groundfish Fisheries**

**Ling Huang** (*University of Connecticut*)

Kathleen Segerson (*University of Connecticut*)

**Is What is Good for the Forest Good for the People: Evaluating the Impacts of Protected Areas on Ecosystem Services and Poverty in Indonesia**

**Daniela Miteva** (*Duke University*)

Subhrendu Pattanayak (*Duke University*)

Brian Murray (*Duke University*)

## **Don't Forget to Protect Abundant Resources**

**Ana Espínola-Arredondo** (*Washington State University*)

Félix Muñoz-García (*Washington State University*)

### **Discussants:**

John Lynham (*University of Hawaii*)

Martin Smith (*Duke University*)

Jonah Busch (*Conservation International*)

Charles Mason (*University of Wyoming*)

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**Jan 05, 2013 2:30 p.m.**

## **Manchester Grand Hyatt, Maggie**

### **Climate Change and Valuation** (Q54; D92; Q51)

**Presiding:** Andrew Plantinga (*Oregon State University*)

## **Climate, Ecosystem Resilience and the Slave Trade**

Namrata Kala (*Yale University*)

James Fenske (*Oxford University*)

## **To Learn or To Change: Optimal R&D**

### **Investments Under Uncertainties of Climate Change**

Ruiqing Miao (*Iowa State University*)

David A. Hennessy (*Iowa State University*)

## **On the Bias / Efficiency Tradeoff in Contingent Valuation**

Sapna Kaul (*Virginia Tech*)

Kevin J. Boyle (*Virginia Tech*)

Michael Hanemann (*Arizona State University*)

Nicolai V. Kuminoff (*Arizona State University*)

## **Risk Premia and the Social Cost of Carbon: A Decomposition Analysis**

David Anthoff (*University of California, Berkeley*)

### **Discussants:**

Andrew Plantinga (*Oregon State University*)

Daniel Kaffine (*Colorado School of Mines*)

Tim Haab (*The Ohio State University*)

Soren Anderson (*Michigan State University*)

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**Jan 05, 2013 8:00 a.m.**

## **Manchester Grand Hyatt, Maggie**

### **Energy Efficiency and Consumer Behavior** (Q40; Q42; Q48)

**Presiding:** Stephen Holland (*University of North Carolina, Greensboro*)

## **Energy Efficiency Behavior: The Role of Information, Capital Costs, and Individual Discount Rates**

Richard Newell (*Duke University*)

Juha Siikamäki (*Resources for the Future*)

## **How Consumers Respond to Product Certification:**

### **A Welfare Analysis of the Energy Star Program**

Sébastien Houde (*Stanford University*)

## **Determinants of Residential Demand for Green Energy: A Cross-Country Analysis**

**Chandra Kiran Krishnamurthy** (*Umeå University*)

Bengt Kriström (*Swedish Agricultural University*)

## **Regulating Hidden Attributes: Assigning Emission Factors in Low-Carbon Fuel Standards**

**Derek Lemoine** (*University of Arizona*)

### **Discussants:**

Ken Gillingham (*Yale University*)

David Rapson (*University of California, Davis*)

Arnab Mitra (*University of Michigan*)

Stephen Holland (*University of North Carolina, Greensboro*)

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**Jan 06, 2013 10:15 a.m.**

## **Manchester Grand Hyatt, Maggie**

### **Energy Extraction and Water Provision** (Q4; Q25; R11)

**Presiding:** Richard Carson (*University of California, San Diego*)

## **The Value of Water as an Urban Club Good: A Matching Approach to HOA-Provided Lakes**

Joshua K. Abbott (*Arizona State University*)

H. Allen Klaiber (*The Ohio State University*)

## **Effects of Civil War on Access to Water and Sanitation Services**

Ariel Dinar (*University of California, Riverside*)

Javier Santiago Ortiz Correa (*University of California, Riverside*)

## **The Drill and the Bill: Shale Gas Development and Property Values**

Beia Spiller (*Resources for the Future*)

Lucija Muehlenbachs (*Resources for the Future*)

Christopher Timmins (*Duke University*)

## **Strategic Decision-Making with Information and Extraction Externalities: A Structural Model of the Multi-Stage Investment Timing Game in Offshore Petroleum Production**

Cynthia Lin (*University of California, Davis*)

### **Discussants:**

Richard Carson (*University of California, San Diego*)

Linda Fernandez (*Virginia Commonwealth University*)

Nicolai Kuminoff (*Arizona State University*)

Timothy Fitzgerald (*Montana State University*)



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**Jan 06, 2013 1:00 p.m.**

**Manchester Grand Hyatt, Maggie**

**Air Pollution and Public Health (Q53; Q56; Q48; Q58)**

**Presiding:** Joshua Graff Zivin (*University of California, San Diego*)

**Does Improved Air Quality at Birth Translate Into Better Long-Term Outcomes? Evidence from the Clean Air Act of 1970**

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

Maya Rossin-Slater (*Columbia University*)

Adam Isen (*University of Pennsylvania*)

**The Environmental, Health, and Fiscal Implications of Reducing Fossil Fuel Subsidies**

**Joseph E. Aldy** (*Harvard University*)

**Joint Impacts of Indoor and Outdoor Air Pollution on Health in Indonesia**

**Jie Sheng Tan Soo** (*Duke University*)

Subhrendu K. Pattanayak (*Duke University*)

**Air Pollution and Procylical Mortality**

**Garth Heutel** (*University of North Carolina, Greensboro*)

Christopher Ruhm (*University of Virginia*)

**Discussants:**

Olivier Deschenes (*University of California, Santa Barbara*)

Joshua Graff Zivin (*University of California, San Diego*)

Rema Hanna (*Harvard University*)

Nicholas Sanders (*William & Mary*)

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**Jan 04, 2013 2:30 p.m.**

**Manchester Grand Hyatt, Randle D**

**The Intergovernmental Panel on Climate Change (IPCC): An Interim Progress Report (Q4; Q5)**  
(Panel Discussion)

**Moderator:** Robert Stavins (*Harvard University*)

**Panelists:**

Leon Clarke (*Joint Global Change Research Institute*)

Ottmar Edenhofer (*Technical University Berlin*)

Marc Fleurbaey (*Princeton University*)

Charles Kolstad (*Stanford University*)

Raymond Kopp (*Resources for the Future*)

Howard Kunreuther (*University of Pennsylvania*)

Richard Richels (*Electric Power Research Institute*)

Thomas Sterner (*Environmental Defense Fund*)

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**Jan 06, 2013 8:00 a.m.**

**Manchester Grand Hyatt, Maggie**

**Environmental Policy and Program Evaluation (Q51; Q52; Q53; Q58)**

**Presiding:** Joshua Linn (*Resources for the Future*)

**Spatial and Social Disparities in the Benefits From Air Quality Improvements**

**Antonio Bento** (*Cornell University*)

Matthew Freedman (*Cornell University*)

Corey Lang (*University of Rhode Island*)

**National Evidence on Behavioral Responses to an Information Campaign: The Case of the Environmental Protection Agency's Air Quality Index**

**Nicolai V. Kuminoff** (*Arizona State University*)

Danielle Bäck (*Arizona State University*)

Eric Van Buren (*Arizona State University*)

Scott Van Buren (*Arizona State University*)

**The Impacts of Cap-and-Trade on Industry: Evidence from the European Carbon Market and German Manufacturing Plants**

**Ulrich J. Wagner** (*Universidad Carlos III de Madrid*)

Katrin Rehdanz (*Christian-Albrechts-University & Kiel Institute for the World Economy*)

Sebastian Petrick (*Kiel Institute for the World Economy*)

**Multimedia Pollution Regulation and Environmental Performance: EPA's Cluster Rule**

**Wayne B. Gray** (*Clark University*)

Ronald J. Shadbegian (*National Center for Environmental Economics, U.S. EPA*)

**Discussants:**

Maximillian Auffhammer (*University of California, Berkeley*)

Branko Boskovic (*University of Alberta*)

Joshua Linn (*Resources for the Future*)

Jacob LaRiviere (*University of Tennessee*)

## DUPONT SUMMIT 2012

**December 7, 2012  
Washington, DC**

The purpose of the Dupont Summit is to promote dialogue about the pressing policy issues related to **science, technology and the environment**. The conference mirrors the interest of the PSO and its partners in promoting discussion of current policy concerns. Presented every year on the first Friday of December, the conference brings together academics, government, and business leaders from a variety of backgrounds for conversation about issues that include but are not limited to health, energy, national security, information and telecommunications, environment and climate change, biotechnology, genetics and stem cells, water and natural resources, science research and education, technology and innovation, space, and ethical, legal and social implications of science and technology.

For program information and to register:

[www.ipsonet.org/conferences/the-dupont-summit](http://www.ipsonet.org/conferences/the-dupont-summit)

## SOUTHERN ECONOMIC ASSOCIATION (SEA)

**82<sup>ND</sup> Annual Meeting  
November 16-18, 2012  
Sheraton New Orleans Hotel  
New Orleans, Louisiana**

### **AERE Sessions**

#### **Friday, November 16**

**8:00 - 9:45 a.m.**

#### **AERE Session 04A**

#### **Revealed Preferences 1**

**Session Chair:** Jill L. Caviglia-Harris, Salisbury University

#### **Papers:**

"Measuring the Disamenity Value of Communication Towers: A Hedonic Housing Market Analysis"  
Stephen Locke, University of Kentucky  
Glenn C. Blomquist, University of Kentucky  
(Presenter)

"Implicit Prices in Simultaneous Capital and Rental Markets: Amenity Valuation in Hedonic Property Markets with Second Home Ownership"  
Craig E. Landry, East Carolina University (Presenter)

"New Evidence of Behavioral Change and the Air Quality Index"  
Carol Mansfield, RTI International (Presenter)  
Brooks Depro, Research Triangle Institute International  
Stephen Graham, Environmental Protection Agency  
Kristin Isaacs, Environmental Protection Agency  
Thomas McCurdy, Environmental Protection Agency  
Zachary Pekar, Environmental Protection Agency  
Susan Stone, Environmental Protection Agency

"Are Clean-Ups a Waste? Exploring Heterogeneous and Inconsistent Price Effects of the Superfund Program"  
Douglas S. Noonan, Georgia Institute of Technology  
(Presenter)

**10:00 - 11:45 a.m.**

**AERE Session 04B**

**Revealed Preferences 2**

**Session Chair:** Glenn C. Blomquist, University of Kentucky

**Papers:**

"A Gasoline Tax or Fuel Efficiency Standards? A Heterogeneous Household Gasoline Demand Analysis"  
Weiwei Liu, Saginaw Valley State University (Presenter)

"Neighbor Effects and Installing Energy-Efficient Residential Heating and Air-Conditioning Systems"  
Douglas S. Noonan, Georgia Institute of Technology  
Lin-Han Chiang Hsieh, Georgia Institute of Technology  
Daniel Matisoff, Georgia Institute of Technology (Presenter)

"Informing Averting Behavior: Effects of Ozone Alerts Across U.S. Cities"  
Douglas S. Noonan, Georgia Institute of Technology (Presenter)

"Park Visitation and Climate Change"  
Toni Sipic, Central Washington University (Presenter)  
Derek Wolfson, University of Oregon

**1:00 - 2:45 p.m.**

**AERE Session 04C**

**Stated Preferences**

**Session Chair:** Daniel Petrolia, Mississippi State University

**Papers:**

"Willingness to Pay for Anadromous Fisheries Restoration: Distance Decay and River Reputation"  
Lynne Lewis, Bates College (Presenter)  
Guillermo Herrera, Bowdoin College  
Ursula Sandstrom, Bates College  
Lindsay Thompson, Johns Hopkins University

"Valuing a Real (and Controversial) Proposal Through a Stated-Preference Survey"  
Carol Mansfield, RTI International (Presenter)  
George Van Houtven, RTI International  
Vesall Nourani, RTI International  
Vik Kilambi, RTI International  
Benjamin Simon, U.S. Department of Interior  
Peter Grigelis, U.S. Department of Interior  
Cindy Thomson, National Oceanic and Atmospheric Administration

"Willingness-to-Pay (WTP) for Environmental Quality Improvements and Risk-Preferences of Individuals"  
Afif Naeem, The Ohio State University (Presenter)  
Timothy C. Haab, The Ohio State University

"A Comparative Analysis of the Multi-Mode Chesapeake Bay Menhaden Survey"  
Todd Hartman, Appalachian State University  
James Kirkley, University of Maryland  
Kenneth McConnell, University of Maryland  
Tanga McDaniel, Appalachian State University  
John C. Whitehead, Appalachian State University (Presenter)

**3:00 - 4:45 p.m.**

**AERE Session 04D**

**Benefit-Cost Analysis**

**Session Chair:** Matthew G. Interis, Mississippi State University

**Papers:**

"Improving Aggregate WTP: Sample Bias Correction via Bootstrapping"  
Catherine M. Chambers, University of Central Missouri (Presenter)  
Christopher Azevedo, University of Central Missouri  
John R. Crooker, University of Central Missouri

"Not Choosing Is a Choice: Accounting for 'Would Not Vote' Choices in Models of WTP"  
Daniel Petrolia, Mississippi State University (Presenter)

"Mapping the WTP Distribution from Individual Level Parameter Estimation"  
Matthew Winden, The Ohio State University (Presenter)  
H. Allen Klaiber, North Carolina State University  
Timothy C. Haab, The Ohio State University

"(Almost) Everybody Wins: A True Pareto Justification for Practical Welfare Economics and Benefit-Cost Analysis"  
Richard Zerbe, University of Washington School of Law (Presenter)  
Tyler A. Scott, University of Washington School of Public Affairs

**Saturday, November 17**

**8:00 - 9:45 a.m.**

**AERE Session 04F**

**Climate Change I**

**Session Chair:** Derek Lemoine, University of Arizona

**Papers:**

"Carbon Taxes and the Trade of Bio-Energy"

Alice Favero, Yale University (Presenter)

Emanuele Massetti, Yale University

"The Effectiveness of Renewable Portfolio Standards in Reducing Carbon Emissions in the US Electricity Sector"

Suman Gautam, Pennsylvania State University (Presenter)

R.J. Briggs, Pennsylvania State University

**10:00 - 11:45 a.m.**

**AERE Session 04G**

**Fisheries and Coasts**

**Session Chair:** Matthew A. Freeman, Mississippi State University

**Papers:**

"Charter Fishing Growth and Fishing Regulations in California"

Elaine F. Frey, California State University, Long Beach (Presenter)

Kristen Monaco, California State University, Long Beach

Chen Feng Ng, California State University, Long Beach

"Lessons from Meta-Analysis: Assessing the Impacts of Sampling Strategy on Recreation Site Choice Models"

Paul R. Hindsley, Eckerd College (Presenter)

Craig E. Landry, East Carolina University

"Property, Protection, and Prediction: Real Estate Markets with Increasing Coastal Hazards"

Andrew Keeler, University of North Carolina (Presenter)

Dylan McNamara, University of North Carolina - Wilmington

"Accounting for Taste: Consumer Valuations for Food-Safety Technologies"

David M. Bruner, Appalachian State University

William L. Huth, University of West Florida

David M. McEvoy, Appalachian State University

Ash Morgan, Appalachian State University (Presenter)

**2:00 - 3:45 p.m.**

**AERE Session 04H**

**Residuals**

**Session Chair:** Carol Mansfield, RTI International

**Papers:**

"Cycles in Natural-Resource Commodity Prices - A Reinvestigation Using Rolling Sample Windows"  
Marc Gronwald, Ifo Institute for Economic Research (Presenter)

"Optimal Timing of Environmental Cleanups"

Jacob LaRiviere, The University of Tennessee

Matt McMahon, The University of Tennessee (Presenter)

Justin Roush, The University of Tennessee

"Carbon Labeling for Consumer Food Goods"

Sharon Shewmake, Vanderbilt University (Presenter)

Abigail Okrent, U.S. Department of Agriculture

Lanka Thabrew, Vanderbilt University

"The Effects of Environmental Regulation on Dry Cleaning Firm Exits"

Brian Vander Naald, University of Alaska Southeast (Presenter)

Trudy Ann Cameron, University of Oregon

**4:00 - 5:45 p.m.**

**AERE Session 04I**

**International**

**Session Chair:** Rachel Cleetus, Union of Concerned Scientists

**Papers:**

"Busting the Boom-Bust Theory: Amazonia, Frontiers, and Economic Development"

Jill L. Caviglia-Harris, Salisbury University (Presenter)

Erin Sills, North Carolina State University

Dar Roberts, University of California, Santa Barbara

Dan Harris, Salisbury University

Katrina Mullan, University of California, Berkeley

Andrew Bell, Columbia University

Michael Toomey, UC, Santa Barbara

"Environmental Aid with Heterogeneous Agents: An Experimental Investigation"

Paul Chambers, University of Central Missouri (Presenter)

Glenn Dutcher, University of Innsbruck

R. Mark Isaac, Florida State University

"Is There International Competition in the Global Groundwater Commons?"

Todd Guilfoos, Binghamton University (Presenter)

## **Sunday, November 18**

**8:00 - 9:45 a.m.**

### **AERE Session 04J**

#### **Agriculture and the Environment**

**Session Chair:** Afif Naeem, The Ohio State University

#### **Papers:**

"Efficiency of Viable Groundwater Management Policies"

Todd Guilfoos, Binghamton University (Presenter)

Neha Khanna, Binghamton University

Jeffrey Peterson, Kansas State University

"Climate Change Impacts and Ambiguity"

Stergios Athanassoglou, Fondazione Eni Enrico Mattei

Emanuele Massetti, Yale University (Presenter)

"A Bioeconomic Model of Interspecies Disease Transmission and On-Farm Decision Making"

Brian Enchelmeyer, University of Wyoming

Shana M. McDermott, University of New Mexico (Presenter)

"The Effect of the El Niño Southern Oscillation on Crop Production in the Southeastern U.S."

Jesse Tack, Mississippi State University (Presenter)

David Ubilava, Mississippi State University

**10:00 - 11:45 a.m.**

### **AERE Session 04K**

#### **Empirical Studies**

**Session Chair:** Johnson Kakeu, Georgia Institute of Technology

#### **Papers:**

"Energy Subsidies in the United States: Do They Contribute to Pollution Abatement in the Electricity Market?"

Karen Maguire, Oklahoma State University (Presenter)

"Political Economy of Climate Change: Evidence from Congressional Roll Call Data"

Toni Sipic, Central Washington University (Presenter)

"The Impact of Social Capital on Environmental Behavior: A North Carolina Case Study"

Daniel T. Hall, High Point University (Presenter)

Michael McCully, High Point University

Christine Cugliari, High Point University

**1:00 - 2:45 p.m.**

### **AERE Session 04L**

#### **Energy**

**Session Chair:** Todd Guilfoos, Binghamton University

#### **Papers:**

"EPA Regulations as a Catalyst for Modernizing the U.S. Power Sector"

Rachel Cleetus, Union of Concerned Scientists (Presenter)

"The Impact of Energy Price Changes on Cropping Patterns in Iowa"

Luba Kurkalova, North Carolina A&T State University (Presenter)

Stephen Randall, North Carolina A&T State University

Silvia Secchi, Southern Illinois University

"Ethanol and Energy Security"

Peter Maniloff, Duke University (Presenter)

"Electric Utility Responses to Changes in Fuel Price"

Daniel Matisoff, Georgia Institute of Technology (Presenter)

Emilson Silva, Georgia Institute of Technology

Douglas S. Noonan, Georgia Institute of Technology

Jinshu Cui, Georgia Institute of Technology

Fanny Guezennec, Georgia Institute of Technology

**3:00 - 4:45 p.m.**

### **AERE Session 04M**

#### **Climate Change II**

**Session Chair:** Luba Kurkalova, North Carolina A&T State University

#### **Papers:**

"Strategic Information Sharing in the Problem of the Commons"

Johnson Kakeu, Georgia Institute of Technology (Presenter)

"Investment in Pollution Abatement Under a Cap and Trade System"

Gizem Keskin, Rice University (Presenter)

"Optimal Ratings-Based Intensity Policies: Assigning Emission Factors in Low-Carbon Fuel Standards"

Derek Lemoin (Presenter)



## Valuation in a Bubble: Hedonic Modeling Pre- and Post-Housing Market Collapse<sup>1</sup>

Kevin Boyle (Virginia Tech), Lynne Lewis (Bates College),  
Jaren Pope Brigham Young University), and Jeffrey Zabel (Tufts University)

### Introduction

The recent housing market bubble and its aftermath has caused some environmental economists to begin to reevaluate the accuracy of the hedonic method for estimating implicit prices of housing characteristics in the face of housing market disequilibrium. The hedonic method has been widely used to estimate the marginal willingness to pay (MWTP) for a variety of housing attributes (Palmquist, 2005), which range from land and structural attributes (e.g., lot size and house square footage) to neighborhood characteristics (e.g., school quality and crime) and nearby environmental amenities/disamenities (e.g., open space and air pollution). A key assumption in these applications is that the housing market is in equilibrium and that the market reflects a common set of preferences (Rosen, 1974). Rosen emphasizes that buyers' offer curves and sellers' bid curves will always meet or "kiss" (are tangent) along a common hedonic price function when these conditions are met and hence can be interpreted as individual marginal willingness to pay (MWTP) for housing characteristics.

The recent boom and bust in the real estate market has led to numerous casual discussions among environmental economists about:

- When are real estate markets in equilibrium?
- Do bubbles and busts affect equilibrium conditions?
- Do different people enter real estate markets in the boom and the bust?
- Do preferences of people in real estate markets change between the boom and the bust?
- How should we interpret the coefficients in the hedonic model when the housing market is not in equilibrium?
- What econometric techniques help to identify MWTP in the face of a boom and bust?

We hope to provide some answers to these and other questions that arise from concerns that implicit price estimates might be biased and/or invalid measures of

MWTP. Clearly one must be very careful in interpreting coefficients in hedonic models as MWTP for specific characteristics, particularly when the housing market is in flux. Hence, we like to refer to the hedonic coefficients as "implicit prices" rather than as MWTP. This is the glass half empty concern. The glass half full perspective asks what can be learned from these market shifts; has a natural experiment occurred that allows identification of effects that would not be possible in the absence of the market shift?

At the 2012 AERE conference in Asheville, a panel of researchers with extensive experience in the estimation of hedonic models was gathered to discuss these questions. These researchers also discussed the impact of the current housing market "crises" on the viability of hedonic property value models as a tool for estimating economic benefits and costs to support public policy evaluations. A summary of our thoughts is presented below.<sup>2</sup>

### Real Estate Bubbles and Busts are Not New

Real estate bubbles and busts are not new and they are part of regular real estate cycles. Since 1963, the U.S. has experienced four real estate cycles (Figure 1). This means that any questions asked about the validity of hedonic property models during the current period of boom and bust date back to before Rosen's seminal article in 1974; at any point in time we are at some phase of a real estate cycle. One might rhetorically propose that the current boom and bust is different or unique. While there may be differences associated with each bust, such as the effects of oil supplies and prices in the mid-1970s or high mortgage interest rates in the early 1980s, the fact that real estate market are cyclical cannot be ignored.

An element that is important to consider in the estimation of hedonic property value models is the wealth of sales data that is now available to researchers. It used to be the case that researchers would have sales data for one geographic location for one point in time, which could be at the top, middle or bottom of a real estate cycle. If cyclical markets affect estimation of

<sup>1</sup>Title credit: Laura Taylor.

<sup>2</sup> Thanks to Laura Taylor and Kathleen Bell who, along with the authors, participated on the panel.

implicit prices, then the results of any specific study would be time and location specific. This limitation is no longer binding. Real estate data are now available for multiple years over large geographic areas. This data-rich environment allows researchers to control for time and spatial effects, and to investigate if boom or bust conditions affect estimated implicit prices.

While there has been little research conducted on the effects of real estate market cycles on estimated implicit prices in the U.S., there have been a number of studies conducted elsewhere in the world that provide some key insights. For example, Roehner (1999) found that the best (wealthy) areas peaked first during a 1990/91 bubble in the Paris real estate market, which suggests differential spatial effects during market cycles. Leung, Wong and Cheung (2007) found that most implicit price estimates were not significantly affected during the 1992-2005 cycle in the Hong Kong real estate market. However, Shimizu and Nishimura (2007) and Chen and Hao (2008) found conflicting evidence during the 1975-1999 cycle in the Tokyo market and the 2003 bubble in the Shanghai market, respectively.

A recent study by Lyons (2012) found that implicit prices changed sign and significance between the bubble and bust of the real estate market in Ireland between 2006 and 2011. Placing these findings in context, an interesting result from the 1986-2006 cycle in the Tokyo real estate market is that one-time hedonic models provide different insights from a repeat-sales model. This suggests that the availability of sales data over time and space is likely crucial for the estimation of hedonic models in order to derive credible implicit price estimates.

While substantial data are available to exploit in evaluating market effects on the estimation of hedonic property models, we caution about pure data mining. We propose that future research should incorporate new theoretical frameworks, advanced econometric methods and careful quasi-experiments. We provide some insight on these guidance suggestions below.

### **Towards a Better Understanding of Housing Market Disequilibrium**

National and local housing cycles affect the supply and demand for housing and hence the housing market outcomes that are the basis for the hedonic equation. Further, housing demand is affected by household income whose changes are also tied to the business cycles. If the market is at the bottom of the housing cycle, when demand is depressed due to poor economic conditions, then one must ask if implicit prices will be

smaller in absolute and percentage terms than if the market is at the top of the housing cycle, when demand has expanded due to good economic conditions. Hence, it is important to consider the underlying market conditions when estimating hedonic price functions. In their meta-analysis of hedonic implicit prices for reductions in total suspended particulates, Smith and Huang (1995) find a wide variation in estimates that depend on the city, year of analysis, and vacancy rates. Their results are a clear indication that location and time considerations are crucially important.

In fact, Leamer (2007) claims that housing cycles *are* the business cycle since residential investment is a much better predictor of recessions than business activity. His explanation is that house prices are sticky downward. Hence the reaction in the housing market to excess supply (due to a drop in demand) is not a drop in price, but a drop in sales. The fall in sales leads to a decline in new housing supply and a drop in construction, finance, and real estate jobs that lead the downturn in the rest of the economy. The consequences for the market outcome and our ability to interpret hedonic coefficients as MWTP can be shown in a simple graph. In Figure 2, under Demand (1), initial equilibrium is  $(P, Q^S)$ . Demand then shifts from Demand (1) to Demand (2). There is now excess supply at price  $P$  and quantity  $Q^S$ . Price does not shift immediately to  $P^E$ . Instead price remains high and volume falls. This outcome in the overall housing market also applies to the implicit markets for individual housing characteristics. Hence, there is no clear relationship between the estimated coefficients in the house price hedonic for the corresponding characteristics that include measures of environmental amenities when the housing market is in disequilibrium.

Hence, it is crucial to determine when the housing market is (or is not) in equilibrium. Along these lines, it is important to understand that houses are not liquid assets and hence market shocks are likely to lead to prolonged periods of disequilibrium. First, owners are not (psychologically) willing to sell their houses for less than they paid for them; so called “loss aversion” (Genesovee and Mayer 2001). Second, new owners tend to over-value their homes more than owners who have been in their homes for longer periods of time due to the “self-serving bias” that arises because the value that new owners place on their house reflects their perceived abilities in bargaining in the housing market. In particular, new owners would not be inclined to believe that their homes are worth less than they paid for them since this would indicate they had been duped by the market (Kiel and Zabel 1999). It is exactly in a down market, when buyers’ valuations are falling, that new

owners are reluctant to drop their valuations below the recent price they paid for their home.

Third, sellers' valuations of their houses are based on recent comparable transactions whereas buyers' valuations are based on their prediction of future values. So when the market is cold and prices are falling, sellers value units more than buyers and sales volume is low. But when the market is hot, the opposite occurs. In cold markets, sales only occur when sellers get "lucky" and are matched with a buyer with a relatively high valuation. As Leamer (2007) points out, what are observed are sellers' prices, not market prices.

For these reasons, housing is not a liquid asset and hence the housing market will take time to reach a new equilibrium after experiencing a shock. Transactions are not likely to be spontaneous since houses are the largest purchase made by households and hence they are not likely to react quickly. Matching buyers and sellers is relatively difficult since houses are not divisible and because of heterogeneous characteristics and information asymmetries. Brokers act as intermediaries and this only adds to transaction costs. DiPasquale and Wheaton (1994) and Riddel (2004) provide evidence of extended periods of housing market disequilibrium.

Since sales volume falls before price in a down market, one sign that the market is not in equilibrium is a large number of vacancies. Vacancy rates above the "natural rate" (that arises from housing search) are an indication of excess housing supply. The recent downturn in the housing market has led to an unprecedented number of foreclosures that has led to vacancy rates in many housing markets that are above the natural rate.

Figure 3 displays annual homeowner vacancy rates for the 1986-2010 period for the U.S. and for four selected states: Florida, Nevada, Ohio, and Pennsylvania. One can see that the national vacancy rate was relatively stable until the recent housing crisis when it increased by more than 50%. Further, while there has always been heterogeneity in the vacancy rate across states, this heterogeneity also increased substantially during the recent housing downturn.

An indicator that the current housing market is in disequilibrium is the large number of foreclosures that had contributed to the high vacancy rates. Figure 4 displays quarterly data on the percent of consumers with new foreclosures between the first quarter of 2003 and the first quarter of 2012 for the U.S. and for the same four states as in Figure 3. These two figures display a similar pattern between 2003 and 2009. This is an

indication of the strong relationship between foreclosures and vacancies.

This should make it clear that it is important to pay attention to both the housing cycle and to whether or not the market is in equilibrium when interpreting the coefficient estimates from the house price hedonics. To this end, Coulson and Zabel (2012) develop a disequilibrium model of the housing market. This is a dynamic error correction model where vacancies naturally arise as the error correction mechanism. In addition, the role that foreclosures play in the vacancy rate is explicitly modeled. This model demonstrates how the interconnectedness of these variables can exacerbate the effects of housing market shocks. Empirical estimates of the model will indicate the length of the disequilibrium caused by large increases in foreclosures and vacancy rates.

### **Some Empirical "Best Practices" for Hedonic Modeling during Bubbles and Busts**

The recent boom and bust in the housing market was not only remarkable for its size, but also for the heterogeneity exhibited across and within different markets in the United States. Figure 5 illustrates this point by showing differences in the Case-Shiller index for the metropolitan areas of Miami, FL, San Francisco, CA, Boston, MA and Atlanta, GA. Given that land supply is more elastic in Atlanta than Miami, San Francisco, or Boston, it does not come as much of a surprise to economists that the boom and bust was less pronounced in Atlanta. However, looking at the heterogeneity across the three housing price tiers *within* a metro area (high priced, middle priced, and low priced housing as defined by the Case-Shiller index), it is clear that lower priced housing which tends to be on the urban fringes appreciated and depreciated more rapidly during the boom and bust than the other price tiers. This *is* more surprising to economists since land supply tends to be more elastic on the urban fringe than in the urban center. Thus during the recent boom and bust, other disequilibrium forces were clearly at work—perhaps the relaxation of credit constraints for lower income households led to increased demand for housing on the urban fringe—that may not be adequately captured in a standard hedonic model.

At the heart of the hedonic method is Rosen's (1974) notion of hedonic equilibrium. Empirically, in a hedonic equilibrium, reduced form parameters describing the shape of the price function are endogenously determined by the structural parameters and exogenous variables. This implies that any unexpected changes in the distributions of income, preferences, technology, or

public goods can change the shape of the price function which, in turn, changes the implicit price schedule that environmental economists are often trying to estimate. Clearly, the extreme boom and bust of the 2000's caused unexpected changes that would have changed the shape of the price function and the implicit price schedule. Therefore, two key questions for hedonic modelers are: (i) How much and how fast is the implicit price schedule changing? and (ii) Are there empirical strategies and techniques that can help "save" the hedonic method and estimation of implicit prices of environmental/urban amenities during a boom-bust cycle?

Question (i) was addressed in the previous section where some empirical clues were given that would indicate when the housing market appears to be in disequilibrium. Question (ii) deserves some more discussion. Can a set of hedonic "best practices" be characterized that could help to more accurately estimate implicit prices for urban and environmental amenities in the face of housing market disequilibrium caused by a boom and bust cycle? As practitioners of the hedonic method know, applying the hedonic method is part art and part science. It requires understanding the strengths and limitations of available housing data and then using an appropriate hedonic modeling strategy. Estimating a hedonic model during a boom and bust cycle is in some ways similar to the classic problem of dealing with omitted variable bias. If a traditional cross-sectional hedonic model is estimated when the market is in disequilibrium and differences exist spatially, the use of variation across space to identify estimates of implicit prices may actually reflect omitted differences across space that were caused by the boom and bust and could not be adequately controlled in the estimation.

In recent years, hedonic modelers have increasingly turned to quasi-experimental techniques and pooled cross-sections or panel data on houses to deal with issues of omitted variable bias (Parmeter and Pope, 2012). For example, if there is an exogenous shock to a public good, using a difference-in-difference strategy can help to difference away time invariant omitted variables. Furthermore, by including spatial and temporal fixed effects in a flexible way and allowing for trending over time, similar strategies can help to mitigate some of the boom-bust omitted variable bias. However, this technique also comes at a cost as the shock to the public good may change the shape of the price function which, in turn, changes the implicit price schedule (Kuminoff and Pope, 2012). This means that a quasi-experimental analysis may do a good job of identifying the "capitalization effect" of the shock to the public good, but that the capitalization effect is in general not the same as the welfare effect, or marginal willingness to

pay for the public good. More work is needed to better understand if the benefit of a quasi-experimental approach in dealing with boom-bust bias exceeds the cost of the bias it introduces for calculating welfare effects.

One potential "best practice" when conducting a quasi-experimental analysis is to conduct a generalized difference-in-difference hedonic strategy. This would include interactions between temporal fixed effects and housing characteristics to control for changes in the shape of the equilibrium price function over time (Kuminoff, Parmeter and Pope, 2010). Another best practice for both quasi-experimental and cross-sectional approaches would be to include flexible controls for space and time. For example, using disaggregated spatial and temporal fixed effects that still allow for reasonable variation in the key variables of interest will help to control for some of the issues of a boom-bust cycle. Furthermore, adding more flexible control over time and space by interacting the spatial and temporal fixed effects would be ideal. Finally, akin to the discussion in the preceding section, testing for major instability can help the hedonic practitioner to understand the vulnerabilities in the housing data being used. For example, if one is using pooled cross-sections of housing data in a quasi-experimental framework, one could analyze changes in housing control composition over the relevant time frame by regressing housing characteristics on the spatial/temporal variables of interest. If the housing controls are significantly different across space before and after the quasi-experimental treatment this would signal housing market disequilibrium and the potential that the estimate(s) of the key variable(s) of interest may reflect market disequilibrium and trending. One could also better determine the size and direction of bias by graphing the residuals to understand how the residuals trend over time in relation to the timing of the boom and bust. These diagnostic tests as well as hedonic modeling strategies that are flexible and generalized are the types of best practices that could help provide confidence in hedonic estimates that rely on housing transactions that took place during a boom and bust.

## Concluding Comments

While implementing the hedonic method presents unique challenges, the recent housing bubble is not unique because real estate markets are cyclical. The recent bursting of a real estate bubble has just made researchers more keenly aware of issues that are associated with any estimation of a hedonic property value model. Recent advances in hedonic modeling offer potential solutions to some of the problems and opportunities to exploit the information provided by the

dynamics of real estate markets. Ultimately, the recent boom-bust cycle is forcing a re-examination of some of the assumptions that underlie hedonic models, which we believe is healthy for the advancement of this literature.

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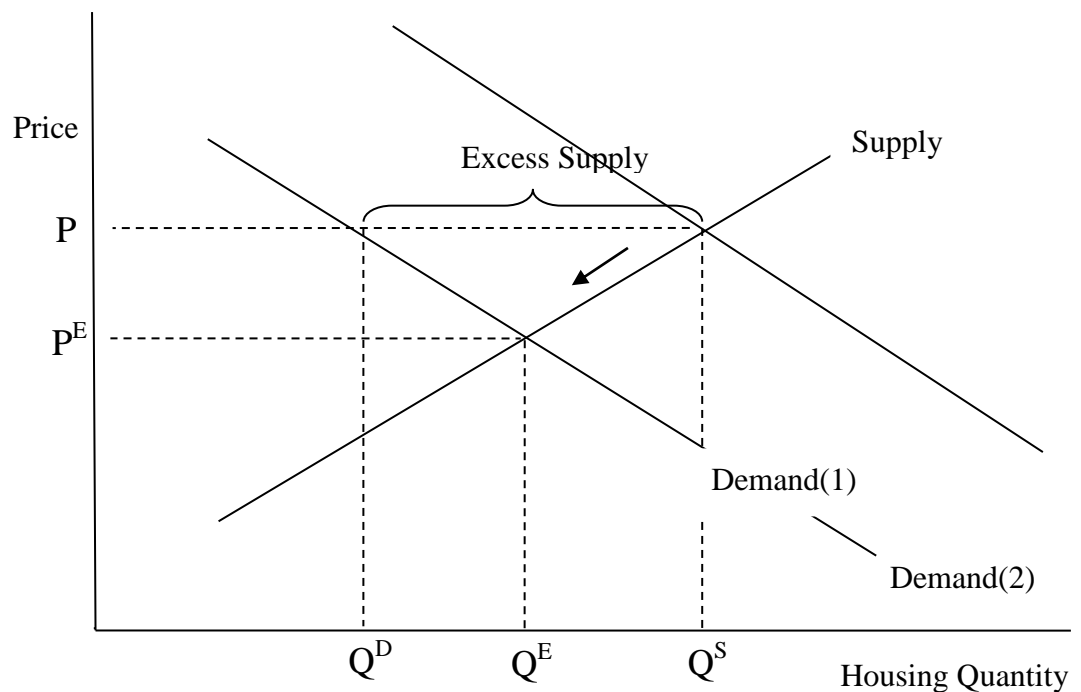


**Figure 1. Cycles in the U.S. Residential Real Estate Market**



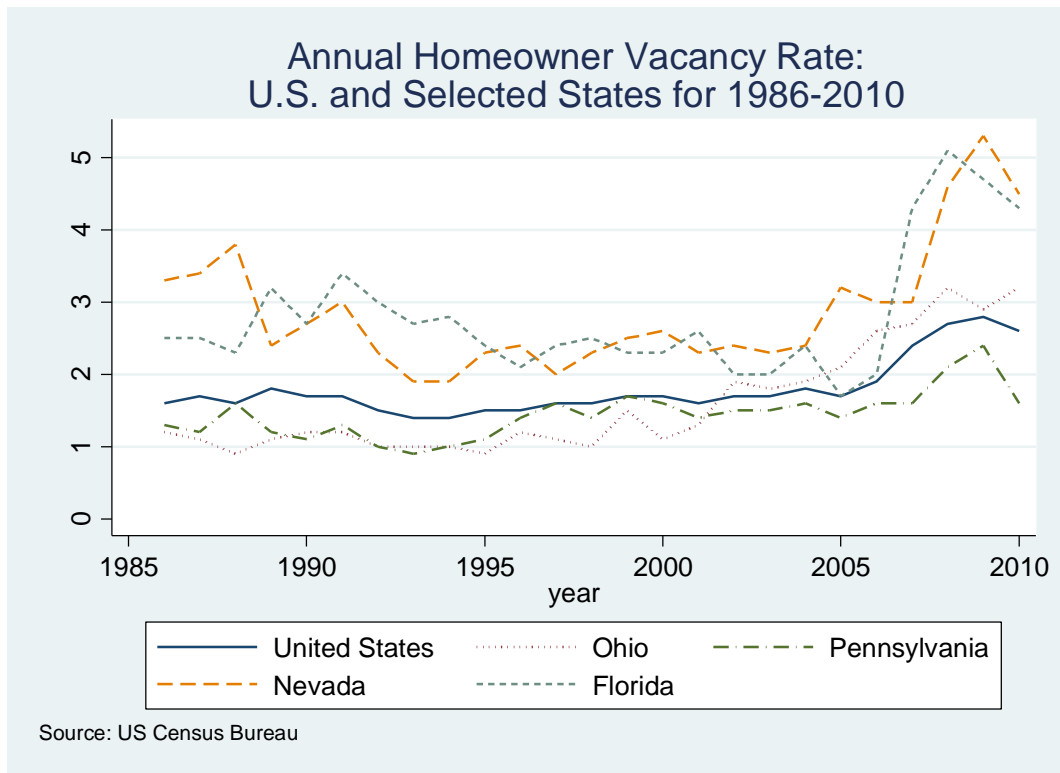
Note: The Z-score is the difference between the current price and a moving average divided by the standard deviation of price over the same time period as the moving average.

Source: [http://articles.businessinsider.com/2011-09-17/markets/30168342\\_1\\_house-prices-housing-market-home-prices](http://articles.businessinsider.com/2011-09-17/markets/30168342_1_house-prices-housing-market-home-prices)

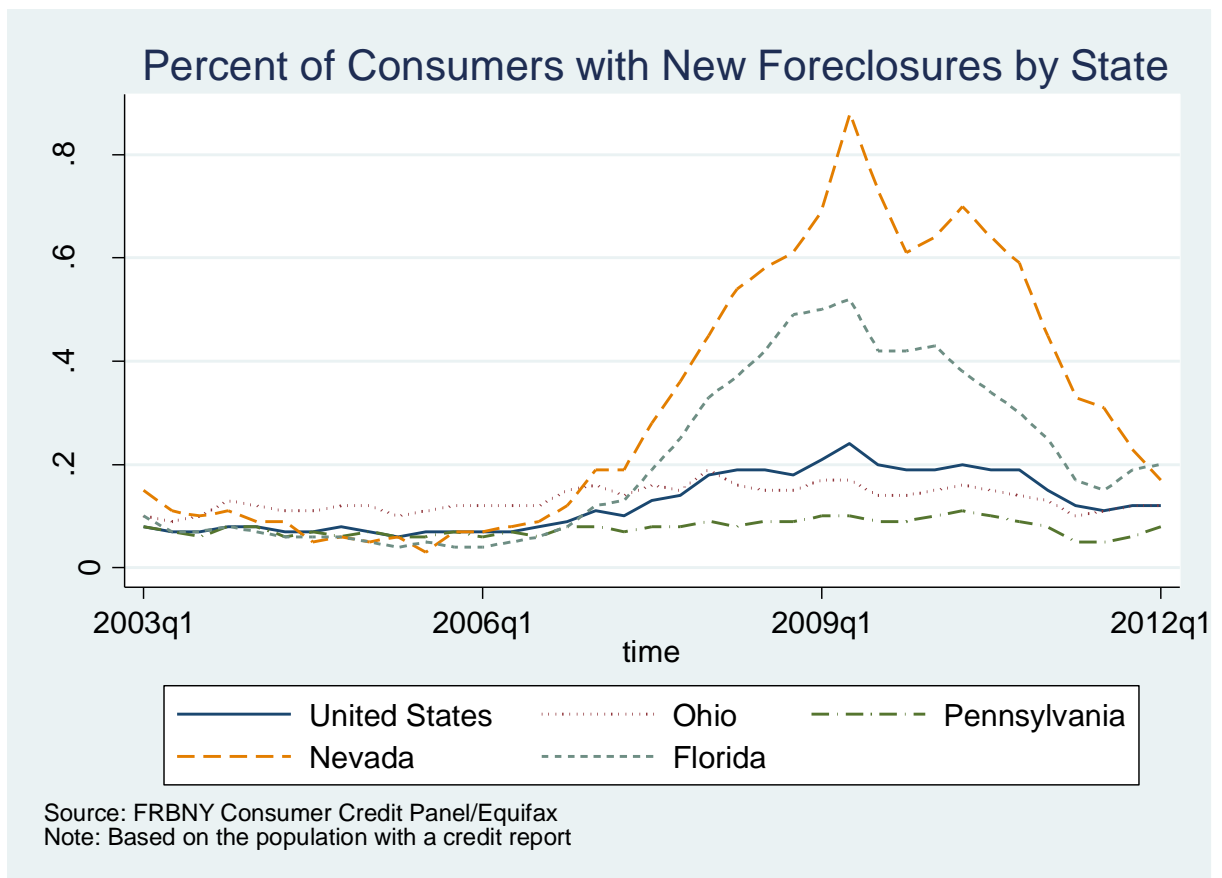


**Figure 2**

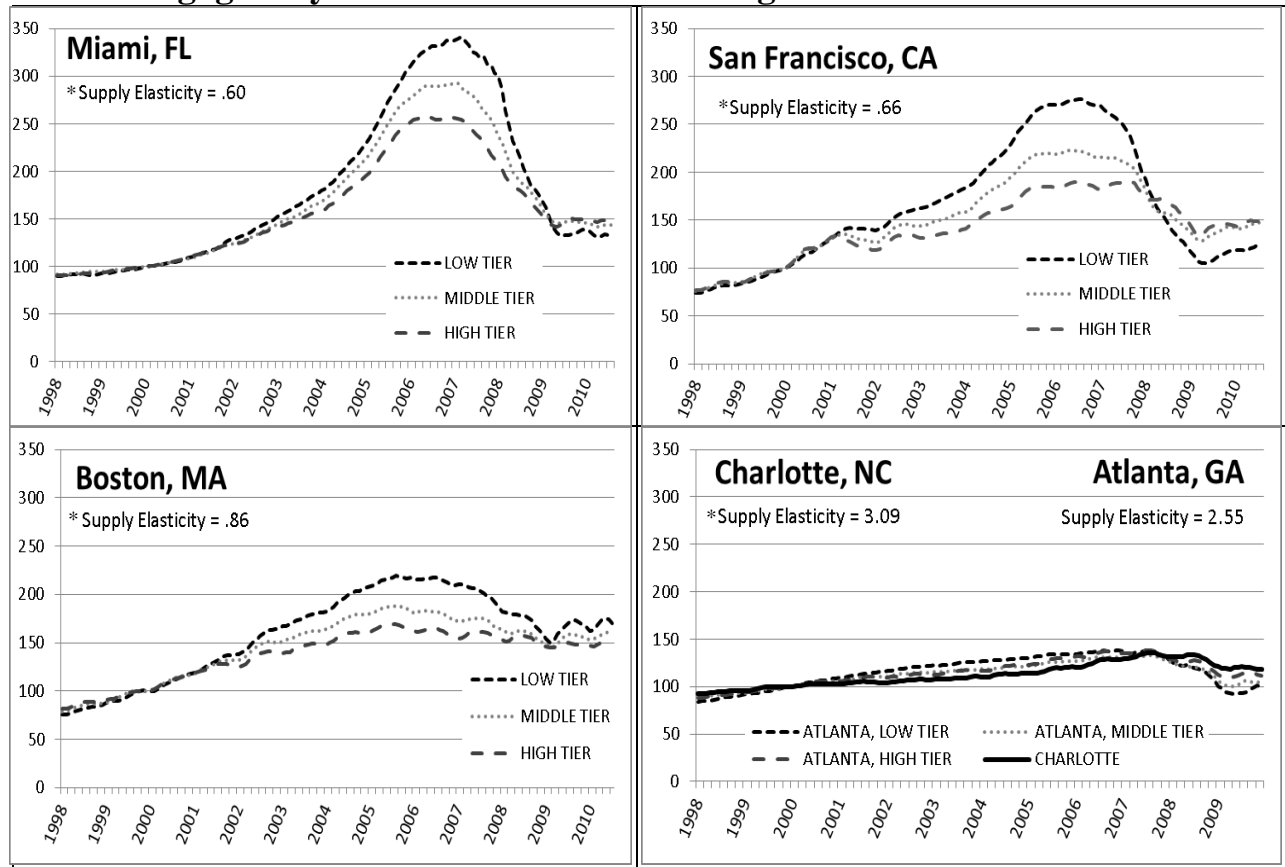
**Figure 3**



**Figure 4**



**Figure 5: Heterogeneity in the Evolution of Housing Prices**



Note: This figure was taken from Kuminoff and Pope, 2013. It shows the substantial heterogeneity in price changes both across and within metro areas. The three lines show the evolution of prices for a metro's bottom "tier", middle "tier", and top "tier" of the price distribution. Breakpoints are defined by metro area as of August 2010. The data for this figure also comes from the the S&P / Case-Shiller Home Price Index. \*Supply elasticities are based on Saiz (2010)

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- [Career Information for Environmental Economists](#) from the Department of Agricultural Economics, Michigan State University

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