

HARVARD ENVIRONMENTAL ECONOMICS PROGRAM

Research Workshop

for

Pre-Doctoral Fellows and Alumni/ae

Thursday-Friday, September 19 – 20, 2019

Harvard Kennedy School
Cambridge, Massachusetts

Conducted with generous support from:

Harvard University Center for the Environment

Mossavar-Rahmani Center for Business and Government
Harvard Kennedy School

The Enel Endowment for Environmental Economics at
Harvard University

HARVARD ENVIRONMENTAL ECONOMICS PROGRAM

RESEARCH WORKSHOP FOR PRE-DOCTORAL FELLOWS AND ALUMNI/AE

AGENDA

ALL MEETINGS IN MALKIN PENTHOUSE, FOURTH FLOOR OF LITTAUER BUILDING,
HARVARD KENNEDY SCHOOL, EXCEPT WHERE OTHERWISE NOTED

Thursday, September 19, 2019

8:15 – 9:00 **Buffet Breakfast**

9:00 – 9:30 **Welcome and Introductions**

Robert Stavins, Director, Harvard Environmental Economics Program

Research Panels (presentations: 10 minutes; responses: 5 minutes)

9:30 - 10:05 **Climate Change Policy: *Impacts***

Carbon prices, preferences, and the timing of uncertainty

Gernot Wagner

New York University, Department of Environmental Studies and Wagner
School of Public Service

Ph.D., Political Economy and Government (2007)

Distributional heterogeneity of temperature impacts on learning

Jisung Park

University of California at Los Angeles

Luskin Center for Innovation, Department of Public Policy

Ph.D., Economics (2017)

Climate change and conflict

Maria Acevedo

IDB Invest

Ph.D., Public Policy (2015)

Response

J.R. DeShazo

University of California Los Angeles, Luskin School of Public Affairs

Ph.D., Urban Planning (Economics) (1997)

10:05 – 10:30 **Discussion**

10:30 – 11:00 **Break**

11:00 – 11:25 **Climate Change Policy: *Compliance, Investment, and Innovation***

Innovation and technology adoption in transportation

Jing Li
MIT Sloan School of Management
Ph.D., Economics (2017)

Dynamic R&D investment with correlation and learning: An application to low carbon technologies

Cuicui Chen
State University of New York, Albany, Department of Economics
Ph.D., Public Policy (2018)

Response

Todd Gerarden
Cornell University
Charles H. Dyson School of Applied Economics and Management
Ph.D., Public Policy (2018)

11:25 – 11:45 **Discussion**

11:45 – 12:10 **Climate Change Policy: *Methods of Analysis and Assessment***

Frontiers in integrated assessment

Karen Fisher-Vanden
Pennsylvania State University, College of Agricultural Sciences, Department of
Agricultural Economics, Sociology, and Education
Ph.D., Public Policy (1999)

Transparency in climate policy: Using forecasting tools to evaluate emission mitigation efforts

Joseph Aldy
Harvard Kennedy School
Ph.D., Economics (2005)

Response

Suzi Kerr
Environmental Defense Fund
Ph.D., Economics (1995)

12:10 – 12:30 **Discussion**

12:30 – 1:30 **Lunch**

1:30 – 2:40 **Electricity Policy**

Demand

The cost of adapting to climate change through the grid

Steve Cicala
University of Chicago, Harris School of Public Policy
Ph.D., Economics (2013)

Impacts of smart meters on losses in electricity distribution, electricity reliability, and household investments in energy efficiency

Robyn Meeks
Duke University, Sanford School of Public Policy
Ph.D., Public Policy (2012)

Using machine learning to target and extrapolate: A case study of household energy use

Samuel Stolper
University of Michigan, School for Environment and Sustainability
Ph.D., Public Policy (2016)

Electricity rationing in India

Kevin Rowe
Ph.D. Program in Public Policy
Harvard Kennedy School

Supply

U.S. carbon pricing and coal productivity

Megan Bailey
Ph.D. Program in Public Policy
Harvard Kennedy School

Innovation in the wind power industry

Richard Sweeney
Boston College, Department of Economics
Ph.D., Public Policy (2015)

Response (10 minutes)

Todd Schatzki
Analysis Group
Ph.D., Public Policy (1998)

2:40 – 3:00 **Discussion**

3:00 – 3:30 **Break**

3:30 – 4:05 **Regulation of Local Pollution**

Emissions regulation and electric vehicle introduction

Sarah Armitage

Ph.D. Program in Political Economy and Government

Harvard Kennedy School

Water pollution, enforcement activity, and economic outcomes in the United States

Daniel Stuart

Ph.D. Program in Public Policy

Harvard Kennedy School

Using satellite data to fill the gaps in the U.S. air pollution monitoring network

Daniel Sullivan

JPMorgan Chase Institute

Ph.D., Economics (2016)

Response

Lori Benneer

Duke University, Nicholas School of the Environment

Ph.D., Public Policy (2004)

4:05 – 4:40 **Discussion**

Group Photograph

Social Stairs, Wexner Commons

4:40 – 5:00

Reception and Dinner

Harvard Kennedy School, Wexner Building, Room 434

5:30 – 9:00

Friday, September 20, 2019

8:15 – 9:00 **Buffet Breakfast**

9:00 – 9:25 **Economic Development and Environmental Quality**

Addressing household air pollution in Ghana through a community scale intervention

Darby Jack
Columbia University, Mailman School of Public Health
Ph.D., Public Policy (2005)

Raising wages, raising pollution: Unintended environmental consequences of anti-poverty programs

Patrick Behrer
Ph.D. Program in Public Policy
Harvard Kennedy School

Response

Fei Yu
North American Representative Office
Asian Development Bank
Ph.D., Public Policy (2008)

9:25 – 9:45 **Discussion**

9:45 – 10:15 **Break**

10:15 – 10:45 **Natural Resource Issues**

The value of water quality: Estimating amenity and recreational benefits

Sheila Olmstead
University of Texas at Austin, Lyndon B. Johnson School of Public Affairs
Ph.D., Public Policy (2002)

Are Payments for Ecosystem Services a win-win for conservation and development?

Kate Sims
Amherst College, Departments of Economics and Environmental Studies
Ph.D., Political Economy and Government (2008)

Responses

Jonathan Baker
Analysis Group
Ph.D., Public Policy (2017)

Olga Rostapshova
University of Chicago, Energy and Environment Lab
Ph.D., Public Policy (2013)

10:45 – 11:10 **Discussion**

11:10 – 11:45 **Petroleum Markets**

Dynamic behavior and strategic interactions among petroleum producers

Cynthia Lin Lawell

Cornell University, Dyson School of Applied Economics and Management

Ph.D., Economics (2006)

Oil and gas well confidentiality laws

Thomas Covert

University of Chicago, Booth School of Business

Ph.D., Business Economics (2014)

Oil price episodes and the U.S. economic production network

Stuart Iler

Ph.D. Program in Public Policy

Harvard Kennedy School

Response

Matthew Ranson

athenahealth

Ph.D., Public Policy (2012)

11:45 – 12:15 **Discussion**

12:15 – 12:45 **Break for buffet lunch**

12:45 – 2:30 **Panels on Professional Development**

Colleges, Universities, and Think Tanks (45 minutes)

Lori Snyder Benneer
Duke University, Nicholas School of the
Environment
Ph.D., Public Policy (2004)

Thomas Covert
University of Chicago
Booth School of Business
Ph.D., Business Economics (2014)

Jing Li
MIT Sloan School of Management
Ph.D., Economics (2017)

Sheila Olmstead
University of Texas at Austin
Lyndon B. Johnson School of Public Affairs
Ph.D., Public Policy (2002)

Jisung Park
University of California at Los Angeles
Luskin Center for Innovation, Department of
Public Policy
Ph.D., Economics (2017)

Trisha Shrum
University of Vermont
College of Agriculture and Life Sciences
Ph.D., Public Policy (2016)

Kate Sims
Amherst College
Departments of Economics and Environmental
Studies
Ph.D., Political Economy and Government
(2008)

Private Sector: Consulting, Business, and Non-governmental Organizations (25 minutes)

Suzi Kerr
Environmental Defense Fund
Ph.D., Economics (1995)

Elizabeth Walker Mettetal
Energy and Environmental Economics, Inc.
Ph.D., Public Policy (2015)

Matthew Ranson
athenahealth
Ph.D., Public Policy (2012)

Todd Schatzki
Analysis Group
Ph.D., Public Policy (1998)

Government and Multilateral Development Banks (30 minutes)

Maria Acevedo
IDB Invest
Ph.D., Public Policy (2015)

Joseph Aldy
Harvard Kennedy School
Ph.D., Economics (2005)

Wenhua Di
Federal Reserve Bank of Dallas
Ph.D., Public Policy (2004)

Fei Yu
Asian Development Bank
Ph.D., Public Policy (2008)

Fan Zhang
World Bank
Ph.D., Public Policy (2007)

2:30 – 2:45 **Closing Remarks**

Harvard Environmental Economics Program

Research Workshop for
Pre-Doctoral Fellows and Alumni/ae

Participant List

Pre-Doctoral Fellows Alumni/ae

Following is a complete list of Pre-Doctoral Fellows alumni/ae. An asterisk (*) indicates the individual is attending the workshop. Harvard doctoral program and year of graduation is in parentheses.

Bios: <https://heep.hks.harvard.edu/people/people-type/alumni-pre-doctoral-fellows>

Maria Acevedo (Public Policy, 2015)*
Private Sector Senior Economist
IDB Invest

Arturo Aguilar (Economics, 2012)
Assistant Professor of Economics
Instituto Tecnológico Autónomo de México

Joseph Aldy (Economics, 2005)*
Professor of the Practice of Public Policy
Harvard Kennedy School

Hunt Allcott (Public Policy, 2009)
Associate Professor of Economics, New York
University
Principal Researcher, Microsoft Research

Jonathan Baker (Public Policy, 2017)*
Associate
Analysis Group

Lori Benneer (Public Policy, 2004)*
Juli Plant Grainger Associate Professor of
Energy Economics and Policy
Nicholas School of the Environment
Duke University

Jonathan Borck (Public Policy, 2008)*
Vice President
Analysis Group

Jing Cao (Public Policy, 2007)
Associate Professor
Department of Economics
Tsinghua University

Gabriel Chan (Public Policy, 2015)
Assistant Professor
Humphrey School of Public Affairs
University of Minnesota

Rohit Chandra (Public Policy, 2018)
Independent energy researcher
New Delhi, India

Cuicui Chen (Public Policy, 2018)*
Assistant Professor of Economics
State University of New York, Albany

Steve Cicala (Economics, 2013)*
Assistant Professor
Harris School of Public Policy
University of Chicago

Thomas Covert (Business Economics, 2014)*
Assistant Professor of Economics
Booth School of Business
University of Chicago

Ashley Craig (Economics, 2019)
Assistant Professor of Economics
University of Michigan

J.R. DeShazo (Urban Planning [Economics], 1997)*
Director, Luskin Center for Innovation;
Professor of Public Policy, Urban Planning
and Civil and Environmental Engineering
Luskin School of Public Affairs
University of California, Los Angeles

Wenhua Di (Public Policy, 2004)*
Senior Economist
Federal Reserve Bank of Dallas

Karen Fisher-Vanden (Public Policy, 1999)*
Professor of Environmental and Resource
Economics
Penn State University

Todd Gerarden (Public Policy, 2018)*
Assistant Professor; Susan Henry
Sesquicentennial Faculty Fellow
Charles H. Dyson School of Applied
Economics and Management
Cornell University

Tara Grillos (Public Policy, 2015)
Assistant Professor of Political Science
Purdue University

Alicia Harley (Public Policy, 2018)
Giorgio Ruffolo Post-Doctoral Fellow in
Sustainability Science
Harvard University

David Hemous (Economics, 2012)
Assistant Professor in Economics and
Political Sciences
INSEAD

Sounman Hong (Public Policy, 2012)
Assistant Professor of Public Administration
Yonsei University (Seoul)

Sabrina Howell (Political Economy & Govt., 2015)
Assistant Professor, Stern School of Business
New York University

Darby Jack (Public Policy, 2005)*
Associate Professor
Mailman School of Public Health
Columbia University

Kelsey Jack (Public Policy, 2010)*
Associate Professor of Environmental and
Development Economics
Bren School of Environmental Science and
Management
University of California, Santa Barbara

Julia Joo-A Lee (Public Policy, 2015)
Assistant Professor
Ross School of Business
University of Michigan

Jennifer Kao (Public Policy, 2019)
Assistant Professor
Anderson School of Management
University of California, Los Angeles

Supreet Kaur (Political Economy and
Government, 2012)
Assistant Professor of Economics
University of California, Berkeley

Nathaniel Keohane (Political Economy and
Government, 2001)
Senior Vice President, International Climate
Environmental Defense Fund

Suzi Kerr (Economics, 1995)*
Chief Economist
Environmental Defense Fund

Avinash Kishore (Public Policy, 2012)
Research Fellow
International Food Policy Research Institute

Carolyn Kousky (Public Policy, 2008)
Director of Policy Research and Engagement
Wharton Risk Center
University of Pennsylvania

Cynthia Lin Lawell (Economics, 2006)*
Associate Professor; Robert Dyson
Sesquicentennial Chair in Environmental,
Energy, and Resource Economics
Dyson School of Applied Economics and
Management
Cornell University

Jing Li (Economics, 2017)*
Assistant Professor; William Barton Rogers
Career Development Chair of Energy
Economics
MIT Sloan School of Management

Stephanie Lo (Economics, 2016)
Vice President, Head of Securities Finance
Research
State Street Associates

Ruben Lubowski (Political Economy and
Government, 2002)
Chief Natural Resource Economist
Environmental Defense Fund

Robyn Meeks (Public Policy, 2012)*
Assistant Professor
Sanford School of Public Policy
Duke University

Elizabeth Walker Mettetal (Public Policy,
2015)*
Senior Consultant
Energy and Environmental Economics, Inc.

Richard Newell (Public Policy, 1997)
President and CEO
Resources for the Future

Janhavi Nilekani (Public Policy, 2018)
Founder
Aastar

Pascal Noel (Economics, 2017)
Assistant Professor of Finance
Booth School of Business
University of Chicago

Sheila Olmstead (Public Policy, 2002)*
Professor of Public Affairs
Lyndon B. Johnson School of Public Affairs
University of Texas at Austin

Jisung Park (Economics, 2017)*
Assistant Professor
Luskin School of Public Affairs, Department
of Public Policy
University of California, Los Angeles

William Pizer (Economics, 1996)
Susan B. King Professor of Public Policy
Sanford School of Public Policy
Duke University

Matthew Ranson (Public Policy, 2012)*
Data Scientist
athenahealth

Olga Rostapshova (Public Policy, 2013)*
Executive Director, Energy and
Environment Lab
University of Chicago

Todd Schatzki (Public Policy, 1998)*
Principal
Analysis Group

Trisha Shrum (Public Policy, 2016)*
Assistant Professor
College of Agriculture and Life Sciences,
Department of Community Development
and Applied Economics
University of Vermont

Katharine Sims (Political Economy and
Government, 2008)*
Associate Professor, Department of
Economics
Affiliate, Environmental Studies Department
Amherst College

E. Somanathan (Economics 1995)
Professor in the Planning Unit
Indian Statistical Institute (New Delhi)

Samuel Stolper (Public Policy, 2016)*
Assistant Professor
School of Environment and Sustainability
University of Michigan

Daniel Sullivan (Economics, 2016)*
Consumer Research Lead
JPMorgan Chase Institute

Richard Sweeney (Public Policy, 2015)*
Assistant Professor of Economics
Department of Economics, Boston College

Dmitry Taubinsky (Business Economics
2014)
Assistant Professor of Economics
University of California, Berkeley

Edmund Toy (Health Policy, 2002)
Senior Economist and Budget Analyst
Governor's Office of State Planning and
Budgeting
State of Colorado

Gergely Ujhelyi (Economics, 2007)
Associate Professor of Economics
University of Houston

Daniel Velez-Lopez (Public Policy, 2019)
Lead Analyst, Venture Fellowship Program
National Grid

Alexander Wagner (Political Economy and
Government, 2005)
Associate Professor of Finance
University of Zürich

Gernot Wagner (Political Economy and
Government, 2007)*
Clinical Associate Professor of Environmental
Studies and Public Service
Department of Environmental Studies and
Wagner School of Public Service
New York University

Lilei Xu (Economics, 2016)
Data Scientist Manager, Growth and Traffic
Airbnb

Fei Yu (Public Policy, 2008)*
Deputy Representative, North American
Representative Office
Asian Development Bank

Fan Zhang (Public Policy, 2007)*
Senior Economist
World Bank

Alix Peterson Zwane (Public Policy, 2002)
Founder and CEO
Global Innovation Fund

Pre-Doctoral Fellows, 2019-2020

Following is a complete list of current Pre-Doctoral Fellows. An asterisk (*) indicates the individual is attending the workshop. Harvard doctoral program is in parentheses.

Bios: <https://heep.hks.harvard.edu/people/people-terms/pre-doctoral-fellows>

Sarah Armitage (Political Economy and Government)*

Megan Bailey (Public Policy)*

Marcos Barrozo (Public Policy)*

Patrick Behrer (Public Policy)*

Jacob Bradt (Public Policy)*

Tridevi Chakma (Public Policy)*

Stuart Iler (Public Policy)*

Felipe Jordan (Political Economy and Government)

Shefali Khanna (Public Policy)

Eleanor Krause (Public Policy)*

Paichen Li (Public Policy)*

Michelle Li (Public Policy)*

Kristen McCormack (Public Policy)*

Ashley Palmarozzo (Business Administration)*

Kevin Rowe (Public Policy)*

Elizabeth Spink (Public Policy)*

Daniel Stuart (Public Policy)*

Kala Viswanathan (Business Administration)*

Faculty Fellows and Associate Scholars of the Harvard Environmental Economics Program

For bios, see: <http://heep.hks.harvard.edu/people/people-terms/faculty-fellows>
<https://heep.hks.harvard.edu/people/people-terms/associate-scholars>

Faculty Fellows will in general not be attending the workshop.

Faculty of Arts and Sciences

Richard Cooper, Maurits C. Boas Professor of International Economics
Melissa Dell, Professor of Economics
Edward Glaeser, Fred and Eleanor Glimp Professor of Economics
Jerry Green, John Leverett University Professor and David A. Wells Professor of Political Economy
Nathaniel Hendren, Professor of Economics
Dale Jorgenson, Samuel W. Morris University Professor of Economics
Michael Kremer, Gates Professor of Developing Societies
N. Gregory Mankiw, Robert M. Beren Professor of Economics
Eric Maskin, Adams University Professor
Ariel Pakes, Thomas Professor of Economics
James Stock, Harold Hitchings Burbank Professor of Political Economy
Martin Weitzman (1942 – 2019)

Harvard Business School

Shawn Cole, John G. McLean Professor of Business Administration
Rebecca Henderson, John and Natty McArthur University Professor
Joseph Lassiter, Senior Fellow and Senator John Heinz Professor of Management Practice in
Environmental Management, Retired
Felix Oberholzer-Gee, Andreas Andresen Professor of Business Administration
Forest Reinhardt, John D. Black Professor of Business Administration
Michael Toffel, Senator John Heinz Professor of Environmental Management
Richard Vietor, Baker Foundation Professor, Paul Whiton Cherington Professor of Business
Administration, Emeritus

Harvard School of Public Health

David Bloom, Clarence James Gamble Professor of Economics and Demography, Department of
Global Health and Population
James Hammitt, Professor of Economics and Decision Sciences, Department of Health Policy and
Management

Continued:

Harvard Law School

Steven Shavell, Samuel R. Rosenthal Professor of Law and Economics

Cass Sunstein, Robert Walmsley University Professor

Mark Wu, Henry L. Stimson Professor of Law

Graduate School of Design

Richard Peiser, Michael D. Spear Professor of Real Estate Development

Harvard Kennedy School

Joseph Aldy, Professor of the Practice of Public Policy

Jeffrey Frankel, James W. Harpel Professor of Capital Formation and Growth

Rema Hanna, Jeffrey Cheah Professor of South-East Asia Studies

William Hogan, Raymond Plank Research Professor of Global Energy Policy

Robert Lawrence, Albert L. Williams Professor of International Trade and Investment

Robert Stavins, A.J. Meyer Professor of Energy and Economic Development

Lawrence Summers, Charles W. Eliot University Professor

Richard Zeckhauser, Frank P. Ramsey Professor of Political Economy

Associate Scholars

Paul L. Joskow, Elizabeth and James Killian Professor of Economics, Emeritus, Massachusetts Institute of Technology

Christopher Knittel, George P. Shultz Professor of Applied Economics, Co-Director of the Center for Energy and Environmental Policy Research, Massachusetts Institute of Technology

Gilbert Metcalf, John DiBiaggio Professor of Citizenship and Public Service and Professor of Economics, Tufts University

Robert Pindyck, Bank of Tokyo-Mitsubishi Professor of Economics and Finance, MIT Sloan School of Management

Richard Schmalensee, Howard W. Johnson Professor of Management and Professor of Economics, Emeritus, Massachusetts Institute of Technology

Sponsors

The **Harvard University Center for the Environment** encourages research and education about the environment and its many interactions with human society. The Center draws its strength from faculty members and students across Harvard University who make up a remarkable intellectual community of scholars, researchers, and teachers of diverse fields including chemistry, earth and planetary sciences, engineering and applied sciences, history, biology, public health and medicine, government, business, economics, religion, literature and the law. The most pressing problems facing our natural environment are complex, often requiring collaborative investigation by scholars versed in different disciplines. By connecting scholars and practitioners from different disciplines, the Center for the Environment seeks to raise the quality of environmental research at Harvard and beyond. The Center has provided generous material support to the Harvard Environmental Economics Program (HEEP) since HEEP's founding, and a number of HUCE's Environmental Fellows and Visiting Scholars have made intellectual contributions to HEEP. For more information, see: <https://environment.harvard.edu>

The **Mossavar-Rahmani Center for Business and Government** at Harvard Kennedy School seeks to advance the state of knowledge and policy analysis concerning some of society's most challenging problems at the interface of the public and private sectors. The scope of its work ranges from the local to the global. Drawing on the unparalleled intellectual resources of the Kennedy School and Harvard University, and bringing together thought leaders from both business and government, the center conducts research, facilitates dialogue, and seeks answers that are at once intellectually rigorous and policy relevant. The Center is the institutional home of the Harvard Environmental Economics Program.

The **Enel Endowment for Environmental Economics at Harvard University** provides major support for the Harvard Environmental Economics Program. The Endowment was established in February 2007 by a generous capital gift from Enel, a progressive Italian corporation involved in energy production worldwide.

Sponsors Providing General Support to HEEP and Support for other Projects

HEEP and the closely-affiliated Harvard Project on Climate Agreements are grateful for general support and support for other projects from the Harvard University Climate Change Solutions Fund, the Harvard Global Institute, the Enel Foundation, the Belfer Center for Science and International Affairs at Harvard Kennedy School, BP, Shell, and Christopher P. Kaneb (Harvard AB 1990).

Previous sponsors include the Alfred P. Sloan Foundation, the Ash Center for Democratic Governance and Innovation at Harvard Kennedy School, the AVINA Foundation, Bank of America, Castleton Commodities International LLC, ClimateWorks Foundation, Doris Duke Charitable Foundation, Duke Energy Corporation, the International Emissions Trading Association (IETA), the James M. and Cathleen D. Stone Foundation, the National Science Foundation, Shell, the U.S. Department of Energy, and the U.S. Environmental Protection Agency.