

## MICHAEL GREENSTONE

### CONTACT INFORMATION

University of Chicago  
Department of Economics  
1126 E. 59<sup>th</sup> Street  
Chicago, Illinois 60637  
Tel: (773) 702-8250  
Fax: (773) 702-8490  
Email: mgreenst@uchicago.edu

### PERSONAL

Marital Status: Married to Katherine Ozment  
Children: William Pryor Greenstone, Jessica Joan Greenstone and Anne Ozment Greenstone  
Citizenship: US

### EDUCATION

Ph.D., Economics, Princeton University, 1998  
B.A. with High Honors, Economics, Swarthmore College, June 1991

### PROFESSIONAL EXPERIENCE

#### ACADEMIC POSITIONS

|                |  |
|----------------|--|
| 2017 – present | Director, <u>Becker Friedman Institute</u> , University of Chicago   |
| 2015 – present | Director, <u>Environment and Energy Lab, University of Chicago Urban Labs</u>  |
| 2014 – present | Milton Friedman Professor in Economics, the College, and the Harris School, <u>University of Chicago</u>   |
| 2014 – present | Director, <u>Energy Policy Institute at the University of Chicago</u> (EPIC)   |
| 2006 – 2014    | 3M Professor of Environmental Economics, MIT   |
| 2006 – 2007    | Visiting Professor, University of California Energy Institute and University of California, Berkeley (Economics Department and Center for Labor Economics) |
| 2005 – 2006    | Visiting Professor at University of California, Berkeley (Center for Labor Economics) and Stanford (Department of Economics)                               |
| 2003 – 2006    | 3M Associate Professor of Economics (with tenure), MIT   |
| 2000 – 2003    | Assistant Professor of Economics University of Chicago   |
| 1998 – 2000    | Robert Wood Johnson Scholar, University of California-Berkeley   |

#### AFFILIATIONS and NONACADEMIC POSITIONS

|                |   |
|----------------|---|
| 2016 – present | Research Advisory Committee Member, <u>Centre for Environmental Health</u>                  |
| 2015 – present | Member, <u>The Lancet Commission on Pollution and Health</u>                                |
| 2015 – present | Fellow, <u>Econometric Society</u>  |
| 2015 – 2017    | Member, <u>Secretary of Energy Advisory Board</u>   |
| 2015 – present | STEP Board, National Academy of Sciences  |
| 2015 – present | Faculty Affiliate, <u>Center for Health and the Social Sciences</u> , University of Chicago |
| 2015 – present | Senior Fellow (Economics, Justice, and Society), <u>NORC</u> at the University of Chicago   |
| 2014 – present | Faculty Advisory Board Member, <u>The Paulson Institute</u>                                 |
| 2014 – present | Elected Member, <u>American Academy of Arts and Sciences</u>                                |
| 2014 – present | Occasional Contributor, <u>The New York Times</u>   |
| 2013 – present | Faculty Director, <u>The E2e Project</u>  |
| 2013 – present | Director, Energy Research Programme, <u>International Growth Centre</u>                     |
| 2013 – present | Member, Advisory Board to the <u>Yale Program on Financial Stability</u> , Yale University  |
| 2013 – present | Nonresident Senior Fellow (Economic Studies), <u>Brookings Institution</u>                  |

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|----------------|--|
| 2010 – 2013    | Senior Fellow (Economic Studies), <u>Brookings Institution</u>   |
| 2010 – 2013    | Director, <u>The Hamilton Project</u>  |
| 2010 – 2013    | Co-Director, Climate Change, Environment and Natural Resources Research Programme, International Growth Centre |
| 2010 – present | Head of Environment and Energy Program, <u>Abdul Latif Jameel Poverty Action Lab</u> , MIT                     |
| 2007 – 2009    | Nonresident Senior Fellow (Economic Studies), <u>Brookings Institution</u>                                     |
| 2009 – 2010    | Chief Economist, White House Council of Economic Advisors  |
| 2008 – 2014    | Energy Council, <u>MIT Energy Initiative</u>   |
| 2008 – 2009    | <u>Environmental Research Council</u> , MIT  |
| 2008 – present | Advisory Board, Ed Labs  |
| 2006 – present | Fellow, <u>Center for the Study of Poverty and Inequality at Stanford University</u>                           |
| 2006 – present | Member, Abdul Latif Jameel Poverty Action Lab  |
| 2003 – present | Research Associate, <u>National Bureau of Economic Research</u>  |
| 2002 – 2003    | Research Fellow, <u>American Bar Foundation</u>  |
| 2001 – 2003    | Research Associate, Center for Integrating Statistical and Environmental Science, University of Chicago        |
| 2001 – 2003    | Research Associate, <u>Population Research Center</u> , University of Chicago                                  |
| 2000 – 2003    | Faculty Research Fellow, National Bureau of Economic Research  |
| 1998 – 2000    | Visiting Scholar, Center for Labor Economics, University of California Berkeley                                |
| 1996 – 1998    | Special Sworn Employee, US Census Bureau   |

## **FIELDS OF INTEREST**

Environmental and Energy Economics, Public Finance, Development Economics, Labor Economics, and Health Economics

## **FELLOWSHIPS AND AWARDS**

|  |
|--|
| Association of Environmental and Resource Economists ( <u>AERE</u> ) Fellow, 2018  |
| National Science Foundation Grant (with Esther Duflo and Rohini Pande), 2011-2013  |
| John D. and Catherine T. MacArthur Foundation (with Hunt Allcott), 2010-2012   |
| Alfred P. Sloan Foundation (with Meredith Fowlie and Catherine Wolfram), 2010-2012   |
| National Institute of Health (NICHD) R21 Grant # ES019375-01 (with Olivier Deschenes), 2010-2012   |
| National Institute of Health (NICHD) R21 Grant #HD055613-01 (with Janet Currie and Enrico Moretti), 2007-2009  |
| Smith-Richardson Foundation, (with Ted Gayer), 2006-2007   |
| Eligible Fellow, Center for Advanced Study in the Behavioral Sciences, 2005-2011   |
| 12 <sup>th</sup> Annual Kenneth J. Arrow Award for Best Paper in Field of Health Economics, 2004   |
| Albert Rees Prize for Best Dissertation in Labor Economics from Princeton in Previous Six Years, 2003  |
| National Institute of Health (NICHD) R01 Grant #HD42176-01, (with Kenneth Chay), 2002-2006   |
| Environmental Protection Agency through Center for Integrating Statistical and Environmental Science at University of Chicago (with Kenneth Chay), 2002-2004 |
| George G. Stigler Center for Study of Economy and State Faculty Research Grant, (with Paul Oyer and Annette Vissing-Jorgensen), 2001-2002 and 2002-2003      |
| National Institute of Health (NICHD) RO3 Grant #HD38302-01, (with Kenneth Chay), 2000-2001   |
| National Science Foundation Grant #9730212, (with Kenneth Chay), 1998-2001   |
| Alfred P. Sloan Foundation Doctoral Dissertation Fellowship, 1996-1997   |
| Woodrow Wilson Society of Fellows Graduate Fellowship, Princeton University, 1996-1998   |
| Joseph L. Fisher Dissertation Award, Resources for the Future, 1996-1997   |
| Robertson Fellowship, Woodrow Wilson School, Princeton University, 1995-1997   |
| Center for Economic Policy Studies Research Grant, Princeton University, 1996  |
| Lynde and Harry Bradley Foundation Fellowship, 1995-1996   |
| Princeton University Fellowship, 1993-1996 and Summer 1996 and 1997  |

## **PUBLICATIONS**

50. “[The Value of Discretion in the Enforcement of Regulation: Experiment Evidence and Structural Estimates from Environmental Inspections in India](#),” (with Esther Duflo, Rohini Pande, and Nicholas Ryan), forthcoming *Econometrica*.

49. “[Do Energy Efficiency Investments Deliver? Evidence from the Weatherization Assistance Program](#),” (with Meredith Fowlie and Catherine Wolfram), *Quarterly Journal of Economics*, 2018, 133 (3): 1597-1644.

48. “[Hydraulic Fracturing and Infant Health: New Evidence from Pennsylvania](#),” (with Janet Currie and Katherine Meckel), *Science Advances*, 2017, 3(12): 1-9.

47. “[The Continuing Impact of Sherwin Rosen’s “Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition”](#),” *Journal of Political Economy*, 2017, 125 (6): 1891-1902.

46. “[New Evidence on the Impact of Sustained Exposure to Particulate Matter on Life Expectancy from China’s Huai River Policy](#),” (with Avraham Ebenstein, Maoyong Fan, Guojun He, Maigeng Zhou), *Proceedings of the National Academy of Sciences*, 2017, 114 (39): 10384–10389.

45. “[Best Cost Estimate of Greenhouse Gases](#),” (with Richard Revesz, Michael Hanemann, Michael Livermore, Thomas Sterner, Denise Grab, Peter Howard, Jason Schwartz), *Science*, August 2017, Vol. 357 (6352).

44. “[Defensive Investments and the Demand for Air Quality: Evidence from the NOx Budget Program](#),” (with Olivier Deschenes and Joseph Shapiro), *American Economic Review*, October 2017, 107 (10): 2958-89.

43. “[Reforming the U.S. Coal Leasing Program](#),” (with Kenneth Gillingham, James Bushnell, Meredith Fowlie, Charles Kolstad, Alan Krupnick, Adele Morris, Richard Schmalensee, James Stock), *Science*, December 2016, Vol 354 (6316).

42. “[Opportunities for Advances in Climate Change Economics](#),” (with Marshall Burke, Melanie Craxton, Charles Kolstad, Chikara Onda, Hunt Allcott, Erin Baker, Lint Barrage, Richard Carson, Kenneth Gillingham, Josh Graff- Zivin, Stéphane Hallegatte, W. Michael Hanemann, Geoffrey Heal, Solomon Hsiang, Benjamin Jones, David Kelly, Robert Kopp, Matthew Kotchen, Robert Mendelsohn, Kyle Meng, Gilbert Metcalf, Juan Moreno-Cruz, Robert Pindyck, Steven Rose, Ivan Rudik, James Stock, Richard S.J. Tol), *Science*, April 2016, Vol. 352 (6283).

41. “[Will We Ever Stop Using Fossil Fuels?](#)” (with Thomas Covert and Christopher R. Knittel), *Journal of Economic Perspectives*, 2016, 30 (1): 117-38.

40. “[Up in Smoke: The Influence of Household Behavior on the Long-Run Impact of Improved Cooking Stoves](#),” (with Rema Hanna and Esther Duflo), *American Economic Journal: Economic Policy*, 2016, 8 (1): 80-114.

39. “[Adapting to Climate Change: The Remarkable Decline in the U.S. Temperature-Mortality Relationship Over the 20<sup>th</sup> Century](#),” (with Alan Barreca, Karen Clay, Olivier Deschenes, and Joseph Shapiro), *Journal of Political Economy*, 2016, 124 (1): 105-109.

38. “[Are the Non-Monetary Costs of Energy Efficiency Investments Large? Understanding Low Take-up of a Free Energy Efficiency Program](#),” (with Meredith Fowlie and Catherine Wolfram), *American Economic Review Papers and Proceedings*, 2015, 105 (5): 201-204.

37. “[Growth, Pollution, and Life Expectancy: China from 1991-2012](#),” (with Avraham Ebenstein, Maoyong Fan, Guojun He, and Maigeng Zhou), *American Economic Review Papers and Proceedings*, 2015, 105 (5): 226- 231.

36. “[Convergence in Adaptation to Climate Change: Evidence from High Temperatures and Mortality, 1900-2004](#),” (with Alan Barreca, Karen Clay, Olivier Deschenes, and Joseph S. Shapiro), *American Economic Review Papers and Proceedings*, 2015, 105 (5): 247-251.

35. “[Environmental Health Risks and Housing Values: Evidence from 1600 Toxic Plant Openings and Closings](#),” (with Janet Currie, Lucas Davis, and Reed Walker), *American Economic Review*, 2015, 105 (2): 678-709.

34. “[Envirodevonomics: A Research Agenda for an Emerging Field](#),” (with B. Kelsey Jack), *Journal of Economic Literature*, March 2015, 53 (1): 5-42.

33. “[Using and Improving the Social Cost of Carbon](#),” (with William Pizer, Matthew Adler, Joseph Aldy, David Anthoff, Maureen Cropper, Kenneth Gillingham, Michael Greenstone, Brian Murray, Richard Newell, Richard Richels, Arden Rowell, Stephanie Waldhoff, Jonathan Wiener), *Science*, December 2014, Vol. 346 (6214).

32. “[An Economic Perspective on the EPA’s Clean Power Plan](#),” (with Meredith Fowlie, Matthew Kotchen, Severin Borenstein, James Bushnell, Lucas Davis, Charles Kolstad, Christopher Knittel, Robert Stavins, Michael Wara, Frank Wolak, and Catherine Wolfram), *Science*, November 2014, Vol. 346 (6211).

31. “[Particulate Matter Matters](#),” (with Francesca Dominici and Cass R. Sunstein) *Science*, April 2014, Vol. 344 (6181).

30. “[Environmental Regulations, Air and Water Pollution, and Infant Mortality in India](#),” (with Rema Hanna), *American Economic Review*, 2014, 104 (10): 3038-3072.

29. “[Truth-telling by Third-Party Auditors and the Response of Polluting Firms: Experimental Evidence from India](#),” (with Esther Duflo, Rohini Pande, and Nicholas Ryan), *Quarterly Journal of Economics*, 2013, 128 (4): 1499-1545.

28. “[Evidence on the Impact of Sustained Exposure to Air Pollution on Life Expectancy from China’s Huai River Policy](#),” (with Yuyu Chen, Avraham Ebenstein, and Hongbin Li), *Proceedings of the National Academy of Sciences*, 2013, 110 (32): 12936-12941.

27. “[What Does Reputation Buy? Differentiation in a Market for Third-Party Auditors](#),” (with Esther Duflo, Rohini Pande, and Nicholas Ryan), *American Economic Review Papers and Proceedings*, 2013, 103 (3): 314-319.

26. “[Developing a Social Cost of Carbon for US Regulatory Analysis: A Methodology and Interpretation](#),” (with Elizabeth Kopits and Ann Wolverton), *Review of Environmental Economics and Policy*, 2013, 7 (1): 23-46.

25. “[The Economic Impacts of Climate Change: Evidence from Agricultural Output and Random Fluctuations in Weather: Reply](#),” (with Olivier Deschenes), *American Economic Review*, 2012, 102 (7): 3761-3773.

24. “[Paying Too Much for Energy? The True Costs of Our Energy Choices](#),” (with Adam Looney), *Daedalus*, 2012, 241(2): 10-30.

23. “[Is There an Energy Efficiency Gap?](#)” (with Hunt Allcott), *Journal of Economic Perspectives*, 2012, 26 (1): 3-28.

22. “[Climate Change, Mortality, and Adaptation: Evidence from Annual Fluctuations in Weather in the US](#),” (with Olivier Deschenes), *American Economic Journal: Applied Economics*, 2011, 3 (4): 152–185.

21. “[Superfund Cleanups and Infant Health](#),” (with Janet Currie and Enrico Moretti). *American Economic Review*, 2011, 101 (3): 435–441.

20. “[Comment on ‘On the Economics of Climate Policy’: Is Climate Change Mitigation the Ultimate Arbitrage Opportunity?](#)” (with Manasi Deshpande), *B.E. Journal of Economic Analysis & Policy*, 10 (2) (Symposium), Article 20, 2010; reprinted in Mark Cohen, Don Fullerton and Robert Topel (Eds.) *Distributional Aspects of Energy and Climate Policies*. Cheltenham, UK: Edward Elgar, 2013, pp. 28-40.

19. “[Identifying Agglomeration Spillovers: Evidence from Winners and Losers of Large Plant Openings](#),” (with Rick Hornbeck and Enrico Moretti), *Journal of Political Economy*, 2010, 118 (3): 536-598.

18. “[The Changing Consequences of Attending Historically Black Colleges and Universities](#),” (with Roland Fryer), *American Economic Journal: Applied Economics*, 2010, 2(1): 116-48.

17. “[Climate Change and Birth Weight](#),” (with Olivier Deschenes and Jonathan Guryan), *American Economic Review Papers and Proceedings*, 2009, 99(2): 211-217.

16. “[Winter Heating or Clean Air? Unintended Impacts of China’s Huai River Policy](#),” (with Douglas Almond, Yuyu Chen, and Hongbin Li), *American Economic Review Papers and Proceedings*, 2009, 99(2): 184-190.

15. “[Quasi-Experimental and Experimental Approaches to Environmental Economics](#),” (with Ted Gayer), *Journal of Environmental Economics and Management*, 2009, 57 (1): 21-44.

14. “[Does Hazardous Waste Matter? Evidence from the Housing Market and the Superfund Program](#),” (with Justin Gallagher), *Quarterly Journal of Economics*, August 2008, 123 (3): 951-1003.

13. “[The Economic Impacts of Climate Change: Evidence from Agricultural Output and Random Fluctuations in Weather](#),” (with Olivier Deschenes), *American Economic Review*, March 2007, 97 (1): 354-385.

12. “[Mandated Disclosure, Stock Returns, and the 1964 Securities Act](#),” (with Paul Oyer and Annette Vissing- Jorgensen), *Quarterly Journal of Economics*, May 2006, 121 (2): 399-460.

11. “[Does Air Quality Matter? Evidence from the Housing Market](#),” (with Kenneth Chay), *Journal of Political Economy*, April 2005, 113(2): 376-424.

10. “[Did the Clean Air Act Cause the Remarkable Decline in Sulfur Dioxide Concentrations?](#)” *Journal of Environmental Economics and Management*, 2004, 47(3).  
 •Reprinted in *Spatial Aspects of Environmental Policy*, editors Jacqueline Geoghegan and Wayne Gray

9. “[Estimating the Value of a Statistical Life: The Importance of Omitted Variables and Publication Bias](#),” (with Orley Ashenfelter), *American Economic Review Papers and Proceedings*, 2004, 94(2).

8. “[Using Mandated Speed Limits to Measure the Value of a Statistical Life](#),” (with Orley Ashenfelter), *Journal of Political Economy*, 2004, 112(1, Pt. 2).

7. “[The Clean Air Act of 1970 and Adult Mortality](#),” (with Kenneth Chay and Carlos Dobkin), *Journal of Risk and Uncertainty*, 2003, 27(3).

6. “[The Impact of Air Pollution on Infant Mortality: Evidence from Geographic Variation in Pollution](#)

Shocks Induced by a Recession,” (with Kenneth Chay), *Quarterly Journal of Economics*, 2003, 118(3).

•Awarded Kenneth J. Arrow Award for Best Paper in Field of Health Economics in 2003.

5. “Estimating Regulation-Induced Substitution: The Effect of the Clean Air Act on Water and Ground Pollution,” *American Economic Review Papers and Proceedings*, 2003, 93(2).

4. “The Impacts of Environmental Regulations on Industrial Activity: Evidence from the 1970 and 1977 Clean Air Act Amendments and the Census of Manufacturers,” *Journal of Political Economy*, 2002, 110(6).

•Reprinted in *The Economics of Pollution Control*, editor Kathleen Segerson. Cheltenham, UK: Edward Elgar, 2011.

3. “A Reexamination of Resource Allocation Responses to the 65-mph Speed Limit,” *Economic Inquiry*, 2002, 40(2).

2. “The Convergence in Black/White Infant Mortality Rates during the 1960s,” (with Kenneth Chay). *American Economic Review Papers and Proceedings*, 2000, 90(2).

1. “Are There Sectoral Anomalies Too? The Pitfalls of Multiple Hypothesis Testing and a Simple Solution,” (with Paul Oyer). *Review of Quantitative Finance and Accounting*, 2000, 15(1).

## WORKING PAPERS

“Valuing the Global Mortality Consequences of Climate Change Accounting for Adaptation Costs and Benefits,” (with Tamma Carleton, Michael Delgado, Trevor Houser, Solomon Hsiang, Andrew Hultgren, Amir Jina, Robert E. Kopp, Kelly McCusker, Ishan Nath, James Rising, Ashwin Rode, Samuel Seo, Justin Simcock, Arvid Viaene, Jiacan Yuan, and Alice Zhang), University of Chicago, Becker Friedman Institute for Economics WP# 2018-51, 2018.

“Do Credit Market Shocks Affect the Real Economy? Quasi-Experimental Evidence from the Great Recession and 'Normal' Economic Times,” (with Alex Mas and Hoai-Luu Nguyen), 2018. 2<sup>nd</sup> Revision Requested at *American Economic Journal: Economic Policy*.

“The Local Economic and Welfare Consequences of Hydraulic Fracturing,” (with Alexander W. Bartik, Janet Currie, and Christopher R. Knittel), 2018. Resubmitted to *American Economic Journal: Applied Economics*.

“The Value of a Statistical Life: Evidence from Military Retention Incentives and Occupation-Specific Mortality Hazards,” (with Kyle Greenberg, Stephen Ryan, and Michael Yankovich), Mimeo, 2018.

“Measuring the Welfare Effects of Residential Energy Efficiency Programs,” (with Hunt Allcott), Mimeo, 2017.

“Weather, Climate Change and Death in India,” (with Robin Burgess, Olivier Deschenes, and Dave Donaldson), Mimeo, 2017.

“The Next Generation of Transportation Policy,” (with Cass Sunstein and Sam Ori), March 2017.

“Toilets Can Work: Short and Medium Run Health Impacts of Addressing Complementarities and Externalities in Water and Sanitation,” (with Esther Duflo, Raymond Guiteras, and Thomas Clasen), Mimeo, 2015.

“The Effects of Environmental Regulation on the Competitiveness of U.S. Manufacturing,” (with John A. List and Chad Syverson), NBER WP #18392, MIT Department of Economics WP No. 12-24, 2012. Revision requested by *Quarterly Journal of Economics*.

“Is The ‘Surge’ Working? Some New Facts.” MIT Department of Economics Working Paper, September 2007. Revision Requested by *B.E. Journal of Economic Analysis & Policy*.

“Civil Rights, the War on Poverty, and Black-White Convergence in Infant Mortality in the Rural South and Mississippi,” (with Douglas Almond and Kenneth Chay). September 2007. Accepted Subject to Minor Revisions at *American Economic Review*.

“Bidding for Industrial Plants: Does Winning a ‘Million Dollar Plant’ Increase Welfare?” (with Enrico Moretti), Mimeo, 2004. Revision requested by *American Economic Review*.

“Air Quality, Infant Mortality, and the Clean Air Act of 1970,” (with Kenneth Chay). NBER Working Paper No. 10053, 2003.

“The Wage Consequences of Enclave Residence: Evidence from the 1980 and 1990 Censuses,” University of California-Berkeley, Center for Labor Economics Working Paper No. 6, November 1998. Revision requested by *Industrial and Labor Relations Review*.

## OTHER PUBLICATIONS

13. “[China’s Air Pollution Edges Back from the Brink](#),” *Asia Global Online*, July 19, 2018.
12. “[The Lancet Commission on Pollution and Health](#),” (with Philip J. Landrigan, Richard Fuller, Nereus J.R. Acosta, Olusoji Adeyi, Robert Arnold, Niladri (Nil) Basu, Abdoulaye Bibi Balde, Roberto Bertollini, Stephan Bose-O'Reilly, Jo Ivey Boufford, Patrick N. Breysse, Thomas Chiles, Chulabhorn Mahidol, Awa M. Coll-Seck, Maureen L. Cropper, Julius Fobil, Valentin Fuster, Andy Haines, David Hanrahan, David Hunter, Mukesh Khare, Alan Krupnick, Bruce Lanphear, Bindu Lohani, Keith Martin, Karen V. Mathiasen, Maureen A. McTeer, Christopher J.L. Murray, Johanita D. Ndhimananjara, Frederica Perera, Janez Potocnik, Alexander S. Preker, Jairam Ramesh, Johan Rockstrom, Carlos Salinas, Leona D. Samson, Karti Sandilya, Peter D. Sly, Kirk R. Smith, Achim Steiner, Richard B. Stewart, William A. Suk, Onno C.P. van Schayck, Gautam N. Yadama, Kandeh Yumkella, Ma Zhong), *The Lancet*, Vol 391 (10119), February 2018, 462-512.
11. “[Lower Pollution, Longer Lives: Life Expectancy Gains if India Reduced Particulate Matter Pollution](#),” (with Janhavi Nilekani, Rohini Pande, Nicholas Ryan, Anant Sudarshan, and Anish Sugathan), *Economic and Political Weekly*, 50(8), (February 21 – February 27, 2015), 40-46.
10. “[Water pollution and public health in India: The potential for a market-friendly approach](#),” (with Raahil Madhok, Rohini Pande, and Hardik Shah), *In Health and South Asia*, Cambridge, MA: Harvard South Asia Institute, 2013, 61-65.
9. “[Renewing Economically Distressed American Communities](#),” (with Adam Looney), *Issues in Science and Technology*, Winter 2011.
8. “[Trends](#),” (with Adam Looney), *The Milken Institute Review*, 13(3): 8-16.
7. “[Towards an Emissions Trading Scheme for Air Pollutants in India: A Concept Note](#),” (with Esther Duflo, Rohini Pande and Nicholas Ryan), Discussion Paper, Ministry of Environment and Forest, Government of India, August, 2010.
6. “[Effective Regulation through Credible Cost-Benefit Analysis: The Opportunity Costs of Superfund](#),” in Edward Balleisen and David Moss (eds.) *Government and Markets: Toward a New Theory of Regulation*. Cambridge; New York: Cambridge University Press, 2010, 52-91.
5. “[Toward a Culture of Persistent Regulatory Experimentation and Evaluation](#),” in David Moss and John

Cisternino (eds.) *New Perspectives on Regulation*. Cambridge, MA: The Tobin Project, 2009, 111-126.

4. “[Cooking Stoves, Indoor Air Pollution, and Respiratory Health in Rural Orissa](#),” (with Esther Duflo and Rema Hanna), *Economic and Political Weekly*, 43(32), (August 09 - August 15, 2008), 71-76.
3. “[Tradable Water Rights](#),” *Democracy*, Spring 2008.
2. “[Indoor Air Pollution, Health, and Economic Well-Being](#),” (with Esther Duflo and Rema Hanna), *Surveys and Perspectives Integrating Environment and Society*, 2008, 1(1).
1. “[The Value of Knowing](#),” (with Paul Oyer and Annette Vissing-Jorgensen), *Regulation*, Summer 2006.

## **INVITED LECTURES**

Keynote Address, Workshop on Environmental Regulation and Industrial Performance, Toulouse School of Economics, May 2018

Keynote Address, Volatility Institute Conference, NYU Stern, April 2018

June and Edgar Martin Memorial Lecture, Miller Upton Forum, Beloit College, Beloit, Wisconsin, October 2017

Keynote Address, Advances with Field Experiments Conference, University of Chicago, September 2017

Plenary Session, Aspen Ideas Festival, Aspen Institute, June 2017

Woody Thompson Lecture, Midwest Economics Association, Cincinnati, Ohio, March 2017

Odisha Knowledge Hub Lecture Series, Odisha Secretariat, February 2017

Keynote Address, Ivey Business School, The Global Energy Outlook: The Future of Fossil Fuels, October 2016

NSF/SBE Distinguished Lecture, National Science Foundation, October 2016

Marburg Lecture Series, Marquette University, November 2016

Barcelona Graduate School of Economics Lecture Series, November 2016

Inaugural Jon Goldstein Lecture, Heller-Hurwicz Economics Institute, University of Minnesota, October 2015

UiO Energy Guest Lecture, University of Oslo, May 2015

Grantham Research Institute on Climate Change and the Environment Public Lecture, London School of Economics, May 2015

World Economic Forum, University of Chicago Panel, Davos, Switzerland, January 2015

Global CEO Conclave at Vibrant Gujarat Summit, Gujarat, India, January 2015

International Growth Centre Annual Conference Public Lecture, London School of Economics, September 2014

PHFI Foundation Day 2014 Lecture, New Delhi, India, March 2014

Merrick Lecture, University of Virginia, May 2013

Keynote Address, Southern California Conference in Applied Microeconomics, April 2012

Keynote Address, IGC ISI India Development Policy Conference, Delhi, India, December 2011

2010/2011 EADS Distinguished Visitor, American Academy in Berlin, November 2011

IDB Conference on Development Challenges and Policies in Latin America and the Caribbean: What are The Issues? September 2011

EPA and DOE Conference on Progress toward a Social Cost of Carbon, 2010

Keynote Address, Developing Standards for Benefit-Costs Analysis Conference, 2010

MIT Energy Conference Dinner Keynote, MIT, 2010

Myron Scholes Global Markets Forum, University of Chicago Booth School, 2010

Special Session Lecture, Royal Economic Society Conference, 2009

Statistics in Society Lecture, New York University, 2009

Razin Economic Policy Lecture, Georgetown University, Keynote Address,

Hong Kong Economic Association Biennial Conference, 2008

Bernard Saffran Lecture at Swarthmore College, 2008

News Executives Climate Change Symposium, Stanford University, 2007

J. Fish Smith and Lillian F. Smith Endowed Chair of Economics Visiting Lecture, BYU, 2004

Lecture to National Association of Attorneys General, 2003

Invited Address, 2<sup>nd</sup> World Congress of Environmental Economists, June 2002

## **CONGRESSIONAL TESTIMONY**

“At What Cost? Examining the Social Cost of Carbon,” Testimony to the U.S. House of Representatives Subcommittee on Environment and Subcommittee on Oversight, February 28, 2017.

“A Review of Regulatory Reform Proposals,” Testimony to U.S. Senate Committee on Homeland Security and Governmental Affairs, September 16, 2015.

“Examining Practical Solutions to Improve the Federal Regulatory Process,” Testimony to U.S. Senate Subcommittee on Regulatory Affairs and Federal Management, June 4, 2015.

“The First Step to Cutting Red Tape: Better Analysis,” Testimony to U.S. Congress Joint Economic Committee, April 30, 2014.

“Eliminating Unnecessary and Costly Red Tape Through Smarter Regulations,” Testimony to U.S. Congress Joint Economic Committee, June 26, 2013.

“The True Costs of Alternative Energy Sources: Are We Unfairly Penalizing Natural Gas?” Testimony to U.S. Congress Joint Economic Committee, April 26, 2012.

“Improving Regulatory Performance: Lessons from the United Kingdom,” Testimony to Congress, Senate Budget Committee Task Force on Government Performance, November 16, 2011; also CEEPR WP No. 2011/019.

“The Importance of Research and Development (R&D) for U.S. Competitiveness and a Clean Energy Future,” Testimony to Congress, Joint Economic Committee Hearing on Promoting a Clean Energy Economy, July 27, 2010; also CEEPR WP No. 2011-010.

“Liability and Financial Responsibility for Oil Spills under the Oil Pollution Act of 1990 and Related Statutes,” Testimony to Congress, House Committee on Transportation and Infrastructure, June 9, 2010; MIT CEEPR Working Paper No. 2011-009.

## **PROFESSIONAL ACTIVITIES**

### **JOURNALS**

Editor, *Journal of Political Economy*, 2015 – 2017

Editor, *Review of Economics and Statistics*, 2007 – 2010

Board of Editors, *American Economic Journal: Economic Policy*, 2007 – 2010; 2013 - present

Associate Editor, *Review of Economics and Statistics*, 2007

Board of Editors, *Review of Environmental Economics and Policy*, 2006 – present

Board of Editors, *Journal of Economic Literature*, 2005 – 2011

Associate Editor, *Journal of Business and Economic Statistics*, 2004 – 2006

### **PUBLIC SERVICE**

Reviewer, National Institutes of Health, Special Emphasis Panel, 2007

Member, US EPA Science Advisory Board, Environmental Economics Subcommittee, 2003 – 2009

Member, US EPA, Advisory Board for Methods for Estimating the Social Benefits of EPA Land Clean-Up and Reuse Programs, 2006-2007

Member, Secretary of Energy Advisory Board, Task Force on Energy R&D, 2010 - 2011

### **CONFERENCES**

Program Committee, Association of Environmental and Resource Economists Summer Workshop, 2007 and 2008 (Chair)

Program Committee, North American Summer Meeting of the Econometric Society, 2007

Co-organizer, NBER Environmental and Energy Economics Summer Institute, 2002, 2004, 2006, 2008, 2014  
Program Committee, 2003 American Economic Association Meetings  
Program Committee, 2002 World Congress of Environmental Economists  
Selection Committee, National Tax Association Dissertation Award, 2006 and 2007