

## Karen Fisher-Vanden

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### EDUCATION

Harvard University, Public Policy (Major Field: Environmental and Resource Economics),  
Ph.D., 1999

University of California, Los Angeles—Anderson Graduate School of Management,  
Management Science, M.S., 1990

University of California, Davis, Mathematics/Computer Science and Economics,  
B.S. and B.A., 1985

### PROFESSIONAL EXPERIENCE

- 2014- Professor of Environmental and Resource Economics, Dept of Ag. Econ, Soc.,  
and Educ, Pennsylvania State University
- 2020- Director, Institute for Sustainable Agricultural, Food, and Environmental Science  
(SAFES), College of Agricultural Sciences, Pennsylvania State University
- 2017- Graduate Faculty, Operations Research, Pennsylvania State University
- 2019- Affiliate Faculty, School of Public Policy, Pennsylvania State University
- 2016- Associate, Institute for CyberScience, Pennsylvania State University
- 2008-2014 Associate Professor of Environmental and Resource Economics, Dept of Ag.  
Econ and Rural Soc., Pennsylvania State University
- 2007-2008 Associate Professor (with tenure) of Environmental Studies, Dartmouth College
- 1999-2007 Assistant Professor of Environmental Studies, Dartmouth College
- 2003-2005 Research Scholar, Rockefeller Center for the Social Sciences, Dartmouth  
College
- 1997-2001 Research Fellow, Center for Business and Government, John F. Kennedy School  
of Government, Harvard University.
- 1996-1997 Research Fellow, Belfer Center for Science and International Affairs, John F.  
Kennedy School of Government, Harvard University.
- 1997 Visiting Researcher, International Institute for Applied Systems Analysis  
(IIASA)—Laxenburg, Austria.
- 1992-1994 Senior Research Scientist, Global Climate Change Group, Battelle, Pacific  
Northwest National Laboratories, Washington, DC.
- 1991-1992 Air Quality Specialist, Socioeconomic Analysis Group, South Coast Air Quality  
Management District, Los Angeles, CA.
- 1990-1991 Senior Consultant, The WEFA Group, Burlington, MA.
- 1989-1990 Research Assistant, UCLA Business Forecasting Project, Los Angeles, CA.
- 1985-1988 Software Support Engineer, Hewlett-Packard Company, Sunnyvale, CA.

### PROFESSIONAL ACTIVITIES

- 2017-2019 Member, Board of Directors, Association of Environmental and Resource Economists (AERE)
- 2010-2013 Lead Author, IPCC Working Group III, Fifth Assessment Report.
- 2015-2018 Member, Science Advisory Board, US Environmental Protection Agency
- 2018- Associate Editor, *Journal of Economic Behavior and Organization*
- 2013 Expert Review Panel, Risky Business Project, Bloomberg Philanthropies, Office of Hank Paulson, and Next Generation.
- 2012-2015 Review Panel, National Science Foundation, Decision, Risk and Management Sciences Program
- 2013-2014 Editorial Board, *Environmental Modeling and Software*
- 2012-2015 Editorial Board, *Climate Risk Management*
- 2011-2015 Member, Science Advisory Board, AMPERE project, European Commission
- 2004- Associate and occasional Guest Editor, *Energy Economics*
- 2006-2010 Member, U.S. Climate Change Science Program, Product Development Advisory Committee.
- 2004-2008 Lead author, U.S. Climate Change Science Program, Review of Integrated Scenario Development and Application
- 2002 Panelist, Integrated Assessment of Climate Change Research Program grants competition, Office of Science, U.S. Department of Energy
- 2000 Expert reviewer, Intergovernmental Panel on Climate Change

## GRANTS AND FELLOWSHIPS

- 2016-2021 Co-Principal Investigator and Co-Director, Cooperative Research Agreement, U.S. Department of Energy, Office of Science, “A Multi-Model, Multi-Scale Research Program in Stressors, Responses, and Coupled Dynamics at the Energy-Water-Land Nexus and for Concentrated, Interdependent Infrastructures: Toward Next Generation Capabilities in Integrated Impacts, Adaptation, and Vulnerability (I-IAV) Modeling and a Community of Practice,” \$20M
- 2010-2017 Co-Principal Investigator and Co-Director, U.S. Department of Energy, Office of Science, Research in Integrated Assessment Inter-Model Comparison Development, Testing, and Diagnostics (PIAMDDI), \$9 million.
- 2012-2014 Co-Principal Investigator, National Science Foundation, Sustainability Research Network, Sustainable Climate Risk Management (SCRiM) strategies, (PI: Klaus Keller, Penn State University), \$12 million.
- 2010-2014 Co-Principal Investigator, National Science Foundation, “Collaborative Research: WSC-Category 3: Crops, climate, canals, and the cryosphere in Asia – changing water resources around the Earth’s third pole,” \$1.4 million (with Steve Frolking, University of New Hampshire; Mark Friedl, Boston University; and Regine Hock, University of Alaska, Fairbanks).
- 2011-2012 Consultant, World Bank, DECRG: Environment & Energy.
- 2010-2014 Principal Investigator, Pacific Northwest National Laboratory (PNNL), “Support for the Second Generation Model (SGM) Development,” \$500,000.

- 2009-2014 Principal Investigator, U.S. Department of Energy, Integrated Assessment of Global Climate Change Research Grant, “Factors influencing energy use and carbon emissions in China.” \$180,000.
- 2009-2010 Co-Principal Investigator, Pennsylvania Department of Environmental Protection, “Climate Change Impacts on the Pennsylvania Economy,” \$110,000.
- 2008-2012 Co-Principal Investigator, National Science Foundation, Decision, Risk and Management Sciences, Division of Social and Economic Sciences, Directorate of Social, Behavioral and Economic Sciences, “An improved model of endogenous technical change considering uncertain R&D returns and uncertain climate response” (with Mort Webster (MIT) and David Popp (NBER)). \$750,000.
- 2007-2008 Susan and Gib Myers 1964 Faculty Fellowship
- 2007 Reiss Family Grant, Rockefeller Center for Public Policy and the Social Sciences, Dartmouth College, “Climate Commitments and Shareholder Value: When Does it Pay to be Green?” \$6000.
- 2007-2008 Dickey Center for International Understanding, Dartmouth College, Research Grant, “Zones of Agreement in an International Climate Change Accord” \$12,000.
- 2005-2008 Senior Researcher, National Science Foundation, Social, Behavioral, and Economics program, "China's technology transformation: diffusion and intensification of R&D effort in China's firms and research institutes." (PI: Gary Jefferson, Brandeis University). \$300,000
- 2004-2008 Principal Investigator, U.S. Department of Energy, Integrated Assessment of Global Climate Change Research Grant, “The Channels of Foreign Influence on the Innovation and Diffusion of Technology in China: Implications for Energy Use and Carbon Emissions.” \$389,000.
- 2006 Principal Investigator, U.S. Department of Energy, Office of Science, Conference Grant, “Workshop on Technological Change and the Environment.” \$14,000.
- 2000-2004 Principal Investigator, U.S. Department of Energy, Integrated Assessment of Global Climate Change Research Grant, “Modeling Technological Innovation and Diffusion in Transition Economies: The Case of China.” \$185,000
- 2003-2004 Principal Investigator, U.S. Environmental Protection Agency, “Emissions Trading between Capped and Non-Capped Sources: Applying Lessons from Water Quality Trading.” \$10,000.
- 2003-2005 Henry Luce Foundation, “The Sustainable New England Landscape” (with A. Friedland, R. Howarth, D. Bolger, C. Sneddon, and R. Virginia). \$310,000

- 2003-2004 Rockefeller Center Public Policy Faculty Grant, “Emissions Trading between Capped and Non-Capped Sources: Applying Lessons from Water Quality Trading.” \$8,000.
- 2001-2002 Consultant, U.S. Department of Energy, Integrated Assessment of Global Climate Change Research, "Economic and Energy Development in China: Policy Options and Implications for Climate Change." (Principal investigators: McElroy, Alford, Xu, Jorgenson, Rogers, and Wilson (Harvard University)).
- 2000-2001 Rockefeller Center Urban/Regional Studies Faculty Grant, “Modeling Technological Innovation and Diffusion in Transition Economies: The Case of China.” \$8,000
- 1998 Harvard University’s Committee on Environment and the Exxon Corporation, travel grant for dissertation research in China.
- 1997 Joseph Crump Fellowship for research in energy and the environment.
- 1996 Pre-doctoral Fellowship, Center for Science and International Affairs (Harvard University) and the National Science Foundation.

## JOURNAL ARTICLES

- In print** Rimsaite, R., K. Fisher-Vanden, S. Olmstead, D. Grogan, 2020, “How well do U.S. western water markets convey economic information?” Forthcoming, *Land Economics*.
- Fisher-Vanden, K., J. Weyant, 2020, “The Evolution of Integrated Assessment: developing the next generation of use-inspired IA tools.” Forthcoming, *Annual Review of Resource Economics*.
- Zaveri, E., D.H. Wrenn, and K.A. Fisher-Vanden, 2020, “The Impact of Water Access on Short-Term Migration in Rural India.” *Australian Journal of Agricultural and Resource Economics*, 64(2):505-532. doi: 10.1111/1467-8489.12364
- Hu, Y., K. Fisher-Vanden, and B. Su, 2019, “Technological spillover through industrial and regional linkages: Firm-level evidence from China.” Forthcoming, *Economic Modeling*.
- Ciscar, J-C., K. Fisher-Vanden, and D. Lobell, 2018, “Synthesis and Review: an inter-method comparison of climate change impacts on agriculture,” *Environmental Research Letters*, 13:070104, <http://doi.org/10.1088/1748-9326/aac7cb>.
- Fan, Q., K. Fisher-Vanden, and A. Klaiber, 2018, “Climate Change, Migration, and Regional Economic Impacts in the US,” *Journal of the Association of Environmental and Resource Economists*, 5(3): 643-671.

Calvin, K., K. Fisher-Vanden, 2017, "Climate Change Impacts on Agriculture: The role of Integrated Assessment Models," *Environmental Research Letters*, 12:115004, <https://doi.org/10.1088/1748-9326/aa843c>

Webster, M., K. Fisher-Vanden, D. Popp, N. Santen, "Should We Give Up After Solyndra? Optimal Technology R&D Portfolios under Uncertainty," 2017, *Journal of the Association of Environmental and Resource Economists*, 4(S1):S123-S151

Davlasheridze, M., K. Fisher-Vanden, A. Klaiber, 2017, "The Effects of Adaptation Measures on Hurricane Induced Property Losses," *Journal of Environmental Economics and Management*, 81:93-114.

Zaveri, E., D. Grogan, K. Fisher-Vanden, S. Frohking, R. Lammers, D. Wrenn, A. Prusevich, and R. Nicholas, 2016, "Invisible water, visible impact: groundwater use and Indian agriculture under climate change," *Environmental Research Letters*, 11.

Fisher-Vanden, K., Y. Hu, G. Jefferson, M. Rock and M. Toman, 2016, "Factors influencing energy intensity in four Chinese industries," *Energy Journal*, 1:153-178.

Fan, Q., A., Klaiber, K. Fisher-Vanden, 2016, "Does Extreme Weather Drive Interregional Brain Drain in the U.S.? Evidence from a Sorting Model," *Land Economics*, 92 (2): 363–388.

Kober, T., P. Summerton, H. Pollitt, U. Chewpreecha, X. Ren, W. Wills, C. Octaviano, J. McFarland, R. Beach, Y. Cai, S. Calderon, K. Fisher-Vanden, A. Loboguerrero Rodriguez, 2016, "Macroeconomic impacts of climate change mitigation in Latin America: A cross-model comparison," *Energy Economics*, 56: 625–636.

Olmstead, S., Fisher-Vanden, K., and Rimsaite, R., 2016, "Climate Change and Water Resources: Some Adaptation Tools and Their Limits." *Journal of Water Resources Planning and Management*, 142(6).

Calderón S., A. Camilo Alvarez, A. Loboguerrero Rodriguez, S. Arango, K. Calvin, T. Kober, K. Daenzer, K. Fisher-Vanden, 2016, "Achieving CO2 reductions in Colombia: Effects of carbon taxes and abatement targets," *Energy Economics*, 56: 575-586.

Van Ruijven, B.J., K. Daenzer, K. Fisher-Vanden, T. Kober, S. Paltsev, R. H. Beach, S. L. Calderon, K. Calvin, M. Labriet, A. Kitous, A.F.P. Lucena, D. P. van Vuuren, 2016, "Baseline projections for Latin America: base-year assumptions, key drivers and greenhouse emissions," *Energy Economics*, 56: 498-511.

Fisher-Vanden, K., E. Mansur, and Q. Wang, 2015, "Electricity Shortages and

Firm Productivity: Evidence from China's Industrial Firms," *Journal of Development Economics*, 114: 172–188.

Butler, M., P. Reed, K. Fisher-Vanden, K. Keller, T. Wagner, 2014, "Inaction and climate stabilization uncertainties lead to severe economic risks," *Climatic Change*, 127:463–474.

Butler, M., P. Reed, K. Fisher-Vanden, K. Keller, T. Wagner, 2014, "Identifying parametric controls and dependencies in integrated assessment models using global sensitivity analysis," *Environmental Modelling and Software*, 59:10-29.

Daenzer, K., I. Sue Wing, and K. Fisher-Vanden, 2014, "Coal's medium-run future under atmospheric greenhouse gas stabilization," *Climatic Change*, 123:763-783.

Fisher-Vanden, K. and S. Olmstead, 2013, "Moving Pollution Trading from Air to Water: Potential, Problems, and Prognosis," *Journal of Economic Perspectives*, 27(1): 147-172. Reprinted in Stavins, R., (ed.), 2019, *Economics of the Environment*, 7<sup>th</sup> edition, Edward Elgar Publishing, UK.

Popp, D., N. Santen, K. Fisher-Vanden, M. Webster, 2013, "Technology Variation vs. R&D Uncertainty: What matters most for energy patent success?" *Resource and Energy Economics*, 35(4): 505-533.

Sue Wing, I., and K. Fisher-Vanden, 2013, "Confronting the challenge of integrated assessment of climate adaptation: a conceptual framework," *Climatic Change*, 117(3):497-514, DOI 10.1007/s10584-012-0651-x.

Fisher-Vanden, K., I. Sue Wing, E. Lanzi, and David Popp, 2013, "Modeling climate change feedbacks and adaptation responses: recent approaches and shortcomings," *Climatic Change*, 117(3):481-495, DOI: 10.1007/s10584-012-0644-9.

Fisher-Vanden, K., K. Schu, I. Sue Wing, and K. Calvin, 2012, "Decomposing the impact of alternative technology sets on future carbon emissions growth," *Energy Economics* 34(S3): S359-S365

Fisher-Vanden, K. and K. Thorburn, 2011, "Voluntary Corporate Environmental Initiatives and Shareholder Wealth," *Journal of Environmental Economics and Management*, 62(3): 430-445.

Fisher-Vanden, K. and M.S. Ho, 2010, "Technology, Development, and the Environment." *Journal of Environmental Economics and Management*, 59(1): 94-108.

Fisher-Vanden, K. 2009. "Energy in China: Past Trends and Future Directions." *International Review of Environmental and Resource Economics*, 3(3): 217-244.

Calvin, K., P. Patel, A. Fawcett, L. Clarke, K. Fisher-Vanden, J. Edmonds, S. Kim, R. Sands, and M. Wise. 2009. "The Distribution and Magnitude of Emissions Mitigation Costs in Climate Stabilization Under Less Than Perfect International Cooperation: SGM Results." *Energy Economics*, 31(S1):S187-S197.

Fisher-Vanden, K., and R. Terry, 2009, "Is Technology Acquisition Enough to Improve China's Product Quality? Evidence from Firm-Level Panel Data." *Economics of Innovation and New Technology*, 18(1): 21-38.

Fisher-Vanden, K., and G. Jefferson, 2008, "Technology Diversity and Development: Evidence from China's Industrial Enterprises." *Journal of Comparative Economics*, 36(4):658-672.

Fisher-Vanden, K., and I. Sue Wing, 2008, "Accounting for Quality: Issues with Modeling the Impact of R&D on Economic Growth, and Carbon Emissions in Developing Economies." *Energy Economics*, 30(6)

Breetz, H. and K. Fisher-Vanden. 2007. "Does Cost-Share Replicate Water Quality Trading Projects? Implications for a Partnership Between Cost-share and Water Quality Trading." *Review of Agricultural Economics*, 29(2), 201-215.

Fisher-Vanden, K., and M.S. Ho. 2007. "How Do Market Reforms Affect China's Responsiveness to Environmental Policy?" *Journal of Development Economics*, 82(1), 200-233.

Fisher-Vanden, K., Jefferson, G., Ma, J., Xu, J., 2006. "Technology Development and Energy Productivity in China." *Energy Economics*, 28(5/6), 690-705.

Breetz, H., Fisher-Vanden, K., Jacobs, H. and C. Schary, 2005, "Trust and Communication: Mechanisms for Increasing Farmers' Participation in Water Quality Trading." *Land Economics*, 81(2), 170-190.

Schary, C. and K. Fisher-Vanden, 2004, "Applying the Acid Rain Program's Cap and Trade Approach to Water Quality Trading." *Journal of Environmental Practice*, 6(4), 1-15.

Fisher-Vanden, K., G. Jefferson, H. Liu, and Q. Tao, 2004 "What is Driving China's Decline in Energy Intensity?" *Resource and Energy Economics*, 26(1), 77-97.

Fisher-Vanden, K., 2003, "The Effects of Market Reforms on Structural Change: Implications for Energy Use and Carbon Emissions in China," *The Energy Journal*, 24(3), 27-62.

Fisher-Vanden, K., 2003, "Management Structure and Technology Diffusion in Chinese State-Owned Enterprises," *Energy Policy*, 31(3), 247-257.

Parson, Edward A. and Fisher-Vanden, K., 1999, “Joint Implementation of Greenhouse Gas Abatement under the Kyoto Protocol’s ‘Clean Development Mechanism’: Its Scope and Limits,” *Policy Sciences* 32 (3), 207-224.

Parson, Edward A and Fisher-Vanden, K., 1997, “Integrated Assessment Models of Global Climate Change,” *Annual Review of Energy and Environment*, 22(1), 589-628.

Fisher-Vanden, K.; Shukla, P.R.; Edmonds, J.A.; Kim, S.H.; Pitcher, H.M.; 1997, “Carbon Taxes and India,” *Energy Economics* 19(3), 289-325.

**In progress** Rimsaite, R., K. Fisher-Vanden, and S. Olmstead, “How well do water markets convey economic information?” Revise and resubmit, *Land Economics*.

## BOOK CHAPTERS, REPORTS, AND OTHER PUBLICATIONS

### Book chapters

Fisher-Vanden, K, 2000, “International Policy Instrument Prominence in the Climate Change Debate: A Case Study of the United States,” in *Climate Change and U.S. Foreign Policy*, P.G. Harris (ed). August 2000, St. Martin’s Press.

### Reports

Moss, R.H., K. Fisher-Vanden, A. Delgado, S. Backhaus, C.L. Barrett, B. Bhaduri, I.P. Kraucunas, P.M. Reed, J.S. Rice, I. Sue Wing, C. Tebaldi, 2016, *Understanding Dynamics and Resilience in Complex Interdependent Systems: Prospects for a Multi-model, Framework and Community of Practice*, Report of a workshop held under the auspices of the U.S. Global Change Research Program Interagency Group on Integrative Modeling with support from the U.S. Department of Energy.

Clarke L., K. Jiang, K. Akimoto, M. Babiker, G. Blanford, K. Fisher-Vanden, J.-C. Hourcade, V. Krey, E. Kriegler, A. Löschel, D. McCollum, S. Paltsev, S. Rose, P.R. Shukla, M. Tavoni, B. van der Zwaan, and D. van Vuuren, 2014: Assessing Transformation Pathways. In: *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J. C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Fisher-Vanden, K., 2015, Opening Commentary: Insights for Climate-Risk Management. In *Economic Risks of Climate Change: An American Prospectus*, [Houser, T., S. Hsiang, R. Kopp, K. Larsen], Columbia University Press

Abler, D., K. Fisher-Vanden, M. McDill, R. Ready, J. Shortle, I. Sue Wing, T. Wilson. 2009. “Economic Impacts of Projected Climate Change in Pennsylvania,” Report to the Pennsylvania Department of Environmental



Protection.

Parson, Burkett, Fisher-Vanden, Keith, Mearns, Pitcher, Rosenzweig, and Webster. 2007. Global Change Scenarios: Their Development and Use. U.S. Climate Change Science Program, Synthesis and Assessment Product 2.1b. Available on-line at <http://www.climatechange.gov/Library/sap/sap2-1/finalreport/default.htm>

Breetz, Fisher-Vanden, Garzon, Jacobs, Kroetz, Terry, 2004, "Water Quality Trading and Offset Initiatives in the U.S.: A Comprehensive Survey," Prepared for the U.S. EPA, National Center for Environmental Economics, Washington, D.C. Available on-line at [http://www.epa.gov/owow/watershed/trading/trading\\_projects.html](http://www.epa.gov/owow/watershed/trading/trading_projects.html) or <http://www.dartmouth.edu/~kfv/waterqualitytradingdatabase.pdf>

Lieu, T.S.; Fisher, K.A.; Goh, F.; Johnson, S.L.; Kneisel, R; *Final Socio-Economic Report for 1991 Air Quality Management Plan*, South Coast Air Quality Management District, July 1991.

Contributing author, *Air Quality Assessment and Socio-Economic Impacts - Implementation: Implications for the Basin*", working paper, South Coast Air Quality Management District, January 1992.

Contributing author, *Regional Clean Air Incentives Market - Summary Recommendations*, South Coast Air Quality Management District, Spring 1992.

## Other Publications

Fisher-Vanden, K., D. Popp, I. Sue Wing (guest editors), 2014, Special issue on "Climate Adaptation," *Energy Economics*, vol 46.

Fisher-Vanden, K. (guest editor), 2007, Special issue on "Technological Change and the Environment," *Energy Economics*.

Fisher-Vanden, K., 1998, "Technological Diffusion in China's Iron and Steel Industry," Belfer Center for Science and International Affairs, ENR Discussion Paper E-98-24, Kennedy School of Government, Harvard University, Cambridge, MA.

Fisher-Vanden, K., 1998, "International Policy Instrument Prominence in the Climate Change Debate: A Case Study of the United States," Belfer Center for Science and International Affairs, ENR Discussion Paper E-97-06, Kennedy School of Government, Harvard University, Cambridge, MA.

Parson, Edward A and Fisher-Vanden, K., 1997, "Joint Implementation and its Alternatives: Choosing Systems to Distribute Global Emissions Abatement and Finance," Belfer Center for Science and International Affairs, ENR Discussion Paper E-97-02, John F. Kennedy School of Government, Harvard University, Cambridge, MA.

Fisher, K.A., 1990, "A Tiebout Multi-Regional General Equilibrium Model to Assess the Economic Impacts of Automobile Emissions Regulation," Master thesis, University of California, Los Angeles, June 1990.

## **TEACHING EXPERIENCE**

### **Pennsylvania State University, Department of Agricultural Economics, Sociology, and Education**

Economic Analysis of Environmental and Resource Policies, *Spring 2019*  
Seminar in Environmental and Development Economics, *Spring and Fall terms, 2011, 2012, 2014*  
Computational Economics, *Spring term, 2010-2020*,  
Graduate colloquium, *Fall term, 2009-2011*  
Resource and Environmental Economics II, *Spring term, 2009*  
Environmental Economics, Policy, and Management, *Fall term, 2008*

### **Dartmouth College, Environmental Studies Program**

Environmental Economics, Policy, and Management, *Spring term, 2001-2008*  
Environmental Problem Analysis and Policy Formulation, *Spring term, 2003*  
The Economy vs. The Environment, first-year seminar, *Winter and Spring terms, 2003-2007*  
The Science, Economics and Politics of Global Climate Change, *Winter term, 2000*  
Integrated Assessment Modeling of Global Climate Change, *Spring and Winter terms, 2000, 2007, 2008.*

### **John F. Kennedy School of Government, Harvard University**

Teaching Fellow, Quantitative Analysis and Empirical Methods  
*Cambridge, MA; September 1995 - January 1996.*

### **Jet Propulsion Laboratory**

Instructor, C programming and the UNIX operating system  
*Summer, 1989*

### **Hewlett-Packard Company**

Instructor, Internals of the UNIX operating system  
*September 1986 - September 1988*

## **SERVICE**

2014-2018 Director of Graduate Studies, Agricultural, Environmental and Regional Economics (AEREC) Graduate Program, Pennsylvania State University  
2015-2017 Graduate Council, Pennsylvania State University Graduate School  
2015- Coordinating Committee, Penn State Institute for Computational Sciences  
2012- Organizer, Energy and Environmental Economics and Policy Seminar Series, Pennsylvania State University  
2014-2015 Promotion and Tenure Committee, Department of Agricultural Economics, Sociology, and Education, Pennsylvania State University

2012-2013	Faculty Advisory Committee, Department of Agricultural Economics, Sociology, and Education, Pennsylvania State University
2012-2103	Chair, faculty search committee, position in quantitative methods, Penn State Institutes of Energy and Environment
2011-	Co-Director, Energy and Environmental Economics and Policy Initiative, Pennsylvania State University
2011-2012	AERS award committee
2011-2013	Community, Environmental, and Development curriculum committee
2010-	Conference program committees, Association of Environmental and Resource Economists and European Association of Environmental and Resource Economists
2009-	Faculty search committees, College of Earth and Mineral Sciences, College of Agricultural Sciences
2009	Northeastern Agricultural and Resource Economics Association (NAREA), committee on the award for outstanding public service through economics
2009	AERS promotion and tenure committee
2008-	AEREC graduate program and graduate exam committees
2003-2008	Co-convener, Rockefeller Center Seminar Series on Environment and Development, Dartmouth College
2005-2007	Dartmouth College Writing Program Steering Committee
2004-2007	Dartmouth College Athletic Council
2002-2008	Faculty Council, Rockefeller Center, Dartmouth College
1999-2000	Environmental Studies/Geography Faculty Recruitment Committee

## REFEREE SERVICE

Academic journals:

*Applied Economic Perspectives and Policy*  
*Annual Review of Energy and the Environment*  
*Climate Policy*  
*Climatic Change*  
*Climate Change Letters*  
*Economic Development and Cultural Change*  
*Economic Systems Research*  
*Economics of Innovation and New Technology*  
*Energy Economics*  
*The Energy Journal*  
*Energy Policy*  
*Environment and Development Economics*  
*Environmental and Resource Economics*  
*Environmental Management*  
*Environmental Values*  
*Journal of Comparative Economics*  
*Journal of Development Economics*  
*Journal of Economic Dynamics and Control*  
*Journal of Economic Behavior and Organization*  
*Journal of Economics and Business*  
*Journal of Environmental Economics and Management*

*Journal of Environmental Management*  
*Journal of Public Economics*  
*Land Economics*  
*Nature Climate Change*  
*Resource and Energy Economics*  
*Review of Agricultural Economics*  
*Review of Economics and Statistics*  
*Review of Environmental Economics and Policy*  
*Technical Forecasting and Social Change*  
*Urban Studies*  
*Water Resources Research*

Funding agencies: U.S. Department of Energy  
U.S. Environmental Protection Agency  
National Science Foundation  
National Research Council  
Research Grant Council, Hong Kong

Publishers: Intergovernmental Panel on Climate Change

#### **MEMBERSHIPS IN PROFESSIONAL SOCIETIES**

American Economic Association (AEA)  
Association for Environmental and Resource Economics (AERE)  
International Association of Energy Economists (IAEE)  
Integrated Assessment Modeling Consortium (IAMC)