

CURRICULUM VITAE

Stephen J. DeCanio

CURRENT POSITION:

Professor of Economics, Emeritus
University of California, Santa Barbara
E-mail: stephen.decanio@gmail.com or decanio@econ.ucsb.edu
Website: <http://www.stephendecanio.com>

PERSONAL:

Born July 9, 1942, in Crow Agency, Montana.
Married, three children.

EDUCATION:

Ph.D. (Economics, 1972) Massachusetts Institute of Technology.
B.A. (Mathematics, 1964) University of California, Berkeley.

AREAS OF SPECIALIZATION:

Foundations of economics; economics of Artificial Intelligence; energy economics; global environmental protection; econometrics and statistics; economics of organizations; economic history; applications of price theory to industrial organization, antitrust and regulation; political economy.

PAST ACADEMIC APPOINTMENTS:

2009-present	Professor of Economics, UCSB, Emeritus
2004-2009	Director, UCSB Washington Program
1981-	Professor of Economics, UCSB.
2004	Visiting Professor, Deutsches Kompetenzzentrum für Nachhaltiges Wirtschaften, University of Witten/Herdecke
1978-81	Associate Professor of Economics, UCSB.
1976-78	Associate Professor of Economics, Yale University.
1972-76	Assistant Professor of Economics, Yale University.

- 1970-72 Assistant Professor of Economics, Tufts University.
- 1969 Instructor of Economics, Simmons College.
- 1969-70 Teaching Assistant, Massachusetts Institute of Technology.

OTHER POSITIONS:

- 1997-1998 Research Fellow, Redefining Progress.

HONORS AND AWARDS:

- Leontief Prize for Advancing the Frontiers of Economic Thought, awarded by Tufts University, Global Development and Environment Institute, 2007.
- Nobel Peace Prize (for participation in the Intergovernmental Panel on Climate Change), 2007.
- U.S. Environmental Protection Agency's "Best of the Best" Stratospheric Ozone Protection Award, "In recognition of the most exceptional global contributions in the first two decades of the Montreal Protocol," presented "For Leadership in Estimating Benefits of Ozone Layer Protection," September 2007.
- ANBAR Electronic Intelligence Citation of Excellence, Highest Quality Rating for the paper (with Skip Laitner), "Modeling technological change in energy demand forecasting: a generalized approach," *Technological Forecasting & Social Change*, Vol. 55, No. 3 (1997).
- U.S. Environmental Protection Agency's Stratospheric Ozone Protection Award, "for extraordinary contributions to global environmental protection," October 1996.

GOVERNMENT AND PUBLIC SERVICE:

- 2008-2013 Member, Steering Committee, E3 Network (Economics for Equity and the Environment)
- 2003 Co-Chair, Agricultural Economics Task Force created by the Technical and Economic Assessment Panel under the Montreal Protocol on Substances that Deplete the Ozone Layer
- 2002 Participant, National Energy Policy Initiative Expert Group

- 2001-2004 Member, Board of Directors, Redefining Progress
- 2000-2021 Member, Editorial Board, *Contemporary Economic Policy*
- 1999 Member, External Review Committee, “Scenarios for a Clean Energy Future” (CEF) Study, U.S. Department of Energy
- 1999 Member, Program Peer Review of the Human Ecology Research Groups of Prof. Dr. Carlo Jaeger, at Institute of Sociology, Technical University of Darmstadt, Germany, and at EAWAG (Swiss Federal Institute for Environmental Science and Technology), Dübendorf, Switzerland.
- 1998-99 Lead Author (with others) of Chapter 5 of “The Special Report on Methodological and Technological Issues in Technology Transfer,” Intergovernmental Panel on Climate Change (IPCC).
- 1998 Member, Economic Options Committee, convened under the Montreal Protocol on Substances that Deplete the Ozone Layer.
- 1997 Reviewer, U.S. Government’s Interagency Analytical Team (on the economics of greenhouse gas reductions).
- 1993-94 Member, Economic Options Committee, convened under the Montreal Protocol on Substances that Deplete the Ozone Layer.
- 1991 Member, Economic Options Committee, convened under the Montreal Protocol on Substances that Deplete the Ozone Layer.
- 1991 Participant, Expert Meeting on Financing Anti-Desertification Programmes, United Nations Environment Programme, Nairobi (21-23 February).
- 1989-92 Member, U.S. Environmental Protection Agency's Stratospheric Ozone Protection Advisory Committee.
- 1989 Member, Economic Options Panel convened pursuant to Article 6 of the Montreal Protocol on Substances that Deplete the Ozone Layer.
- 1986-87 Senior Staff Economist, Council of Economic Advisers.

PUBLICATIONS (in chronological order):

Books and Monographs:

Agriculture in the Postbellum South: The Economics of Production and Supply. Cambridge, Massachusetts: M.I.T. Press, 1974.

Taxing Energy: Oil Severance Taxation and the Economy (with Robert T. Deacon, H.E. Frech, III, and M. Bruce Johnson). New York: Holmes & Meier Publishers, Inc., 1990.

Tax Waste, Not Work (with Jeff Hamond, principal author, and Peggy Duxbury, Alan Sanstad, and Christopher Stinson). San Francisco: Redefining Progress, 1997.

The Economics of Climate Change: A Background Paper. San Francisco: Redefining Progress, 1997.

Economic Models of Climate Change: A Critique. Houndmills, UK: Palgrave Macmillan, 2003.

Limits of Economic and Social Knowledge. Houndmills, UK: Palgrave Macmillan, 2014.

Refereed Articles in Journals or Serials (in chronological order):

“Cotton ‘Overproduction’ in Late Nineteenth-Century Southern Agriculture,” *Journal of Economic History*, Vol. 33, No. 3 (September 1973): 608-33.

“Productivity and Income Distribution in the Post-Bellum South,” *Journal of Economic History*, Vol. 34, No. 2 (June 1974): 422-46.

“Rational Expectations in American Agriculture, 1867-1914 (with Thomas F. Cooley), *The Review of Economics and Statistics*, Vol. 59, No. 1 (February 1977): 9-17.

“Inflation and the Wage Lag During the American Civil War” (with Joel Mokyr), *Explorations in Economic History*, Vol. 14, No. 4 (October 1977): 311-36.

“Rational Expectations and Learning from Experience,” *Quarterly Journal of Economics*, Vol. 93 (February 1979): 47-57.

“Accumulation and Discrimination in the Postbellum South,” *Explorations in Economic History*, Vol. 16 (April 1979): 182-206.

“Proposition 13 and the Failure of Economic Politics,” *National Tax Journal*, Vol. 32, No. 2 (June 1979): 55-65.

“Economic Losses from Forecasting Error in Agriculture,” *Journal of Political Economy*, Vol. 88, No. 2 (April 1980): 234-58.

“Two Hidden Sources of Productivity Growth in American Agriculture, 1860-1930” (with William N. Parker), *Agricultural History*, Vol. 56, No. 2 (October 1982): 648-62.

“Delivered Pricing and Multiple Basing Point Equilibria: A Reevaluation,” *Quarterly Journal of Economics*, Vol. 99, No. 3 (May 1984): 329-47.

“Student Evaluations of Teaching - A Multinomial Logit Approach,” *The Journal of Economic Education* (Summer 1986): 165-76.

“Cross-Contract Crediting Under FERC Order 500,” *Contemporary Policy Issues*, Vol. 8, No. 2 (April 1990): 159-75.

“Uncle Tom’s Cabin: A Reappraisal,” *The Centennial Review*, Vol. 34, No. 4 (Fall 1990): 587-93.

“Doing Well by Doing Good: Technology Transfer to Protect the Ozone” (with Kai N. Lee), *Policy Studies Journal*, Vol. 19, No. 2 (Spring 1991): 137-48.

“International Cooperation to Avert Global Warming: Economic Growth, Carbon Pricing, and Energy Efficiency,” *Journal of Environment and Development*, Vol. 1, No. 1 (Summer 1992): 41-62.

“Carbon Rights and Economic Development: A Property Rights Approach,” *Critical Review*, Vol. 6, No. 2-3 (1992): 389-410.

“Vertical Contracts: A Natural Experiment in Gas Pipeline Regulation” (with H. E. Frech, III), *Journal of Institutional and Theoretical Economics (Zeitschrift für die gesamte Staatswissenschaft)*, Vol. 149, No. 2 (June 1993): 370-392.

“Rich, Poor Share Stake In Poverty, Pollution Link,” *Forum for Applied Research and Public Policy*, Vol. 8, No. 2 (Summer 1993): 35-39.

“Barriers within firms to energy-efficient investments,” *Energy Policy*, Vol. 21, No. 9 (September 1993): 906-914.

“Agency and Control Problems in US Corporations: The Case of Energy-Efficient Investment Projects,” *Journal of the Economics of Business*, Vol. 1, No. 1 (1994): 105-123.

“Why Do Profitable Energy-Saving Investment Projects Languish?” *Journal of General Management*, Vol. 20, No. 1 (Autumn 1994): 62-71.

“The Future Through Yesterday: Long-Term Forecasting in the Novels of H.G. Wells and Jules Verne,” *The Centennial Review*, Vol. 38, No. 1 (Winter 1994): 75-93.

- “Modeling Technological Change in Energy Demand Forecasting: A Generalized Approach” (with John A. “Skip” Laitner), *Technological Forecasting and Social Change*, Vol. 55 (1997): 249-263.
- “Economic Modeling and the False Tradeoff Between Environmental Protection and Economic Growth,” *Contemporary Economic Policy*, Vol. 15 (October 1997): 10-27.
- “Investment in Energy Efficiency: Do the Characteristics of Firms Matter?” (with William E. Watkins), *Review of Economics and Statistics*, Vol. 80, No. 1 (February 1998): 95-107.
- “The Efficiency Paradox: Bureaucratic and Organizational Barriers to Profitable Energy-Saving Investments,” *Energy Policy*, Vol. 26, No. 5 (April 1998): 441-454.
- “Information Processing and Organizational Structure” (with William E. Watkins), *Journal of Economic Behavior and Organization*, Vol. 36, No. 3 (August 1998): 275-294.
- “Estimating the Non-Environmental Consequences of Greenhouse Gas Reductions Is Harder Than You Think,” *Contemporary Economic Policy*, Vol. 17, No. 3 (July 1999): 279-295.
- “The Importance of Organizational Structure for the Adoption of Innovations” (with Catherine Dibble and Keyvan Amir-Atefi), *Management Science*, Vol. 46, No. 10 (October 2000): 1285-1299.
- “Organizational Structure and the Behavior of Firms: Implications for Integrated Assessment” (with Catherine Dibble and Keyvan Amir-Atefi), *Climatic Change*, Vol. 48, No. 2/3 (February 2001): 487-514.
- “Complexity in Organizations: Consequences for Climate Policy Analysis” (with William E. Watkins, Glenn Mitchell, Keyvan Amir-Atefi, and Catherine Dibble), in *Advances in the Economics of Environmental Resources*, Vol. 3, *The Long-Term Economics of Climate Change: Beyond a Doubling of Greenhouse Gas Concentrations*, eds. Darwin C. Hall and Richard B. Howarth. Amsterdam: JAI/Elsevier Science, 2001.
- “Estimating Bounds on the Economy-Wide Effects of the CEF Policy Scenarios” (with Alan H. Sanstad, Gale A. Boyd, and Jonathan G. Koomey), *Energy Policy*, Vol. 29 (2001): 1299-1311.
- “Cutting Carbon Emissions at a Profit (Part I): Opportunities for the U.S.” (with Florentin Krause, J. Andrew Hoerner, and Paul Baer), *Contemporary Economic Policy*, Vol. 20, No. 4 (October 2002): 339-365.
- “Room for Improvement: Increasing the Value of Energy Modeling for Policy Analysis” (with John A. “Skip” Laitner, Jonathan G. Koomey, and Alan H. Sanstad), *Proceedings of the 2002 ACEEE Summer Study on Energy Efficiency in Buildings*.

- “Cutting Carbon Emissions at a Profit (Part II): Impacts on U.S. Competitiveness and Jobs” (with Florentin Krause, J. Andrew Hoerner, and Paul Baer), *Contemporary Economic Policy*, Vol. 21, No. 1 (January 2003): 90-105.
- “Room for improvement: increasing the value of energy modeling for policy analysis” (with John A. “Skip” Laitner, Jonathan G. Koomey, and Alan H. Sanstad), *Utilities Policy*, Vol. 11 (2003): 87-94.
- “Economic Analysis, Environmental Policy, and Intergenerational Justice in the Reagan Administration: The Case of the Montreal Protocol,” *International Environmental Agreements: Politics, Law and Economics*, Vol. 3, No. 4 (2003): 299-321.
- “The Role of a Dynamic Marketplace in the Adoption of Industrial Efficiency Innovations” (with John A. “Skip” Laitner), *Proceedings of the 2003 ACEEE Summer Study on Energy Efficiency in Industry*.
- “Economics of the ‘Critical Use’ of Methyl Bromide under the Montreal Protocol” (with Catherine S. Norman), *Contemporary Economic Policy*, Vol. 23, No. 3 (July 2005): 376-393.
- “Descriptive or Conceptual Models? Contributions of Economics to the Climate Policy Debate,” *International Environmental Agreements: Politics, Law and Economics*, Vol. 5 (2005): 415-427.
- “Equity Effects of Alternative Assignments of Global Environmental Rights” (with Paul Niemann), *Ecological Economics*, Vol. 56, No. 4 (2006): 546-559.
- “Economics of ‘essential use exemptions’ for metered-dose inhalers under the Montreal Protocol” (with Catherine S. Norman), *Journal of Environmental Management* 85 (2007): 1-8.
- “An Economic Framework for Coordinating Climate Policy with the Montreal Protocol” (with Catherine S. Norman), *Sustainable Development Law & Policy* [Law journal], Vol. VII, No. 2 (2007): 41-44, 82-83.
- “Distribution of Emissions Allowances as an Opportunity,” *Climate Policy* 7 (2007): 91-103.
- “The Montreal Protocol at 20: Ongoing Opportunities for Integration with Climate Protection” (with Catherine S. Norman and Lin Fan), *Global Environmental Change* 18 (2008): 330-340.
- “The Political Economy of Global Carbon Emissions Reductions,” *Ecological Economics* 68 (2009): 915-924.
- “Limitations of integrated assessment models of climate change” (with Frank Ackerman, Richard B. Howarth, and Kristen Sheeran), *Climatic Change* 95 (2009): 297-315.

- “The Economics of 350” (with Frank Ackerman, Elizabeth A. Stanton, Eban Goodstein, Richard B. Howarth, Richard Norgaard, Catherine S. Norman, and Kristen A. Sheeran), *Solutions* **1**, 5 (2010): 49-54.
- “Economic feasibility of the path to zero net carbon emissions” (with Anders Fremstad), *Energy Policy* **39** (2010): 1144-1153. doi:10.1016/j.enpol.2010.11.038.
- “Game Theory and Climate Diplomacy” (with Anders Fremstad), *Ecological Economics* **85** (2013): 177-187.
- “Robots and Humans – Complements or Substitutes?” *Journal of Macroeconomics* **49** (2016): 280-291. Open access: <http://dx.doi.org/10.1016/j.jmacro.2016.08.003>
- “What Is It Like to Be a Social Scientist?” *Critical Review* **29**(2) (2017): 121-140. Open access: <https://www.tandfonline.com/doi/full/10.1080/08913811.2017.1316454>
- “Games between humans and AIs,” *AI & Society* **33** (2018): 557–564.
- “AI recognition of differences among book-length texts,” *AI & Society* (2018). Open access: <https://doi.org/10.1007/s00146-018-0851-7>
- “Can an AI learn political theory?” *AI Perspectives* (2020) **2**(3): Open access: <https://aiperspectives.springeropen.com/track/pdf/10.1186/s42467-020-00007-2>
- “Addressing Partial Identification in Climate Modeling and Policy Analysis” (with Charles F. Manski and Alan H. Sanstad), *Proceedings of the National Academy of Sciences*, Vol. 118, No. 15 (2021). <https://www.pnas.org/content/118/15/e2022886118>.

Chapters in Books, Conference Volumes, Reports, and Web Publications:

- “Accumulation and Discrimination in the Postbellum South,” in *Market Institutions and Economic Progress in the New South, 1865-1900*, eds. G.M. Walton and J.F. Shepherd. New York: Academic Press, 1981. (Reprint of 1979 article of same title listed above.)
- “Rent Control Voting Patterns, Popular Views, and Group Interests,” in *Resolving the Housing Crisis: Government Policy, Decontrol, and the Public Interest*, ed. M. Bruce Johnson. Cambridge, MA: Ballinger Publishing Company, 1982.
- “Expectations and Business Confidence During the Great Depression,” in *Money in Crisis: The Federal Reserve, the Economy, and Monetary Reform*, ed. Barry N. Siegel. Cambridge, MA: Ballinger Publishing Company, 1984.

- “Energy Efficiency and Managerial Performance: Improving Profitability While Reducing Greenhouse Gas Emissions,” in *Global Climate Change and Public Policy*, ed. David L. Feldman. Chicago: Nelson-Hall Publishers, Inc., 1994.
- “Uncle Tom's Cabin: A Reappraisal [excerpt],” *Nineteenth Century Literature Criticism*, ed. James E. Person, Jr., assoc. eds. Catherine C. Dominic and Marie Lazzari, Vol. 50 (1996): 382-384 (reprint of excerpt from article with same title listed above).
- “Understanding the Diffusion Process in Modeling the Development of Energy Efficiency Technologies,” in *Climate Change Analysis Workshop*, U.S. Department of Agriculture, Department of Commerce, Department of Energy, Department of State, and Environmental Protection Agency, 1996.
- “Implementing the Montreal Protocol Through Network Action” (with Penelope Canan and Nancy Reichman), in *Conference Proceedings*, International Conference on Ozone Protection Technologies, 1996.
- “Experience with a Trilateral Exchange Program for the Development of Collaborative Research,” in *Integrating Higher Education in North America: From Wingspread to San Diego*, eds. Norris C. Clement and Glenn Sparrow. San Diego: San Diego State University Press, 1998.
- “The Organizational Structure of Firms and Economic Models of Climate Policy,” in *New Directions in the Economics and Integrated Assessment of Global Climate Change* (with Richard B. Howarth, Alan H. Sanstad, Stephen H. Schneider, and Starley L. Thompson), papers prepared for the Pew Center on Global Climate Change 1999 Economics Conference. Washington: Pew Center on Global Climate Change, 2000.
- “Incorporating Behavioral, Social, and Organizational Phenomena in the Assessment of Climate Change Mitigation Options” (with John A. “Skip” Laitner and Irene Peters), in *Society, Behaviour, and Climate Change Mitigation*, eds. Eberhard Jochem, Jayant Sathaye, and Daniel Bouille, *Advances in Global Change Research*, Vol. 8. Dordrecht: Kluwer Academic Publishers, 2001.
- “Estimating the Non-Environmental Consequences of Greenhouse Gas Reductions is Harder Than You Think” [reprint], in *The Legacy of Herbert Simon in Economic Analysis*, ed. Peter E. Earl. Series title, *Intellectual Legacies in Modern Economics*, series ed. Steven G. Medema; assoc. eds. Roger Backhouse and A. W. Coats. Cheltenham, UK: Edward Elgar Publishing Limited, 2001.
- “Market Failures in Energy Markets,” in *Encyclopedia of Energy*, ed. Cutler J. Cleveland. Academic Press/Elsevier Science, 2004.
- “Barriers within Firms to Energy-Efficient Investments” [reprint], in *Corporate Strategies for Managing Environmental Risk*, ed. Bernard Sinclair-Desgagné. Series title, *International*

Library of Environmental Economics and Policy, series eds. Tom Tietenberg and Kathy Segerson. Aldershot, UK: Ashgate Publishing Group (2004).

- “Market Failure,” in *A Dictionary of Energy*, eds. Cutler Cleveland and Christopher Morris (Elsevier Science and Academic Press, 2005).
- “The Economics of 350: The Benefits and Costs of Climate Stabilization” (with Frank Ackerman, Elizabeth A. Stanton, Eban Goodstein, Richard B. Howarth, Richard Norgaard, Catherine S. Norman, and Kristen A. Sheeran), E3 Network (October 2009).
- “The Need for a Fresh Approach to Climate Change Economics” (with Frank Ackerman, Richard B. Howarth, and Kristen Sheeran), in *Assessing the Benefits of Avoided Climate Change: Cost Benefit Analysis and Beyond*. Gullede, J., L. J. Richardson, L. Adkins, and S. Seidel (eds.), Proceedings of Workshop on Assessing the Benefits of Avoided Climate Change, March 16–17, 2009. Pew Center on Global Climate Change: Arlington, VA. p. 159–181. Available at: <http://www.pewclimate.org/events/2009/benefitsworkshop>.
- “The New Economics of Climate Change,” *Real Climate Economics* (July 8, 2010), available at: <http://realclimateeconomics.org/wp/archives/author/sdecanio/page/2>.
- “Climate Change and National Security,” *Real Climate Economics* (July 23, 2010), available at: <http://realclimateeconomics.org/wp/archives/author/sdecanio/page/2>.
- “Game Theory and Climate Diplomacy” (with Anders Fremstad), Economics for Equity and the Environment Working Paper (October 2010). Available at: http://www.e3network.org/papers/Basic_Game_Analysis.pdf.
- “Economic Feasibility of the Path to Zero Net Carbon Emissions” (with Anders Fremstad), Economics for Equity and the Environment Working Paper (October 2010). Available at: http://www.e3network.org/papers/Zero_Net_Carbon_Emissions.pdf.
- “When Bad Economics and Climate Science Collide,” *Real Climate Economics* (October 1, 2010), available at: <http://realclimateeconomics.org/wp/archives/author/sdecanio>.
- “Lessons of the Montreal Protocol for Climate Policy,” *Real Climate Economics* (March 21, 2011), available at: <http://realclimateeconomics.org/wp/archives/author/sdecanio>.
- “Climate Policy for Conservatives,” *Grist* (24 May, 2011), available at: <http://www.grist.org/climate-policy/2011-05-24-climate-policy-for-conservatives/N10> and at *Real Climate Economics* (May 23, 2011), available at: <http://realclimateeconomics.org/wp/archives/871>.

“Behind the scenes solving ODEs of a model of optimal climate policy,” (with Alan Sanstad and Charles Manski), blog post in the Wolfram Community:
<https://community.wolfram.com/groups/-/m/t/2255854>

“Addressing Deep Uncertainty in Climate Policy Analysis” (with Charles F. Manski and Alan H. Sanstad), US CLIVAR VARIATIONS, Vol. 20, No. 1 (Winter 2022). doi:
10.5065/9mn8-1p50, <https://indd.adobe.com/view/a9b5161d-e61b-452e-8914-36529a9a241b>.

U.S. Government and United Nations Reports, Chapters, and Testimony:

“Risk and Responsibility” (co-author and manager of team of four Senior Staff Economists), in *Annual Report of the Council of Economic Advisers*, January, 1987.

“Economic Losses from an Oil Supply Disruption” (with J. David Germany & others), pp. C-5 - C-11 of Appendix C of *Energy Security: A Report to the President of the United States*, U.S. Department of Energy, Washington, DC: U.S. Government Printing Office, 1987.

“Economic Assessment Issues,” Chapter 3 of *Economic Panel Report Pursuant to Article 6 of the Montreal Protocol on Substances that Deplete the Ozone Layer* (with Kai N. Lee and others), United Nations Environment Programme, 1989.

“Technology Transfer,” Chapter 6 of *Economic Panel Report Pursuant to Article 6 of the Montreal Protocol on Substances that Deplete the Ozone Layer* (with Kai N. Lee and others), United Nations Environment Programme, 1989.

“Managing the Transition: Lessons from Experience,” Chapter 2 of *Report of the Economic Options Committee, Montreal Protocol 1991 Assessment* (with R. Van Slooten and others), United Nations Environment Programme, 1991.

“The Dynamics of the Phaseout Process Under the Montreal Protocol,” in *Report of the Economic Options Committee, Montreal Protocol 1994 Assessment* (lead author), United Nations Environment Programme, 1994.

“CFC and Halon Banking,” in *Report of the Economic Options Committee, Montreal Protocol 1994 Assessment* (co-lead author with Jeffrey C. Williams), United Nations Environment Programme, 1994.

“Testimony [oral and written] of Stephen J. DeCanio, Professor of Economics, University of California, Santa Barbara, CA,” *Hearings before the Subcommittee on Energy and Environment of the Committee on Science*, U.S. House of Representatives, 105th Congress, October 9, 1997. [Note: The written submission consisted of *The Economics*

of *Climate Change*, listed above, but the full Testimony includes written Answers to Follow-Up Questions].

“Estimating Bounds on the Macroeconomic Effects of the CEF Policy Scenarios” (with Alan H. Sanstad and Gale A. Boyd), Appendix E-4 of *Scenarios for a Clean Energy Future*, prepared by the Interlaboratory Working Group on Energy-Efficient and Clean-Energy Technologies, for the Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy, 2000. Available at http://www.ornl.gov/ORNL/Energy_Eff/.

“Financing and Partnerships for Technology Transfer” (co-lead author with Dilip Ahuja, Weerawat Chantanakome, Michael Grubb, Joyeeta Gupta, Li Junfeng, Merylyn McKenzie Hedger, Bhaskhar Natarajan, John Turkson, and David Wallace; coordinating lead authors Mark Mansley and Eric Martinot; contributing authors Ron Benioff and Ibrahim Abdel Gelil; and review editor Karen R. Polenske), Chapter 5 of *Methodological and Technological Issues in Technology Transfer*, Special Report of IPCC Working Group III, Intergovernmental Panel on Climate Change, 2000. Cambridge: Cambridge University Press.

“Economic Aspects of Nominations for ‘Critical Use’ of Methyl Bromide Under Terms of the Montreal Protocol” (with Catherine S. Norman), in *Report of the Technology and Economic Assessment Panel, May 2003 Progress Report*. Nairobi: United Nations Environment Programme.

Comments and Book Reviews:

“A New Economic History of Slavery: A Review of *Time on the Cross*,” *Reviews in American History*, Vol. 2, No. 4 (December 1974): 474-87 (review article).

Growth of the Modern American Economy, by Stuart Bruchey, *Journal of American History*, (March 1976): 956-7 (book review).

“The Economics of Political Change: An Historical Perspective,” *Journal of Economic History*, Vol. 38, No. 1 (March 1978): 143-7 (comment).

One Kind of Freedom by Roger L. Ransom and Richard Sutch, *Economic History Review*, Second Series, Vol. 32, No. 3 (August 1979): 455-7 (book review).

The Rational Expectations Revolution in Macroeconomics: Theories and Evidence, by David K. H. Begg, *The Wall Street Review of Books*, (Summer 1983): 171-3 (book review).

Folded, Spindled, and Mutilated: Economic Analysis and U.S. v. IBM, by Franklin M. Fisher, John J. McGowan, and Joen E. Greenwood, *The Wall Street Review of Books* (Fall 1984): 243-6 (book review).

“Beyond the Ozone Agreement,” *Issues in Science and Technology*, Vol. VI, No. 2 (Winter 1989-90): 13-14 (comment).

“North-South Links Key to Sustainable Growth,” *Forum for Applied Research and Public Policy*, Vol. 6, No. 1 (Spring 1991): 107-8 (comment).

Computation and Complexity in Economic Behavior and Organization, by Kenneth R. Mount and Stanley Reiter, for the *Bulletin of the American Mathematical Society* Vol. 41 (2004), 117-120 (book review).

Economic Theory and Global Warming, by Hirofumi Uzawa, for the *Journal of Economic Literature*, Vol. XLIII, No. 1 (March 2005): 195-196 (book review).

Environmental Policy and Corporate Behavior, Ed. Nick Johnstone, for *Ecological Economics* Vol. 67, No. 2 (2008): 342-343 (book review).

Miscellaneous:

“Agricultural Production, Supply and Institutions in the Post-Civil War South,” *Journal of Economic History*, Vol. 32, No. 1 (March 1972): 396-8 (dissertation summary).

“Varying-Parameter Supply Functions and the Sources of Economic Distress in American Agriculture, 1866-1914” (with Thomas F. Cooley), National Bureau of Economic Research Working Paper #57 (September 1974). <https://www.nber.org/papers/w0057>.

“ATICS: An Agricultural Time Series-Cross Section Dataset” (with Thomas F. Cooley and M. Scott Matthews), National Bureau of Economic Research, Working Paper #197 (1977) (dataset with documentation).

“KANATICS: A Kansas Agricultural Time Series-Cross Section Dataset” (with Joseph Trojanowski), Inter-University Consortium for Political and Social Research, Ann Arbor, Michigan (1977) (dataset with documentation).

“The Economics of Global Change” (co-moderator, with Kai N. Lee), Western Behavioral Sciences Institute, La Jolla, CA (December 1990) (computer teleconference).

“There’s a silver lining to smart environmentalism,” *Santa Barbara News-Press* (14 June 1992) (op-ed).

“Development in step with environmentalism,” *Colorado Springs Gazette-Telegraph* (6 June 1992) (op-ed).

“Budget, Faculty Compensation, and the Future of UC,” *Senate Times*, published by the Santa Barbara Division of the Academic Senate (April 1995): 6-7 (speech).

“Cutting Carbon Emissions at a Profit: Opportunities for the U.S.” (collaborating author, with Paul Baer; lead author Florentin Krause). El Cerrito, CA: International Project for Sustainable Energy Paths, April 2001.

“Cutting Carbon Emissions at a Profit: Opportunities for the U.S. – Executive Summary” (collaborating author, with Paul Baer; lead author Florentin Krause). El Cerrito, CA: International Project for Sustainable Energy Paths, May 2001.

“Get Ready for a 229% Parking Tax Increase!” (with Doug Morgan), *UCSB Faculty Association Newsletter*, June 2001.

“Filling the Holes in Economic Models,” guest opinion in *Global Change*, Vol. 7, No. 2 (Summer 2001), p. 2.

“The Parking Mess – What Needs to Be Done Now” (with Doug Morgan), *UCSB Faculty Association Newsletter*, November 2001.

“Reflections on Climate Change, Economic Development, and Global Equity,” remarks delivered upon receiving the 2007 Leontief Prize for Advancing the Frontiers of Economic Thought, October 17, 2007, available at http://www.ase.tufts.edu/gdae/about_us/leontief/DeCanioLeontief07.pdf.

“Addressing Partial Identification in Climate Models and Policy Analysis” (with Charles F. Manski and Alan H. Sanstad), National Bureau of Economic Research Working Paper #28449 (2021). DOI 10.3386/w28449.

“Minimax Regret Climate Policy with Deep Uncertainty in Climate Modeling and Intergenerational Discounting” (with Charles F. Manski and Alan H. Sanstad), National Bureau of Economic Research Working Paper #29716 (February 2022). <https://www.nber.org/papers/w29716>.

COURSES TAUGHT AT UCSB:

Graduate:

Economics 213: Economic History
Economics 241A-B: Probability/Statistics/Econometrics
Economics 243: Computational Laboratories in Economics
Economics 291: Graduate Workshop in Economics
Economics 594CL: Special Topics in Economics
Economics 596: Directed Reading and Research

Undergraduate:

Economics 5: Introduction to Probability and Statistics
Economics 104B: Intermediate Microeconomic Theory
Economics 113A: Economic History of the United States to 1900
Economics 113B: Twentieth Century United States Economic History
Economics 128: Literature and Economics
Economics 141 A-B: Probability/Statistics/Econometrics
Economics 175: Regulation of Economic Activity
Economics 193: Internship in Economics
Economics 199: Independent Studies in Economics
Environmental Studies 174: Environmental Policy and Economics
Interdisciplinary Studies 192DC/199DC: UCSB Washington Program Research Seminar

INVITED PAPERS, LECTURES AND PRESENTATIONS:

Cliometrics Conference, Madison, 1971 and 1975.
Greater Cambridge Economic Historians, Cambridge, Massachusetts, 1972.
MSSB - University of Rochester Conference, "*Time on the Cross: A First Appraisal*," 1974.
Harvard University, 1974.

University of Pennsylvania, 1975.

Rutgers College, 1975.

University Seminar in Economic History, Columbia University, 1975.

World Econometric Society Meetings, Toronto, 1975.

Duke University, 1977.

University of California, San Diego, 1977.

University of California, Santa Barbara, 1977, 1980

Northwestern University, 1978.

University of Chicago, 1978.

HUD/UCSB Conference, "Tax and Expenditure Limitation," Santa Barbara, California, 1978.

All University of California Conference in Economic History, Davis, California, 1979.

Liberty Fund/Center for Political Economy and Natural Resources Conference, "The Political Economy of the Transfer Society," Bozeman, Montana, 1980.

Pacific Institute Conference, "The Housing and Construction Crisis: California and the Nation," Los Angeles, 1980.

Western Economic Association Annual Meeting, San Francisco, 1981.

Pacific Institute Conference, "Inflation or Deflation? Prospects for Capital Formation, Employment and Economic Recovery," San Francisco, 1981.

University of California, Berkeley, 1982.

All-University of California Conference in Economic History, Berkeley, California, 1982.

Miami University at Oxford, Ohio, 1985.

Brandeis University, 1985.

University of California, Santa Barbara, 1985.

First World Congress of the Cliometrics Society, Evanston, Illinois, 1985.

University of Maryland, Baltimore, 1986.

University of Virginia, 1987.

Western Economic Association, International Annual Conference, Los Angeles, 1988.

Santa Barbara Civil War Council, 1989.

Santa Barbara, Ventura, and San Luis Obispo chapter of the American Trial Lawyers Association, 1990.

Santa Barbara United Nations Association, 1990.

Western Behavioral Sciences Institute, 1990.

University of California, Los Angeles, 1991.

University of Southern California, School of Business Administration, UNOCAL Applied Microeconomics Seminar, 1991.

Institute on Global Conflict and Cooperation, Teaching Seminar on Global Warming, La Jolla, 1991.

Institute of the Americas, Conference on Latin American Environment and Hemispheric Technological Cooperation, La Jolla, 1991.

“Energy Efficiency and Global Warming,” address to American Institute of Architects. Santa Barbara Chapter, February 5, 1992.

University of California, Santa Barbara, Department of Economics, Industrial Organization Seminar, April 1992.

“Rio Wrap-Up,” radio talk show hosted by Adrian Vance, KSSM, AM-990, June 20, 1992.

Commencement Address, Social Science graduates, University of California, Santa Barbara, CA, June 13, 1992.

Lecture presented to National Endowment for the Humanities Summer Institute on “C. Vann Woodward and the Southern Heritage,” Henderson State University, Arkadelphia, Arkansas, July 16, 1992.

“Factors to Consider When Making Chemical Purchasing and Investment Decisions,” paper presented to the International CFC and Halon Alternatives Conference, Washington, DC, September 30, 1992.

“The Global Environment and the Development of the Pacific Rim,” lecture presented to the Western Legislative Conference, Joint Committee Session on Environment & Resource Management and Economic Development & International Trade, Guam, November 15, 1992.

“The Clinton Economic Package,” interview on radio talk show “Tidal Waves” hosted by Michael Gray, KTYD FM-99.9, February 21, 1993.

“The Future Through Yesterday: Long-Term Forecasting from the Perspective of the 19th Century,” paper presented to the All-U.C. Group in Economic History Conference on Global Change, Resource Shocks, and Economic History, Pasadena, California, April 2-4, 1993.

“Why Do Profitable Energy-Saving Investment Projects Languish? (And What Can Management Do About It?),” paper presented at Greening of Industry Network conference, "Designing the Sustainable Enterprise," Boston, Massachusetts, November 14-16, 1993.

Workshop presentation for “Designing for Sustainable Communities: A Vision for the Future of the Built Environment,” a conference sponsored by the American Institute of Architects, held in Santa Barbara, CA, April 7-10, 1994.

“The Current State of the Effort to Save the Ozone Layer,” brown bag seminar at the Department of Economics, University of California, Santa Barbara, April 20, 1994.

“CFC and Halon Banking” [with Jeffrey Williams], paper presented at the Second Occasional California Workshop on Environmental and Resource Economics and Policy, Santa Barbara, October 21-22, 1994.

“The History of the Montreal Protocol on Substances that Deplete the Ozone Layer,” seminar given at the History of Science Colloquium, UCSB Department of History, February 7, 1995.

“The Energy Paradox: Bureaucratic and Organizational Barriers to Profitable Energy-Saving Investments,” paper presented to Resources for the Future Seminar series, Washington DC, October 25, 1995.

“Testing Conventional Investment Theory for Energy-Efficiency Projects,” Lawrence Berkeley National Laboratory, November 15, 1995.

“What are the Key Factors Affecting Technology Diffusion and Policy Effectiveness,” panel discussion at the Workshop on Incorporating Technology Innovation into the Consideration of Policy Responses to Human-induced Climate Change, sponsored by the Center for Global Change, University of Maryland, February 9-10, 1996.

“What Have We Learned About Trilateral Research Projects?” panel presentation at Third General Meeting on Higher Education, Research, and Training Collaboration in North America, Guadalajara, Mexico, 28-30 April, 1996.

“What’s Wrong With Profit Maximization,” paper presented at the Third Occasional California Workshop on Environmental and Natural Resource Economics,” University of California, Santa Barbara, May 16-17, 1996.

“Understanding the Diffusion Process in Modeling the Development of Energy Efficiency Technologies,” paper presented at Climate Change Analysis Workshop, hosted by U.S. Department of Agriculture, Department of Commerce, Department of Energy, Department of State, and Environmental Protection Agency, Springfield, Virginia, June 6-7, 1996.

“Information Processing and Organizational Structure,” paper presented to seminar in the Department of Sociology, University of Denver, August 12, 1996.

“Institutional Barriers to Profitable Investments in Energy Efficiency,” paper presented to Sustainable Economics Lunchtime Series, Economic Policy Institute, Washington, DC, October 24, 1996.

“Information Processing, Organizational Structure, and Climate Policy,” paper presented at Energy Analysis Program Special Seminar, Lawrence Berkeley National Laboratory, November 21, 1996.

“Information Processing and Organizational Structure,” paper presented at Department of Economics Seminar, University of California, Santa Cruz, November 26, 1996.

“Why Economists Support Immediate Efforts to Protect the Climate,” paper presented at U.S.-Japan Environmental Leadership Workshop, Tokyo, April 2-4, 1997.

“The Economics of Responses to Global Climate Change,” lecture presented as part of the 1997 Critical Issues in America Program, *Environmental Issues and Policy Reform in America: A Crisis of Values, Science, and Society in the Political Process*, University of California, Santa Barbara, April 29, 1997.

“Information Processing and Organizational Structure,” paper presented at the Third International Conference on Computing in Economics and Finance, Hoover Institution, Stanford, California, June 30-July 2, 1997.

“Information Processing and Organizational Structure,” paper presented at 72nd Annual Western Economic Association (WEA) International Conference, Seattle, Washington, July 9-13, 1997.

“Complexity in Organizations,” paper presented at Lawrence Berkeley National Laboratory, January 22, 1998.

“Complexity in Organizations,” paper presented at Department of Environmental Studies Seminar, University of California, Santa Cruz, January 23, 1998.

“Complexity in Organizations,” paper presented at Tellus Institute, Boston, MA, February 13, 1998.

“Redefining Progress,” lecture for a session of the conference titled, “California's Environment and the Economics of Sustainability,” sponsored by the UCSB Interdisciplinary Humanities Center, April 23-25, 1998.

“Complexity in Organizations,” briefing for U.S. Environmental Protection Agency, May 15, 1998.

“Complexity in Organizations,” co-author of paper presented by Glenn Mitchell at Western Economic Association International 73rd Annual Conference, Lake Tahoe, NV, July 1, 1998.

“The Importance of Organizational Barriers to the Adoption and Diffusion of Innovations,” paper presented at the Board of Governors of the Federal Reserve System, Washington, DC, October 19, 1998.

“Energy Economics,” guest lecture (given jointly with Alan Sanstad) for course titled *Governmental Responses to Global Climate Change*, University of Washington (Seattle) School of Marine Affairs, Graduate School of Public Affairs, and School of Oceanography, Professor Edward L. Miles, December 2, 1998.

“The Importance of Organizational Structure for the Adoption of Innovations” (co-authored with Catherine Dibble and Keyvan Amir-Atefi), paper presented at U.S. Environmental Protection Agency Workshop on Energy Efficiency and Microeconomics, December 16-17, 1998, Berkeley, CA.

“The Economics of Climate Change,” UCSB Economics Forum, sponsored by UCSB General Affiliates, February 17, 1999.

“The Importance of Organizational Structure for the Adoption of Innovations” (co-authored with Catherine Dibble and Keyvan Amir-Atefi), paper presented at Swiss Federal Institute for Environmental Science and Technology (EAWAG), Dübendorf, Switzerland, April 26, 1999.

“Is There a Tradeoff Between Economic Progress and Environmental Protection?” public lecture given at Eidgenössische Technische Hochschule (Swiss Federal Institute of Technology) (ETH), Zürich, April 26, 1999.

“Organizational Structure and the Adoption of Innovations” (co-authored with Catherine Dibble and Keyvan Amir-Atefi), Western Economic Association International 74th Annual Conference, San Diego, 6-10 July 1999.

“Structure and Performance in Multi-Task Organizations” (co-authored with Catherine Dibble and Keyvan Amir-Atefi), Pew Center Workshop on the Economics and Integrated Assessment of Climate Change, Pew Center on Global Climate Change, Washington, 21-22 July 1999.

“The Impact of Firms’ Organizational Structures on Economic Performance and Investment Decisions,” U.S. Environmental Protection Agency’s Clean Air Act Advisory Committee, Subcommittee on Energy, Clean Air, and Climate Change, Washington, 26 July 1999.

“Expert Networks and Leadership Roles: Structure and Style,” presentation given at the 1999 Earth Technologies Forum, Washington DC, September 27-29, 1999.

“Organizational Structure and the Behavior of Firms: Implications for Integrated Assessment” (co-authored with Catherine Dibble and Keyvan Amir-Atefi), paper presented at the RAND Corporation, Santa Monica, CA, November 19, 1999.

“Organizational Structure and the Behavior of Firms: Implications for Integrated Assessment” (co-authored with Catherine Dibble and Keyvan Amir-Atefi), paper presented at the Computational Workshop sponsored by the Center for Computational Social Science and the Center for Rescuing Strategy and Organization Science, University of California, Los Angeles, February 11, 2000.

“Organizational Structure and the Behavior of Firms: Implications for Integrated Assessment” (co-authored with Catherine Dibble and Keyvan Amir-Atefi), paper presented at the John F. Kennedy School of Government, Harvard University, April 13, 2000.

“Obstacles to Implementing the Kyoto Protocol,” memorandum presented at the “Workshop on Implementing the Kyoto Protocol,” sponsored by the Institute for Global Conflict and Cooperation and the UC Revelle Program on Climate Science and Policy, La Jolla, CA, April 28-29, 2000.

“Economics of Global Climate Change,” interview on the Pat Choate Show, radio program syndicated on the Talk America Radio Network, May 17, 2000.

“The Unfulfilled Promise of General Equilibrium Analysis, Part I: Consumers’ Preferences and Market Demand,” paper presented at U.S. Environmental Protection Agency, Washington DC, October 16, 2000.

“The Unfulfilled Promise of General Equilibrium Analysis, Part I: Consumers’ Preferences and Market Demand,” seminar presentation in Geography 205, “Theory in Environmental Social Science,” UCSB Department of Geography, November 1, 2000.

“Multiple Equilibria and the Theory of Value: Implications for Integrated Assessment,” lecture presented to the Energy and Resources Group, University of California, Berkeley, February 21, 2001.

“Lessons from the Montreal Protocol,” presentation given to the “Scholars of the Montreal Protocol 2001 Conference,” sponsored by the United Nations Environment Programme, Keystone, CO, March 22-24, 2001.

“Cutting Carbon Emissions at a Profit: Opportunities for the U.S.” (with Florentin Krause), Congressional Briefing sponsored by the Environmental and Energy Study Institute (May 3, 2001).

“Cutting Carbon Emissions at a Profit: Opportunities for the U.S.” presentation based on paper with Florentin Krause, J. Andrew Hoerner, and Paul Baer,

delivered at conference titled, “Market Solutions to Climate Change,” Schwab Residential Center, Stanford University, sponsored by Redefining Progress (September 25, 2001).

“Heterogeneous Agents and Multiple Equilibria: Implications for Climate Policy Analysis,” presentation at UCLA Computational Social Sciences Conference in Lake Arrowhead, May 9-12, 2002.

“Economic Aspects of Nominations for ‘Critical Use’ of Methyl Bromide Under Terms of the Montreal Protocol,” presentation to the 23rd Open-Ended Working Group of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 7-11 July 2003.

“How Can Economics Help Us Think About the Climate?” Presentation for the U.S. Environmental Protection Agency, Washington DC, September 22, 2003.

“Forecasting Performance of Energy-Economic Models,” presentation for the Northeast-Midwest Institute, September 22, 2003.

“What’s Needed for Future Models,” presentation for Workshop on Global Modeling, sponsored by the journal *Structural Change and Economic Dynamics*, The Eindhoven Centre for Innovation Studies at the Eindhoven University of Technology, The Institute for Governance Studies at Twente University, and The Dutch Research Council NWO, ISW Programme, October 10, 2003.

“History and Political Economy of the Montreal Protocol,” lecture delivered at Dartmouth College, April 29, 2004.

“Economics of Methyl Bromide Critical Use Exemptions,” seminar paper delivered at Dartmouth College, April 30, 2004.

“Limits on What Economic Models Can Tell Us About Global Climate Policy,” lecture presented at University of Witten/Herdecke, June 24, 2004.

“Economic Models and Global Climate Policy,” Department of Geography, University of Maryland, College Park, November 22, 2004.

“What Will It Take to Reach Consensus (Nearly) on Climate Policy?” presentation to Seminar on Disequilibrium Dynamic Methods in Climate Change Economics, Tyndall Center and Faculty of Economics, University of Cambridge, Cambridge UK, September 5, 2005.

“What Will It Take to Reach Consensus (Nearly) on Climate Policy?” presentation to Environmental Policy Roundtable, Maryland Ecological Economics Student Group (EESG), University of Maryland School of Public Policy, September 16, 2005.

“What Can Economic Models Contribute to Climate Policy?” presentation for 6th Annual Conference on Science, Policy, and the Environment – Energy for a Sustainable and Secure Future, National Council for Science and the Environment, Washington DC, January 26-27, 2006.

“Is Economics the Wrong Language for Addressing Climate Policy,” paper presented to the joint University of California/American Council for an Energy-Efficient Economy (ACEEE) workshop, “*Energy and Economic Policy Models: A Reexamination of Some Fundamentals*,” Washington DC, November 16-17, 2006.

“The Montreal Protocol: Ongoing Research on the Political Economy of MeBr Phaseout” (with Catherine S. Norman), presentation to U.S. Environmental Protection Agency, Stratospheric Protection Division,” Washington DC, December 13, 2006.

“Limitations of Integrated Assessment Models of Climate Change” (based on paper with Frank Ackerman, Richard Howarth, and Kristen Sheeran), University of Maryland, Joint Global Change Research Institute, February 6, 2008.

“Limitations of Integrated Assessment Models of Climate Change” (based on paper with Frank Ackerman, Richard Howarth, and Kristen Sheeran), in panel, “Toward a New Climate Economics: Can We Afford the Future,” American Association for the Advancement of Science, Boston, February 15, 2008.

“Everything You Need to Know About Climate Economics,” Lunch Seminar, UC Washington Center, May 21, 2008.

“Economics: Climate Change and Climate Stewardship,” presentation to Faith Leadership Dialogue on Creation Care and Climate Stewardship, Jamestown, North Dakota, November 15, 2009.

“Climate Change and Climate Stewardship: the economics and moral and ethical implications of responding to climate change,” presentation given at North Dakota State University, Environmental Conservation Sciences, November 16, 2009.

“Let’s Get Real About Climate: International Politics and the Lessons of Copenhagen,” presentation to Breakout Panel on “The Economics of 350,” Conference on the New Green Economy, National Council for Science and the Environment, Washington DC, January 21, 2010.

“Engaging the US in Global Climate Protection Efforts,” presentation for E3 Network – “Climate Economics after Cap-and-Trade: New Directions for Research and Outreach,” Pocantico Conference Center of the Rockefeller Brothers Fund January 13-15, 2011.

“Game Theory and Climate Diplomacy,” College of Sciences Distinguished Speaker Series, University of Central Florida, February 7, 2011.

“The Limits of Mathematical Modeling in the Social Sciences,” plenary address at the Third International Conference on Science in Society,” Catholic University of America, August 5-7, 2011.

“Robots and Humans – Complements or Substitutes,” Colorado State University, Fort Collins, April 8, 2016.

ACADEMIC AFFILIATIONS AND PROFESSIONAL ACTIVITIES:

Co-chair (with Mary A. Yeager) of Southern California Economic History Workshop, 1978-1980.

Co-chair (with Stuart Bruchey) of Columbia University Seminar in Economic History, 1977-1978.

Member of University Seminar in Economic History, Columbia University, 1972-1978.

Member, The Economic History Association, 1973 ~ 2004.

Member, The Econometric Society, 1975 - 1987.

Member, Board of Editors, *Journal of Economic History*, 1985 - 1988.

Member, Board of Advisers, The Independent Institute, ~ 1989-1997.

Member, International Network for Economic Method, 1990.

Member (Faculty), International Executive Forum, Western Behavioral Sciences Institute, 1990-1991.

Participant, National Academy of Engineering International Workshop, “Technology Transfer to Eliminate Ozone-Depleting Chemicals,” Irvine, California, April 22-25, 1991.

Participant, National Academy of Science Colloquium on Industrial Ecology, May 20-21, 1991, Washington, DC.

Participant, Workshop on Social Science theory and International Environmental Relations, UCLA, May 14-16, 1992.

Participant, Workshop on Human Dimensions of Global Change, UCSD, February 20-22, 1992.

Participant, meeting on Environmental and Safety Risks Associated with CFC-12 Substitutes, South Coast Air Quality Management District, Diamond Bar, CA, November 18, 1992.

Facilitator (Santa Barbara downlink), American Institute of Architects Videoconference, "Energy and Resource Efficiencies," January 14, 1993.

Participant, All-U.C. Group in Economic History Conference on “Global Change, Resource Shocks, and Economic History,” Pasadena, California, April 2-4, 1993.

Participant, Greening of Industry Network conference, “Designing the Sustainable Enterprise,” Boston, Massachusetts, November 14-16, 1993.

Participant, “Designing for Sustainable Communities: A Vision for the Future of the Built Environment,” a conference sponsored by the American Institute of Architects, Santa Barbara, CA, April 7-10, 1994.

Participant, Second Occasional California Workshop on Environmental and Resource Economics and Policy, Santa Barbara, October 21-22, 1994.

Participant, “U.S.-Japan Environmental Executive Leadership Conference,” Nara, Japan, April 24-28, 1995.

Participant, 1995 International CFC and Halon Alternatives Conference & Exhibition, “Stratospheric Ozone Protection for the 90’s,” Washington, DC, October 23-25, 1995.

Participant, Third General Meeting on Higher Education, Research and Training Collaboration in North America, Guadalajara, Mexico, 28-30 April, 1996.

Participant, Third Occasional California Workshop on Environmental and Natural Resource Economics, University of California, Santa Barbara, May 16-18, 1996.

Participant, Climate Change Analysis Workshop hosted by U.S. Department of Agriculture, Department of Commerce, Department of Energy, Department of State, and Environmental Protection Agency, June 6-7, 1996, Springfield, Virginia.

Participant, “Integrating Higher Education in North America: A Conference-Workshop,” San Diego State University, San Diego, California, December 13-14, 1996.

Participant, Critical Issues in America Symposium, “U.S. Solar and Renewable Energy Policy,” University of California, Santa Barbara, May 17, 1997.

Panelist, Fourth Annual Provost’s Conference, Denver University, February 19, 1998.

Chair, “Technologies and Environmental Policy,” Session 142 of Western Economic Association International 73rd Annual Conference, Lake Tahoe, NV, June 28-July 2, 1998.

Discussant, “Environmental Resources,” Session 124 of Western Economic Association International, 73rd Annual Conference, Lake Tahoe, NV, June 28-July 2, 1998.

Panelist, “Which Way LA,” National Public Radio program (hosted by Warren Olney) devoted to Buenos Aires climate negotiations, November 5, 1998.

Participant, “Climate Policy – Do We Need a New Approach?” workshop sponsored by The Fondazione Eni E. Mattei, Stanford University, and Venice International University, Venice, Italy (September 6-8, 2001).

Interviewee, “1370 Connection” radio program on “Global Warming,” hosted by Bob Smith, WXXI, Rochester, NY (August 7, 2001).

Participant, 6th Occasional California Workshop on Environmental and Resource Economics, UCSB, October 26-27, 2001.

Participant, Expert Group, National Energy Policy Initiative organized by the Rocky Mountain Institute and the Consensus Building Institute, Airlie Center, February 1-3, 2002.

Participant, Workshop on Global Modeling, sponsored by the journal *Structural Change and Economic Dynamics*, The Eindhoven Centre for Innovation Studies at the Eindhoven University of Technology, The Institute for Governance Studies at Twente University, and The Dutch Research Council NWO, ISW Programme, October 9-11, 2003.

Discussant, “Forecasting Our Energy Future: Why Do We Get Different Answers to Our Questions on Natural Gas?” panel hosted by the U.S. House of Representatives Committee on Science, Subcommittee on Energy, July 8, 2004.

Participant, “Sociological Work on Global Warming and Climate Change,” Didactic Seminar, American Sociological Association, Philadelphia PA, August 12, 2005.

Participant, EPA-WRI-JED-SAGE-ERG “Colloquium on Socioeconomic Drivers of Greenhouse Gas Emissions,” Washington DC, September 29-30, 2005.

Participant, U.S. Environmental Protection Agency “Forum on Sustainability, Well-Being, and Environmental Protection: What’s an Agency to Do?” Washington DC, December 2, 2005.

Moderator, Symposium on “Assessing Energy Futures,” 6th Annual Conference on Science, Policy, and the Environment – Energy for a Sustainable and Secure Future, National Council for Science and the Environment, Washington DC, January 26-27, 2006.

Participant, NKS 2006 Wolfram Science Conference, Washington DC, June 16-18, 2006.

Co-Convener (with John A. “Skip” Laitner) of joint University of California/American Council for an Energy-Efficient Economy (ACEEE) workshop, “*Energy and Economic Policy Models: A Reexamination of Some Fundamentals*,” Washington DC, November 16-17, 2006.

Participant, Policy Options Workshop – Energy Efficiency in the Industrial Sector, U.S. Department of Energy, September 30, 2009.

Participant, "A Discussion with Nicholas Stern on the Economics of Climate Change in the United States," World Wildlife Fund, New York, April 21, 2010.

Participant, Third International Conference on Science in Society, Catholic University of America, August 5-7, 2011.

REFEREEING:

Referee for *Advances in the Economics of Environmental Resources*, *AI & Society*, *American Economic Review*, *Climate Policy*, *Climatic Change*, *Contemporary Economic Policy*, *Contemporary Policy Issues*, *Ecological Economics*, *Economic Inquiry*, *Economic Modelling*, *Economics of Education Review*, *Energy Journal*, *Energy Policy*, *European Economic Review*, *Explorations in Economic History*, *Journal of Economic Behavior and Organization*, *Journal of Economic Dynamics and Control*, *Journal of Economic Education*, *Journal of Economic History*, *Journal of Environment and Development*, *Journal of Environmental Economics and Management*, *Journal of Industrial Ecology*, *Journal of Institutional and Theoretical Economics*, *Journal of Macroeconomics*, *Journal of Political Economy*, *Journal of the Economics of Business*, *Macroeconomic Dynamics*, *Management Science*, *Metroeconomica*, *Proceedings of the National Academy of Sciences*, *Quarterly Journal of Economics*, *Regulation*, *Resource and Energy Economics*, *Southern Economic Journal*, the Intergovernmental Panel on Climate Change, the National Science Foundation, the University of California Systemwide Biotechnology Research and Education Program, and the U.S. Department of Energy.

UNIVERSITY AND COMMUNITY SERVICE:

Member, Committee on Educational Policy and Academic Planning (CEPAP), UCSB, 1979-1981.

Member, Advisory Committee on Statistics, UCSB, 1979.

Member, Graduate Committee, Department of Economics, UCSB, 1980-1981.

Member, Recruiting Committee, Department of Economics, UCSB, 1979-1981; 1987-1988.

Chair, Undergraduate Committee, Department of Economics, UCSB, 1979-1985; 1992-1994.

Chair, Computer Committee, Department of Economics, UCSB, 1985-1986; 1987-1988; 1998-1999.

Member, Steering Committee, UCSB Global Change Group, 1990-1991.

Member, Building Committee, UCSB Professional School of Environmental Sciences and Management, 1991.

Member, UCSB Faculty Legislature, 1992-1996.

Member, UCSB Faculty Legislature Executive Committee, 1992-1994.

Chair, UCSB Faculty Welfare Committee, 1993-1996.

Member, University Committee on Faculty Welfare, 1993-1997.

Vice-Chair, University Committee on Faculty Welfare, 1995-1996.

Chair, University Committee on Faculty Welfare, 1996-1997.

Member of the Board, UCSB Faculty Association, 1993-1997; 1999.

Coach, Santa Barbara PONY Baseball, 1993-1994

Assistant Coach, Goleta Valley Little League, 1995.

Moderator, UCSB Colloquium on Undergraduate Research, 1995.

Member, Compass Project Committee (UCSB), 1996-1997.

Panelist, Chancellor's Community Breakfast, "Globalization of the World Economy," November 12, 1998, The University Club, Santa Barbara.

Member, Advisory Committee for the Institute for Social, Behavioral, & Economic Research, 1998-2001.

Member, Program Peer Review of the Human Ecology Research Groups of Prof. Dr. Carlo Jaeger at Institute of Sociology, Technical University of Darmstadt, Darmstadt, Germany, and at EAWAG, Swiss Federal Institute for Environmental Science and Technology, Dübendorf, Switzerland, April 20-23, 1999.

Member, UCSB Committee on Educational Policy and Academic Planning (CEPAP), 2000-2002.

Member, Department of Economics Recruiting Committee, 2001-2004.

Member, UCSB Council on Planning and Budget, 2002-2004.

CONSULTING:

(Consultant) Golob & Sons, Inc., et al. v. Schaaque Packing Company et al., Superior Court of the State of Washington, Seattle, Washington (1979-80). Retained by Lane, Powell, Moss & Miller (Matthew R. Kenney, Esq.), Perkins, Coie, Olsen, Stone & Williams (David J. Burman, Esq.), Preston, Thorgrimson, Ellis, Holman & Fletcher (Larry M. Carter, Esq.) Schweppe, Doolittle, Krug, Tausend & Beezer (Frederic C. Tausend, Esq.) and Wilkie, Farr and Gallagher (David L. Foster, Esq.) for the defense.

(Consultant) Seattle Baseball Club v. King County, Superior Court of the State of Washington, County of King (1980). Retained by Schweppe, Doolittle, Krug, Tausend & Beezer (Frederic C. Tausend, Esq.) for the plaintiff.

(Consultant) State of Arizona v. Portland Cement Association et al., Superior Court of the State of Arizona, in and for the County of Maricopa (1980-1982). Retained by O'Melveny & Myers (Henry C. Thumann, Esq.) for defendant Amcord, Inc. and by Thelen, Marrin, Johnson & Bridges (Paul R. Haerle, Esq.) for defendant Kaiser Cement Corporation.

(Consultant) Fine Paper Antitrust Litigation, U.S. District Court, Eastern District of Pennsylvania (1980). Retained by Lord, Bissell & Brook (Edward Fitzpatrick, Esq.) for defendant Great Northern Nekoosa Corporation.

(Consultant) Pacific Sun Publ. Co., Inc., et al. v. The Chronicle Publ. Co., Inc., et al., U.S. District Court, Northern District of California (1981). Retained by Shartsis, Friese & Ginsburg (Arthur J. Shartsis, Esq.) for the plaintiff.

(Consultant) Joyce v. Cheney, Superior Court of the State of California, County of San Luis Obispo (1981). Retained by David Howard Battin, Esq., for the plaintiff.

(Affidavit) Fanchon Blake, et al., v. City of Los Angeles, et al., U.S. District Court, Central District of California (1981). Retained by Office of the City Attorney of Los Angeles (Lewis N. Unger, Esq.) for the defense.

(Consultant) "Economic Analysis of Proposed Severance Tax on California Crude Oil," Clients' Group (1982).

(Testimony) Arturo M. Garcia v. Copley Press, Inc., Superior Court of the State of California for the County of Los Angeles (1983). Retained by O'Melveny & Myers (Bertrand M. Cooper, Esq.) for the defense.

(Consultant) James P. O'Toole v. Copley Press, Inc., Superior Court of the State of California for the County of Los Angeles. Retained by O'Melveny & Myers (Bertrand M. Cooper, Esq.) for the defense.

(Consultant) Coordinated Pretrial Proceedings in Petroleum Products Antitrust Litigation, MDL Docket No. 150 WPG, United States District Court, Central District of California. Retained by Menaker and Herrmann, for defendant Phillips Petroleum Company.

(Deposition) Schmunk v. Eli Lilly, et al., United States District Court for the District of Colorado, (1984). Retained by Weller, Freidrich, Hickisch, Hazlitt and Ward (Marc Brosseau, Esq.), and by Lord, Bissell and Brook (Hugh Moore, Esq.), for defendant Abbott Laboratories.

(Deposition and Testimony) Fay Jones v. Turner and Newall, King County Superior Court, Seattle, Washington, (1984). Retained by Levinson, Friedman, Vhugen, Duggan, Bland, and Horowitz (Theodore R. Willhite, Esq.), for the plaintiff.

(Testimony) Paulette Butcher v. N.L. McCullough, Kern County Superior Court (1985). Retained by Kirk and Simas (John Normanly, Esq.), for the plaintiff.

(Consultant) Steve Barrackman, personal injury case, Arroyo Grande, California (1985). Retained by Buddy Jaquith, Esq., for the plaintiff.

(Consultant) “An Economic Impact Analysis of Petroleum and Related Activities in California,” Western Oil and Gas Association (1985).

(Consultant) Malcolm Weiss vs. York Hospital, et al., U.S. District Court for the Middle District of Pennsylvania (1985). Retained by Levin and Fishbein (Michael D. Fishbein, Esq.) for the plaintiff.

(Deposition and Testimony) Barbara Alaynik vs. Eli Lilly & Co., et al.; Linda Kushel vs. Abbott Laboratories, et al.; Marcy Sherbok vs. Eli Lilly & Co., et al.; Carol Stapp vs. Abbott Laboratories, et al.; Dorothy Sutton, et al. vs. Eli Lilly & Co., et al., Superior Court of the State of California for the County of Los Angeles (1985). Retained by Overton, Lyman & Prince (Laurence H. Schnabel, Esq.), for Defendant Abbott Laboratories.

(Testimony) In the Matter of Offshore Platform Jackets and Piles from the Republic of Korea and Japan, before the United States International Trade Commission (1986). On behalf of Chevron, U.S.A., Inc., Cities Service Oil and Gas Corporation, Exxon Company, U.S.A., Marathon Oil Company, Phillips Petroleum Company, Texaco, Inc., and Union Oil Company of California.

(Consultant) Patricia Ann Lester, personal injury case, Upland, CA (1986). Retained by Larry A. Sackey, Esq., for the plaintiff.

(Consultant) “Cross-Contract Crediting Under FERC Order 500: An Economic Analysis,” paper prepared for the Natural Gas Supply Association (1988).

(Consultant) “Allocated Quotas and Regulatory Fees: A Mixed Strategy for CFC and Halon Control,” paper prepared for the United States Environmental Protection Agency (1988).

(Consultant) United States Steel Corporation vs. Pacific Gas and Electric Company, Granite-Ball-Groves Joint Venture, Granite Construction Company, Gordon H. Ball, Inc., and S. J. Groves and Sons, Inc., United States District Court, Eastern District of California (1988). Retained by McCutchen, Black, Verleger & Shea (Howard J. Privett, Esq.) for the plaintiff.

(Consultant) United Nations Environment Programme Economic Panel, convened pursuant to Article 6 of the Montreal Protocol on Substances that Deplete the Ozone Layer, for the United States Environmental Protection Agency (1989).

(Testimony) Yukio Tamura vs. Yaesu Electronics Corporation, Superior Court of the State of California for the County of Los Angeles (1989). Retained by Schramm and Raddue (Richard F. Lee and Peter A. Umoff), for defendant Sako Hasegawa.

(Consultant) Ansell Incorporated vs. Schmid Laboratories, Inc., and Allercare/NSL, Inc., United States District Court, District of New Jersey (1990). Retained by Menaker & Herrmann (Richard G. Menaker), for the defendants.

(Consultant) United States Environmental Protection Agency (1991).