

David Gerard

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Education

Ph.D. University of Illinois; Economics, 1997.
M.S. University of Illinois; Economics, 1994.
B.A. Grinnell College; American Studies and Economics, 1990.

Academic & Research Positions

Associate Professor, Department of Economics, Lawrence University, 2009-
With tenure, June 2013-present.
Chair, January 2013-present.
Executive Director, Center for the Study & Improvement of Regulation, Department of Engineering & Public Policy, Carnegie Mellon University. 2003-2009.
Associated Teaching Faculty, Masters program in Engineering & Technology Innovation Management; Undergraduate Policy & Management program in the Department of Social & Decision Sciences, Carnegie Mellon University, 2006-2009.
Post-Doctoral Fellow, Department of Engineering & Public Policy, Carnegie Mellon University. 2001-2003.
Adjunct Professor, Department of Agricultural Economics & Economics, Montana State University. 1998-2001.
Research Associate, Political Economy Research Center (PERC), 1997-2000.
Research Assistant, Office of Commerce Research, University of Illinois. 1994-97.
Teaching Assistant, Department of Economics, University of Illinois. 1991-94.

Other Academic Appointments

Visiting Scholar, Ostrom Workshop in Political Theory & Policy Analysis, Indiana University, Fall 2016.
Adjunct Associate Professor, Department of Department of Engineering & Public Policy, Carnegie Mellon University. 2009-present.
Visiting Researcher, Institute of Transport and Logistic Studies, University of Sydney. Summer 2007.

Research Fields

New Institutional Economics, Environmental & Resource Economics, Regulation & Public Policy.

Publications in Refereed Journals

“Sensitivity Analysis of the Build Decision for Carbon Capture and Sequestration Projects,”
Greenhouse Gases: Science & Technology. 2(1):36-45 (With Paul S. Fischbeck and Sean T. McCoy). (2012)
“How big is big? How often is often? Characterizing Texas Petroleum Refinery Emissions,”
Atmospheric Environment. 44(34):4230-4239. (With Britney McCoy and Paul S. Fischbeck). (2010)

- “Environmental Bonds and the Problem of Long-Term Carbon Sequestration,” *Journal of Environmental Management*. 90(2):1097-1105. (With Elizabeth J. Wilson). (2009)
- “An Interactive Tool to Compare and Communicate Traffic Safety Risks: Traffic STATS,” *The Journal of the Transportation Research Forum*.. 46(3): 87-102. (With Paul S. Fischbeck, Barbara Gengler, and Randy S. Weinberg). (2007)
- “Diesels and Hybrids Don’t Mix: Public Perceptions and Actual Driving Behavior of New Diesel and Hybrid Owners,” *Transportation Research Record: The Journal of the Transportation Research Board*. No. 2017. pp. 33-40 (With Paul S. Fischbeck and H. Scott Mathews). (2007)
- “Identifying and Correcting Errors with Odometer Readings from I/M Data: A “Rollover” Problem for the Estimation of Emissions and Technical Change,” *Transportation Research Record*. No. 2011 pp. 87-97. (With Vincent Goh and Paul S. Fischbeck). (2007)
- “An Interactive Forecasting Tool for the Impacts of New Engine Technologies on Fuel Consumption and Emissions,” *Transportation Research Record*. No. 2011, pp. 78-86. (With Paul S. Fischbeck and David Rice). (2007)
- “Experiments in Technology-Forcing: Comparing the Regulatory Processes of U.S. Automobile Safety and Emissions Regulations,” *International Journal of Technology Policy and Management*. 7(1): 1-14. (With Lester Lave). (2007)
- “Implementing Technology-Forcing Policies: The 1970 Clean Air Act and the Introduction of Advanced Emissions Controls.” *Technology Forecasting and Social Change*. 72:761-778. (With Lester Lave). (2005)
- “Using Environmental Bonds to Regulate the Risks of GM Crops: Problems and Prospects.” *Environmental Biosafety Research*. 2(1): 25-32. (With Siân Mooney). (2003)
- “Transaction Costs and the Value of Mining Claims.” *Land Economics*. 77(3): 371-384. (2001)
- “The Law and Economics of Reclamation Bonds.” *Resources Policy*. 26(4): 189-197. (2000)
- “The Development of First-Possession Rules in U.S. Mining, 1872-1920: Theory, Evidence, and Policy Implications.” *Resources Policy*. 24(4): 251-264. (1998)

Research Reports and Edited Volume

- M. Granger Morgan and Sean McCoy, with Jay Apt et al., *Carbon Capture and Sequestration: Removing the Legal and Regulatory Barriers*. New York, NY: Resources for the Future Press. (2012)
- National Research Council, *TRB Special Report 308: The Safety Challenge and Promise of Automotive Electronics: Insights from Unintended Acceleration*. Washington, DC: National Academies Press. (2012)
- M. Granger Morgan et al., *Carbon Capture and Sequestration: Framing the Issues for Regulation, An Interim Report from the CCSReg Project*. Pittsburgh, PA. Department of Engineering & Public Policy, Carnegie Mellon University. (2009)
- Carbon Capture and Sequestration: Integrating Technology, Monitoring, Regulation*, Blackwell Publishing (Contributing co-editor with Elizabeth J. Wilson). (2007)

Book Chapters and Invited Papers

- “Is it Warm in Here? The Intractable Challenges of Climate Change,” Lawrence University *Convocations*. (2015)
- “Carbon Capture and Sequestration in Context: Technology, Regulation, and Social Acceptance,” in

- Carbon Capture and Sequestration: Integrating Technology, Monitoring, Regulation.* (With Elizabeth J. Wilson). (2007)
- “Geologic Sequestration Under Current U.S. Regulations: Problems and Prospects,” in *Carbon Capture and Sequestration: Integrating Technology, Monitoring, Regulation.* (With Elizabeth J. Wilson). (2007)
- “Risk Assessment and Management for Geologic Sequestration of Carbon Dioxide,” in *Carbon Capture and Sequestration: Integrating Technology, Monitoring, Regulation.* (With Elizabeth J. Wilson). (2007)
- “CAFE Increases: Missing the Elephant in the Living Room,” Related Publication 04-11. AEI-Brookings Joint Center for Regulatory Studies. (With Lester Lave). (2004)
- “The Economics of CAFE Reconsidered: A Response to CAFE Critics and A Case for Fuel Economy Standards,” Regulatory Analysis 03-10. AEI-Brookings Joint Center for Regulatory Studies. (With Lester Lave). (2003)
- “Federal Flood Policies: 150 Years of Environmental Mischief.” In *Government vs. Environment.* Leal and Meiners, eds. Lanham, MD: Rowman and Littlefield Press. (2002)
- “Property Rights and Technological Innovation: Legal Remedies and Pollution Abatement in U.S. Mining.” In *The Technology of Property Rights.* Anderson and Hill, eds. Lanham, MD: Rowman and Littlefield Press. (With Timothy J. LeCain). (2001)
- “Costs and Benefits of Interior's Proposed Initiative to Revise and Update Regulations Governing Hardrock Mining Operations (43 CFR 3809).” *9th Annual Proceedings of the Mineral Economics and Management Society.* (2000)
- “The Origins of the Federal Wilderness System.” In *Political Environmentalism.* T. L. Anderson, ed. Stanford, CA: Hoover Institution Press. (2000)

Working Papers

- “Advancing the Effectiveness of Energy Conservation Programs: Evaluation of Low-Income Household Weatherization from the Perspective of a Pennsylvania Natural Gas Utility,” Under review. (With Amelia MacSleyne and Paul S. Fischbeck) *Under Review.*
- “Political Economy of Sustainability,” prepared as Chapter 6 for *Introduction to Sustainable Engineering.* Cliff Davidson et al. (With William R. Keach and Michael C. Munger).
- “Quantifying Risk Regulations for Empirical Research in Administrative Law: The Case of US Transportation Fuels,” (With David E. Stickers and Paul S. Fischbeck).
- “The Political Economy of Setting Risk Regulations: An Empirical Study of U.S. Transportation Fuels,” (With David E. Stickers and Paul S. Fischbeck).
- “Using GIS to Explore Environmental Justice Issues: The Case of U.S. Petroleum Refineries,” (With Paul S. Fischbeck, Britney McCoy, and Jun Hyun Park). Unpublished paper from The State of Environmental Justice in America, Howard University, March 2007.

Book Reviews

- J.S. Holliday *Rush for Riches: Gold Fever and the Making of California.* Berkeley: University of California Press, 1999; and *A Golden State: Mining and Economic Development in Gold Rush California.* Edited by James J. Rawls and Richard J. Orsi. Berkeley: University of California Press, 1999. Reviewed together in *Journal of Economic History.* December 1999

Larry Lankton, *Beyond the Boundaries: Life and Landscape at the Lake Superior Copper Mines, 1840-1875*.
Reviewed in *Journal of Economic History*. September 1998

Dissertation

Institutions, Property Rights, and Transaction Costs in the Hardrock Mining Industry, 1866-1996. Committee:
Lee J. Alston, Chair; Richard J. Brazee; Thomas Ulen

Research Funding

An Interactive Tool to Compare and Communicate Traffic Safety Risks. March 2005-March 2006.
Funding of \$135,000 from the AAA Foundation for Traffic Safety. Co-P.I. with Paul Fischbeck
and Randy Weinberg.

Technology-Forcing Regulations and Regulatory Overlap in the US Auto Industry: Studies of
Emissions, Fuel Economy, and Safety Regulations. Funding of \$85,000 from the A.W. Mellon
Foundation. Co-P.I. with Lester Lave. June 2002-August 2004.

Web Tool Development

Development team of Death Risk Rankings (with Paul Fischbeck, Barbara Gengler, and Jeria
Quesenberry) www.deathriskrankings.com

Development team of TrafficSTATS (with Paul Fischbeck, Randy Weinberg, and Barbara Gengler).
No longer available online.

Courses Taught

Lawrence University

- Introductory Microeconomics; Intermediate Microeconomics; Political Economy of Regulation; Economics of the Firm; Environmental Economics; Industrial Organization; Public Economics. Senior Experience reading seminar.
- Freshman Studies.
- Introduction to Environmental Policy.
- “Is it Warm in Here? The Intractable Policy Challenges of Climate Change,” Björklunden summer seminar, July-August 2016.

Carnegie Mellon University

- Policy Analysis II; Public Policy & Regulation (alone, with Paul Fischbeck, and with Lester Lave); Policy Making Institutions; Organizations; Managerial and Engineering Economics.
- Entrepreneurship, Regulation, and Technological Change (with David Hounshell).
- Innovation for Energy & the Environment (with Pat Atkins).
- Capstone Undergraduate Project Research Courses: *Hybrids and Diesels in the American Automobile Fleet: 2005-2020* (Spring 2005); *U.S. Oil Refineries: Spatial Dimensions of Economics, Regulatory Policy & Environmental Justice* (Fall 2005).

Montana State University

- The Economic Way of Thinking (60-240 students per section); Intermediate Microeconomics.

University of Illinois (Graduate Teaching Assistant)

- Statistics; Macroeconomics.

Ph.D. Committees (all at Carnegie Mellon in Department of Engineering & Public Policy)

David E. Stickers *Risk Regulation of Transportation Fuels: An Analysis of Stakeholder Behavior and Regulatory Outcomes*. (Committee Co-Chair)

Elizabeth J. Wilson *Managing the Risks of Geologic Carbon Sequestration: A Regulatory and Legal Analysis*. 2004

Jaegul Lee, *Impacts of government regulation on innovation, using patent data of U.S. automotive emissions controls*. 2005

Amelia MacSleyne, *Assessing the Effectiveness of Energy Conservation Programs using Micro-Level Data*. 2007

Sarah J. Ryker, *Chemical mixtures in U.S. drinking water--Technical and policy approaches to risk assessment and regulation* 2008.

Melissa Chan, *Life Cycle Analysis of Pittsburgh Coal Seam Extraction*. 2008.

Sarah L. Rees, *Two Case Studies in Air Quality: Performance of the Federal Reference Method for Fine Particulate Matter and Air Quality Impacts of Light Duty Diesel Vehicles*. 2010.

Britney McCoy, *Upset Emissions and Environmental Justice Issues Surrounding U.S. Oil Refineries*. 2010.

Mo Chen, *Quantitative Vehicle Policy Study for China: Environmental, Economic and Safety Perspectives*.

Professional Service

- Member of National Academy of Sciences' Committee on Electronic Vehicle Controls and Unintended Acceleration, 2010-2012.
- Journal referee: *Quarterly Journal of Economics and Finance*, *Business History Review*, *Journal of Evolutionary Economics*, *Risk Analysis*, *Management Science*, *Contemporary Economic Policy*, *International Environmental Agreements*, *Technology Forecasting & Social Change*, *Australian Journal of Agricultural and Resource Economics*, *Environmental Science & Technology*.
- National Science Foundation Economics Program (2004)
- Health Canada Policy Research Program, *Regulations in a Changing World* (2004)
- Michael Baye *Managerial Economics and Business Strategy*, 6th edition.

Public Lectures

"Climate Change is Coming: Should We Try to Look Busy?" Quigley Hall Lecture, Allegheny College, September 10, 2015.

"Is it Warm in Here? The Intractable Challenges of Climate Change," Lawrence University *Faculty Honors Convocation*, May 14, 2015.

"Matters of Life & Death: An Informal Introduction to Formal Modeling with Thomas Schelling," Freshman Studies Lecture, Lawrence University, October 2014 and October 2015.

"The Capitalists' Cooperative: Economics of Organization and Its Implications for Corporate Social Responsibility," Grinnell College Rosenfield Program Symposium on Sustainability and Corporate Social Responsibility, February 12, 2013.

"Prospects for US Electricity Generation: Carbon Capture &/or Natural Gas," Economics Colloquium at Lawrence University, May 2012.

"Juggling the Purple Balls: Ranking Mortality Risks in the U.S. and Europe." Lunch at Lawrence, November 2010.

"Studying Risk Regulations at Lawrence and The Purple Balls of Death," Talk for Lawrence University outreach program, December 2009.

"Can the Government 'Force' Innovation? The 1970 Clean Air Act and the Introduction of

Advanced Automotive Emissions Controls,” Allegheny College Campus Lecture, 2003.

Appearances in News Media

Quoted in *Huffington Post*, “Should We Cancel Daylight Saving Time?” March 14, 2016.

Quoted in Bloomberg, “Here’s Why Your Commute Will Be Terrible This Monday,” March 11, 2016.

Quoted in *Time*, “How Daylight Saving Time Can Be Dangerous,” October 31, 2014.

Interviewed by KPCC Southern California Public Radio *Take Two* program on Daylight Saving Time, March 10, 2014.

Quoted on *National Public Radio Marketplace*, “New fuel standards could lead to higher gas prices,” May 3, 2012.

Featured in stories in *Appleton Post-Crescent* and *Champaign-Urbana News Gazette* on appointment to National Academy of Sciences, *Committee on Electronic Vehicle Controls and Unintended Acceleration*, September 2010.

Guest blogger at Organizations and Markets, www.Organizationsandmarkets.com. 2009-2010.

Featured in stories in *Appleton Post-Crescent* and *Milwaukee Journal-Sentinel* on Death Risk Rankings query tool. Also interviewed by WOSH and quoted in several international news outlets. September 2009.

Quoted in AP and *Pittsburgh Post-Gazette* on pedestrian fatality risks during Daylight Saving Time change. Story was widely cited in newspapers, radio, and television. November 2007.

USA Today front-page story on elderly drivers used data from TrafficSTATS; follow-up interview on FoxNews. May 2007.

Interviewed by AP story on TrafficSTATS. AP story picked up by more than 200 newspapers. Also interviewed by NPR (Weekend Edition and Marketplace), Seattle Public Radio, ABC News, St. Louis Post-Dispatch, WTAE-TV Pittsburgh, Roger Hedgecock Show, and others. January 2007.

Public Policy Writing & Other Contributions

“Daylight Saving Time Deserves More Light,” *Appleton Post-Crescent*, March 9, 2014

“The Spring Time Saves Lives,” *New York Times* Room for Debate, March 6, 2014.

Testimony before U.S. Senate Committee on Environment and Public Works, Subcommittee on Fisheries, Wildlife, and Water. Hearing on the *Good Samaritan Abandoned or Inactive Mine Waste Remediation Act* (S. 1787) June 21, 2000.

Comments on the Department of the Interior’s proposed initiative to revise and update regulations governing hardrock mining operations (43 CFR 3809). Mercatus Center Regulatory Studies Program, George Mason University. February 2000.

The Mining Law of 1872: Digging a Little Deeper. Policy Series Paper PS-11. Bozeman, MT: Political Economy Research Center. December 1997.

“Don’t Target the 1872 Mining Law as Vehicle to Protect Environment.” *The Salt Lake Tribune*, April 12, 1998; (also published as “We should reform the Mining Law of 1872, not trash it.” *The Great Falls Tribune*, April 12, 1998.)

“The Mining Law of 1872: Digging Deeper.” *PERC Reports* 16(1) 8-9.

“Base Closings Don’t Have to Spell Disaster.” *Illinois Business Review*. Summer 1996. 53(2):12-15.

“The Economics of Pollution Reduction and Sulfur Dioxide Emissions Permits.” *Illinois Business Review*. Fall 1995. 52(3):11-14.

“Update on the Study of the Economy of Rantoul, Illinois.” *Illinois Business Review*. Spring 1995.

Invited and Conference Presentations

- Midwest Economics Association, Evanston, IL (2010)
- Heartland Environmental & Resource Economics Workshop, University of Illinois (2009)
- Institute of Transport and Logistic Studies, University of Sydney (2007)
- Risk Center Seminar, Carnegie Mellon University. (2007)
- The State of Environmental Justice in America, Howard University Law School. With Paul Fischbeck, Jun Hyun Park, and Britney McCoy. (2007)
- *Transportation Research Board Annual Meeting*, Washington, DC. (three papers and one poster) With Paul Fischbeck. (2007)
- *Institute for Operations Research and the Management Sciences (INFORMS) Annual Meeting*, Pittsburgh, PA. (two papers) With Amelia MacSleyne and Paul Fischbeck. (2006)
- *International Society for the New Institutional Economics*, Boulder, CO. (2006)
- Department of Mineral Economics, Colorado School of Mines. (2006)
- *Society for Risk Analysis*, Orlando. (2005)
- Graduate School of Public and International Affairs, University of Pittsburgh. (2005)
- program in Environmental and Resource Economics (pERE), University of Illinois. (2004)
- *International Society for the New Institutional Economics*, Tucson. (2004)
- Empirical Methods Seminar, LBJ School of Public Policy, University of Texas. (2004)
- *7th Annual International Conference on Technology Policy and Innovation*, Monterrey, Mexico. (2003)
- Center for the Study of the Human Dimensions of Global Change, Carnegie Mellon University. (2002)
- *EPA Hardrock Mining 2002: Issues Shaping the Industry*. Denver. (2002)
- *Mineral Economics and Management Society*. Boulder. (2000)
- Political Economy Forum. Pray, Montana. (1999)
- *Western Economics Association International Meetings*, San Diego. (1999)
- *Southern Economic Association Meetings*, Atlanta. (1997)
- *Economic History Association Meetings*, New Brunswick, NJ; and Montana State University. (1997)
- program in Environmental and Resource Economics (pERE) workshop, University of Illinois. (1996)
- Economic History Workshop, University of Illinois. (1995)

Honors and Awards

Faculty Convocation Award for distinguished professional work. Lawrence University, May 2015.

National Endowment for the Humanities, Summer Institute in the History of Political Economy, Duke University. Summer 2010. (selected but could not attend).

Western Coal and Transportation Association Award for outstanding dissertation in natural resource economics. May 1997.

Environmental and Resource Economics Scholar, program in Environmental and Resource Economics (pERE), University of Illinois. Fall 1996.