# **David Gerard**

John R. Kimberly Distinguished Professor

Department of Economics

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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 Appointments & Research Positions

Associate Professor, Department of Economics, Lawrence University, 2009-present.

With tenure, June 2013-present.

Department Chair, January 2013-August 2019.

John R. Kimberly Distinguished Professor, July 2016-present.

Executive Director, Center for the Study & Improvement of Regulation, Department of Engineering & Public Policy, Carnegie Mellon University. 2003-2009.

Associated Teaching Faculty, Carnegie Mellon University, 2006-2009.

Masters program in Engineering & Technology Innovation Management (Department of Engineering and Public Policy).

Undergraduate program in Policy & Management (Department of Social & Decision Sciences).

Research 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**

Adjunct Associate Professor, Department of Engineering & Public Policy, Carnegie Mellon University. 2009-present.

Visiting Scholar, Ostrom Workshop in Political Theory & Policy Analysis, Indiana University, Fall 2016.

Visiting Researcher, Institute of Transport and Logistic Studies, University of Sydney. Summer 2007.

### Research Fields

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

## **Publications in Refereed Journals**

- "Who Should Own the League? Transaction Costs and NBA Ownership Structure," forthcoming in *Journal of Sports Economics* (With Tomas Nonnnemacher)
- "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 (Coeditor with Elizabeth J. Wilson). (2007)

## **Book Chapters and Invited Papers**

- "Resources for the Future." In Political Groups, Parties, and Organizations that Shaped America: An Encyclopedia and Document Collection, Scott Ainsworth and Brian Harward (eds.), ABC-CLIO. (2019)
- "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**

- "Accidental Technology Forcing Under the Renewable Fuel Standard: The Case of Landfill and Dairy Biogas," (with Raian Rith)
- "Tenure at Liberal Arts Colleges: Further Empirical Evidence on Alchian," (with Tomas Nonnenmacher)
- "The Economics of Regulation and Antitrust in the Era of Homeland Security," Paper presented at Ostrom Workshop Colloquium

### **Book Reviews**

I.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 Alston, Chair; Richard 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.

# **Teaching**

## Lawrence University

- Introductory Economics; Introductory Microeconomics (ECON 100)
- Intermediate Microeconomics (ECON 300)
- Quantitative Decision Making (with Alan Parks) (ECON / MATH 223)
- Public Economics (ECON / GOVT 271)
- Environmental Economics (ECON / ENST 280)
- Economics of the Firm / Organizational Economics (ECON 450)
- Industrial Organization (ECON 400)
- Political Economy of Regulation (ECON / GOVT 444)
- Institutional and Organizational Economics (ECON 495)
- Topics in the Economics of Pandemics (ECON 295/495)
- Senior Experience seminars (ECON 601)
- Introduction to Environmental Policy (ENST 151)
- Freshman Studies

## Carnegie Mellon University

Department of Social & Decision Sciences

- Policy Analysis II
- Public Policy & Regulation (alone and with Paul Fischbeck)
- Policy Making Institutions
- Organizations
- Entrepreneurship, Regulation, and Technological Change (with David Hounshell)
- Policy Analysis III / 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)

Masters in Engineering & Technology Innovation Management Program

- Managerial and Engineering Economics (including a semester distance learning from CMU to students at Athens Institute of Technology)
- Innovation for Energy & the Environment (with Pat Atkins)

Graduate School of Industrial Administration

• Public Policy & Regulation (with Lester Lave)

# Montana State University

- The Economic Way of Thinking (lecture-hall sized sections)
- Intermediate Microeconomics.

# University of Illinois (Graduate Teaching Assistant)

- Probability and Statistics
- Macroeconomics

#### Miscellaneous

- Is it Warm in Here? The Intractable Policy Challenges of Climate Change, Lawrence University Björklunden summer seminar, July-August 2016.
- Guest lecturer in *Institutional Analysis: Concepts and Applications*, Indiana University, October 2016.

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

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

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.

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

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

Amelia MacSleyne, Assessing the Effectiveness of Energy Conservation Programs using Micro-Level Data. 2007 Jaegul Lee, Impacts of government regulation on innovation, using patent data of U.S. automotive emissions controls. 2005.

David E. Stikkers Risk Regulation of Transportation Fuels: An Analysis of Stakeholder Behavior and Regulatory Outcomes. 2004. (Co-Chair)

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

### Lawrence Summer Research Students

Karl Hailperin (2010), Anmy Xu (2011), Zachary Crombie Presberg (2017), Bridget Duero (2018), Syndey Lobdell (2018), Claudia Simmons (2018), Nick Guzzo (2019), Thuy Nguyen (2019, 2020), Sharon Kolo (2021), Raian Rith (2021).

#### **Professional Service**

- Member of National Academy of Sciences' Committee on Electronic Vehicle Controls and Unintended Acceleration, 2010-2012.
- External Reviewer for Department of Economics at Illinois Wesleyan University (2015), Allegheny College (2019)
- 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, Greenhouse Gases: Science & Technology, Resources Conservation, & Recycling.
- National Science Foundation Economics Program (2004)
- Health Canada Policy Research Program, Regulations in a Changing World (2004)

# Public Lectures & Appearances

- "Give Me a Carbon Tax or Give Me Catastrophic Climate Change," Lawrence University Environmental Studies Capstone, February 25, 2021
- Speaker and panelist for discussion on climate change with U.S. Representative Mike Gallagher, Lawrence University, February 22, 2019.
- "T Minus-Five for Democratic Deliberation," panelist for Lawrence Univesity Voices, Polvolny Lecture Series in International Studies, October 2, 2018
- Speaker and panelist for discussion on medical marijuana sponsored by Lawrence University branch of American Medical Student Association, February 29, 2016.
- "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.
- "A Carbon Tax is the Answer. What's the Question?" Climate Change Coalition of Door County, April 1, 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.

## Select Appearances in News Media

Appeared in Spectrum News 1 Wisconsin story on President Trump's threatened tariffs on Mexican

- imports, June 7, 2019
- Quoted in *Christian Science Monitor*, "Trump's challenge to fuel-efficient car standards: an uphill struggle," April 3, 2018
- Quoted in *Fast Company*, "When it comes to clean cars, is the California way the right approach?" April 21, 2017
- 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, <u>www.Organazationsandmarkets.com</u>. 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**

- "Extend the Exemption for the Endowment Tax," Inside Higher Ed, December 12, 2017
- "Daylight Saving Time Deserves More Light," Appleton Post-Crescent, March 9, 2014
- "The Spring Time Change 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. 52(1):3-5.

## Web Tool Development

Development team of Death Risk Rankings (with Paul Fischheck, Barbara Gengler, and Jeria Quesenberry) formerly <u>www.deathriskrankings.com</u>

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

#### **Conferences & Presentations**

Symposium on Civil Liberties, Economic Growth, and Corruption, Lawrence University (2019)

New Frontiers in Empirical Study of Agency Policymaking, La Follette School of Public Affairs, University of Wisconsin (2018)

Ostrom Workshop Research Series, Indiana University (2016)

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, Carnegie Mellon University. (2007)

Transportation Research Board Annual Meeting, Washington, DC. (three papers, one poster) (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

Department of Agricultural Economics and Economics, Montana State University. (1997)

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

Economic History Workshop, University of Illinois. (1995)

## Select Lawrence University Service

President's CoVID-19 Management Team, Health Committee, 2020-present.

Faculty & Employer Relations Focus Group, 2020.

Faculty Committee on Governance (elected by faculty), 2017-'18, 2018-19.

President's Committee on Diversity Affairs, 2014-15.

Pre-Law Advising Committee, 2013-21 (Chair 2015-21).

Economics Department Chair, January 2013- June 2019.

## 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.

### Miscellaneous

- Co-author of test bank for W. Kip Viscusi, Joseph E. Harrington, Jr., and David E.M. Sappington, *The Economics of Regulation & Antitrust*. Cambridge, MA: MIT Press. 5<sup>th</sup> edition.
- Reviewer for Michael Baye Managerial Economics & Business Strategy, 6th edition.
- Litigation consulting for Stillings, Buchinger, & Been LLC, November 2017