

GERALD R. MARSCHKE

Office Address:

Department of Economics
University at Albany, SUNY
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Education:

The University of Chicago, Ph.D. Economics, 1997

The University of California, Davis, B.A. Economics, 1984

Fields of research and teaching interest:

Labor economics, public economics, industrial organization, economics of science and technology, science and technology policy, organizational economics

Research and teaching experience:

Current Appointments

Associate Professor, Department of Economics, University at Albany, SUNY, 2004-2008, 2010-

Faculty member, Public Policy Faculty, University at Albany, SUNY, 2002-2008, 2010-

Research Associate, National Bureau of Economic Research (NBER), 2014-

Senior Research Associate, Labor and Worklife Program, Harvard Law School, Harvard University, 2010-

Past Appointments

Associate Professor, Department of Public Administration & Policy, University at Albany, SUNY, 2004-2008, 2010-2011

Faculty Research Fellow, National Bureau of Economic Research (NBER), 2007-2014

Research Fellow, Institute for the Study of Labor (IZA), 2005-2013

Wertheim Fellow, Labor and Worklife Program, Harvard Law School, Harvard University, 2008-2010

Visiting Associate Professor, John F. Kennedy School of Government, Harvard University, 2008-2009

Assistant Professor, Department of Economics and Department of Public Administration & Policy, University at Albany, SUNY, 1998-2004

Visiting Assistant Professor, Department of Economics, University at Buffalo, SUNY,
1996-1998

Research Associate, Center for Social Program Evaluation, University of Chicago, James
J. Heckman, Director, 1993-1996

Publications:

- "High-Impact and Transformative Science (HITS) Metrics: Definition, Exemplification, and Comparison," (Joseph Staudt, Huifeng Yu, Robert P. Light, Gerald Marschke, Katy Börner, and Bruce A. Weinberg), *PLoS ONE*, 13(7), July 2018, pp. 1-23.
- "Last Place: The Intersection between Ethnicity, Gender, and Race in Biomedical Authorship." (Marschke, Gerald, Allison Nunez, Bruce A. Weinberg, and Huifeng Yu), *American Economic Association Papers and Proceedings*, 2018.
- "Impact of University Scientists on Innovations in Nanotechnology," (with Sangjoon Lee and Jinyoung Kim), in *Intellectual Property for Economic Development: Issues and Policy Implications*, (Sanghoon Ahn, Bronwyn H. Hall, and Keun Lee, eds.), Edward Elgar, 2014, pp. 141-158.
- "Curbing Cream-Skimming: Evidence on Enrolment Incentives," (with Do Han Kim and Pascal Courty), *Labour Economics*, 2011, 18(5), pp. 643-655.
- The Performance of Performance Standards*, (James J. Heckman, Carolyn Heinrich, Pascal Courty, Gerald Marschke, and Jeffrey Smith eds), W. E. Upjohn Institute for Employment Research, 2011; in addition to co-editing this monograph, Marschke co-authored the following chapters,
- "U.S. Employment and Training Programs and Performance Standards System Design," (Chapter 2, with Pascal Courty, Carolyn Heinrich, and Jeffrey Smith);
- "The JTPA Incentive System: Implementing Performance Measurement and Funding," (Chapter 4, with Pascal Courty);
- "Setting the Standards: Performance Targets and Benchmarks," (Chapter 5, with Carolyn Heinrich and Pascal Courty); and
- "Measuring Government Performance: An Overview of Dysfunctional Responses," (Chapter 7, with Pascal Courty).
- "Incentives and Their Dynamics in Public Sector Performance Management Systems," (with Carolyn Heinrich), *Journal of Policy Analysis and Management*, Winter 2010, 29(1), pp. 183-208.
- "Inventive Activity and Scholarship in Academe: Complements or Substitutes?" (with Brent Goldfarb and Amy Smith), *Economics of Innovation and New Technology*, 2009, 18(8), pp. 743-756.
- "Inventor Productivity and Firm Size: Evidence from Panel Data on Inventors," (with Jinyoung Kim and Sangjoon Lee), *Pacific Economic Review*, October 2009, 14(4), pp. 516-531.
- "Relation of Firm Size to R&D Productivity," (with Jinyoung Kim and Sangjoon Lee), *International Journal of Business and Economics*, April 2009, 8(1), pp. 7-19.
- "International Knowledge Flows: Evidence from an Inventor-Firm Matched Data Set," (with Jinyoung Kim and Sangjoon Lee), in *Science and Engineering Careers in the*

- United States: An Analysis of Markets and Employment*, (Richard Freeman and Daniel Goroff, eds.), NBER and The University of Chicago Press, 2009, pp. 321-348.
- "A General Test for Distortions in Performance Measures," (with Pascal Courty), *The Review of Economics and Statistics*, August 2008, 90(3), pp. 428-441.
- "Making Government Accountable: Lessons from a Federal Job Training Program," (with Pascal Courty), *Public Administration Review*, September-October 2007, 67(5), pp. 904-916.
- "How Much U.S. Technological Innovation Begins in Universities?" (with Jinyoung Kim), *Economic Commentary*, Cleveland Federal Reserve Bank, April 1, 2007, pp. 1-3.
- "The Scientific Labor Market and University-to-Industry Knowledge Transfer," (with Jinyoung Kim), Cleveland Federal Reserve Bank conference volume (for "Universities, Innovation, and Economic Growth," a conference organized by the Cleveland FRB November 16, 2006).
- "Labor Mobility of Scientists, Technological Diffusion, and the Firm's Patenting Decision," (with Jinyoung Kim), *The Rand Journal of Economics*, Summer 2005, 36(2), pp. 298-317.
- "Setting the Standard in Performance Measurement Systems," (with Pascal Courty and Carolyn Heinrich), *International Public Management Journal*, 8(3), 2005, pp. 1-27; winner of June Pallot Award for Best Article, *International Public Management Journal*, 2005.
- "Benchmarking Performance," (with Pascal Courty), *Public Finance and Management*, 4(3), 2004, pp. 288-316.
- "Accounting for the recent surge in U.S. Patenting: Changes in R&D expenditures, patent yields, and the high tech sector," (with Jinyoung Kim), *Economics of Innovation and New Technology*, Vol. 13, No. 6, September 2004, pp. 543-558.
- "An Empirical Investigation of Gaming Responses to Performance Incentives," (with Pascal Courty), *Journal of Labor Economics*, Vol. 22, No. 1, January 2004, pp. 23-56; winner of H. Gregg Lewis Prize for Best Article, *Journal of Labor Economics*, 2004-2005.
- "Performance Funding in Federal Agencies: A Case Study of a Federal Job Training Program," (with Pascal Courty), *Public Budgeting and Finance*, Vol. 23, No. 3, Fall 2003, pp. 22-48.
- "Dynamics of Performance Measurement Systems," (with Pascal Courty), *Oxford Review of Economic Policy*, Vol. 19, No. 2, Summer 2003, pp. 268-84.
- "Performance Incentives with Award Constraints," (with Pascal Courty), *Journal of Human Resources*, Vol. 38, No. 4, Fall 2002, pp. 812-45.
- "The Economics of Performance Incentives in Government with Evidence from a Federal Job Training Program," Chapter 4, in *Quicker, Better, Cheaper? Managing Performance in American Government*, (Dall Forsythe, ed), Rockefeller Institute Press, 2001, pp. 61-97.
- "Performance Incentives in Government: Evidence from a U.S. Job Training Program for the Economically Disadvantaged," *Centre for Market and Public Organisation Bulletin*, No. 3, June 2000, pp. 4-7.

- "Measuring Government Performance: Lessons from a Federal Bureaucracy," (with Pascal Courty), *American Economic Review Papers and Proceedings*, Vol. 87, No. 2, May 1997, pp. 383-88.
- "Using Longitudinal Data on Establishments to Analyze the Effects of Union Organizing Campaigns in the United States," (with Robert Lalonde and Kenneth Troske), *Annales d'Economie et de Statistique*, No. 41/42, Jan-June 1996, pp. 155-85.
- "Moral Hazard Under Incentive Systems: The Case of a Federal Bureaucracy," (with Pascal Courty), in *Advances in the Study of Entrepreneurship, Innovation, and Economic Growth*, (Gary Libecap, ed.), Vol. 7, 1996, pp. 157-90.

Working papers (by topic):

Physicians

- "Malpractice Reform and the Sorting of New Physicians by Medical Human Capital," (with Pinka Chatterji and Siyang Li), *NBER Working Paper Series* (No. 24401), September 2019.
- "On the Sorting of Physicians across Medical Specialties: Understanding Shortages and Growth in Specialization," (with Pascal Courty), *NBER Working Paper Series* (No. 14502), November 2008.

Economics of Science and Technology

- "Teams in R&D: Evidence from Inventor Data," (with Jinyoung Kim).
- "Inventor Mobility and Knowledge Transmission in Nanotechnology," (with Sangjoon Lee and Jinyoung Kim).
- "The Influence of University Research on Industrial Innovation," (with Sangjoon Lee and Jinyoung Kim), *NBER Working Paper Series* (No. 11447), June 2005.

Research in progress (by topic):

Economics of Higher Education and Organizations

- "Incentives in Academia," (with Pascal Courty).

Impacts of Federal R&D Funding on Employment and Scientific Output

- "Booms and Busts in NIH Funding and their Effects on the Health Sciences," (with Erling Barth, Richard Freeman, and Andrew Wang).

Measuring the returns to R&D & Economic Impact of Science & Engineering Workers

- "Continuing Applications and Patent Production Function Estimation," (with Na Cheng).
- "Pathways to production: Knowledge flows from universities to industry," (Erling Barth, James C. Davis, Andrew Wang, and Sifan Zhou).
- "R&D Spillovers and Labor Mobility," (with Erling Barth, James C. Davis, Richard Freeman and Andrew Wang).

Aging and Innovation

"Team Age, Innovativeness, and Impact: Evidence from Big Data on Biomedical Scientists," (with Huifeng Yu, Matthew B. Ross, Joseph Staudt, Bruce A. Weinberg).

Fellowships, grants, and awards:

National Science Foundation Grant (P.I.), "Economic Impact of Investments in R&D and Science and Engineering Workers," NSCE-1918445, 2019-2022 (\$548,099)

National Science Foundation Grant (P.I.), "Labor Market Outcomes of STEM PhDs: Measuring Career Earnings and Occupation Trajectories," DGE-1661278, 2017-2020 (\$499,452)

New York University subcontract (P.I.), "Pathways from University Research to Productive Careers," 2015-2016 (\$25,000)

National Institute on Aging (Senior Investigator), "Innovation in an Aging Society," P01 AG039347, 2013-2018 (\$1,361,791)

National Institute on Aging (Senior Investigator), "Supplement: Innovation in an Aging Society," P01 AG039347, 2016-2017 (\$158,532)

National Science Foundation Grant (P.I.), "Doctoral Dissertation Research: R&D Agglomeration", NCSE-1324282, 2013-2014 (\$15,000)

Social Sciences and Humanities Research Council of Canada Grant (Collaborator), "Faculty Salaries: Is there a trade-off between Equal Pay and Academic Excellence?" 2011-2014 (CAD\$60,000)

National Science Foundation Grant (Co-P.I.), "DAT: Scientists and Engineers as Agents of Technological Progress: Measuring the Returns to R&D and the Economic Impact of Science & Engineering Workers," SBE-0915670, 2009-2014 (\$399,998)

National Science Foundation Grant (Co-P.I.), "Assessing the Impact of Federal Stimulus R&D Funding on Employment and Scientific Output," SBE- 0942634, 2009-2010 (\$190,000)

National Science Foundation Grant (P.I.), "Collaborative Research: Workshop on Linking NSF SED/SDR Data to Scientific Productivity Data," SRS-0725467, 2007-2008 (\$12,929)

June Pallot Award for Best Article, *International Public Management Journal*, 2005

H. Gregg Lewis Prize for Best Article, *Journal of Labor Economics*, 2004-2005

Faculty Research Assistance Program (B) Grant, University at Albany, SUNY, 2002

Faculty Research Assistance Program (A) Grant, University at Albany, SUNY, 2000

Young Economist Award, Royal Economics Society, 1999

Lynde and Harry Bradley Foundation Fellowship, 1990-1992

The University of Chicago Fellowship, 1988-1992

Conference and other presentations:

IZA World Labor Conference, Berlin, Germany (June, 2018). Presented "Last Place: The Intersection between Ethnicity, Gender, and Race in Biomedical Authorship."

- Society of Labor Economists meetings, Raleigh, North Carolina (May, 2017). Presented "Team Age, Innovativeness, and Impact: Evidence from Big Data on Biomedical Scientists."
- American Economic Association meetings, Chicago, Illinois (January, 2017). Presented "R&D Spillovers and Labor Mobility." Organized session "R&D Agglomeration, Spillovers, and Recombination Mechanisms and Implications for Productivity and Growth."
- Atlanta Conference on Science and Innovation Policy, Atlanta, Georgia (September, 2015). Presented "Teamwork in Science: Evidence from Patent Data."
- Society of Labor Economists meetings, Montreal, Canada (September, 2015). Presented "Teamwork in Science: Evidence from Patent Data."
- Global TechMining Conference, Atlanta, Georgia (September, 2015). Panelist, "Economic Perspectives on Technical Emergence."
- National Bureau of Economic Research, Workshop on Academic Collaboration, Cambridge, Massachusetts (June, 2013). Presented "Collaboration in Biomedical Science."
- Society of Labor Economists meetings, Boston, Massachusetts (May, 2013). Presented "On the Sorting of Physicians across Medical Specialties: Understanding Shortages and Growth in Specialization."
- National Bureau of Economic Research, Productivity Lunch Seminar, Cambridge, Massachusetts (March, 2013). Presented "NIH Research Funding and Regional Economic Impacts."
- Nanobank Research Conference "The Rise of Nanotechnology," Cambridge, MA (May 2011). Presented "Who are the R&D Revolutionaries? Evidence from Nanotechnology."
- National Bureau of Economic Research Summer Institute Conference, Productivity and Development of American Economy Meetings, Cambridge, Massachusetts (July, 2010). Presented "Teamwork in Science: Evidence from Patent Data."
- National Bureau of Economic Research, Productivity Lunch Seminar, Cambridge, Massachusetts (May, 2010). Presented "Booms and Busts in NIH Funding and their Effects on the Health Sciences."
- Meeting titled "How Can We Maintain Biomedical Research and Development at the End of ARRA?" funded by The Alfred P. Sloan Foundation and the Howard Hughes Medical Institute, Banbury Center, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York (April, 2010). Presented "How Can PIs Manage the End of ARRA? Comments."
- Fifth IZA Conference on Labor Market Policy Evaluation, Washington D.C. (October 2009). Presented "Curbing Cream-Skimming: Evidence on Enrolment Incentives."
- Midwest Economic Association Meetings, Cleveland, OH (March 2009). Presented "Incentives in Academia."
- Nanobank Research Conference, Cambridge, MA (May 2008). Presented "Inventor Mobility and Knowledge Transmission in Nanotechnology."
- NSF Conference on Linking NSF Scientist and Engineering Data to Scientific Productivity Data, Arlington, Virginia (February, 2008). Organizer.
- Asian Conference 2007 on Applied Micro-Economics/Econometrics, Seoul, Korea (December, 2007). Presented "Incentives in Academia."

- IZA/CEPR European Summer Symposium in Labour Economics (ESSLE), Buch am Ammersee, Germany (September, 2007). Presented "Incentives in Academia."
- Society of Labor Economists meetings, Chicago, Illinois (May, 2007). Presented "The Influence of University Research on Industrial Innovation," "International Knowledge Flows: Evidence from an Inventor-Firm Matched Data Set," and "Inventive Activity and Scholarship in Academe: Complements or Substitutes?"
- Association for Public Policy Analysis and Management Research Conference, Washington, D.C. (November, 2006). Presented "The Influence of University Research on Industrial Innovation" and "A General Test for Distortions in Performance Measures."
- Cleveland Federal Reserve Bank, "Universities, Innovation, and Economic Growth" Conference, Cleveland, OH (November, 2006). Presented "The Influence of University Research on Industrial Innovation."
- National Science Foundation, "Using Human Resource Data from Science Resources Statistics, National Science Foundation, To Study the Science and Engineering Workforce" Conference, Washington, D.C. (October, 2006). Presented "Matching Data."
- National Bureau of Economic Research Summer Institute, "Academic Science and Entrepreneurship: Dual Engines of Growth?" Conference, Santa Fe, NM (April, 2005). Presented "The Influence of University Research on Industrial Innovation."
- WIPO-OECD Workshop on the Use of Patent Statistics, Geneva, Switzerland (October, 2004). Presented "Labor Mobility of Scientists, Technological Diffusion, and the Firm's Patenting Decision." Panelist in roundtable discussion "Where to from here? Future priorities for patent statistics and analysis."
- National Bureau of Economic Research Summer Institute, "Academic Science and Entrepreneurship: Dual Engines of Growth?" Pre-conference, Cambridge, Massachusetts (July, 2004). Presented "The Influence of University Research on Industrial Innovation: Evidence from the Pharmaceutical and Semiconductor Industries."
- Association for Public Policy Analysis and Management Research Conference, Washington, D.C. (November, 2003). Presented "Inventive Activity and Scholarship in Academe: Complements or Substitutes?"
- National Bureau of Economic Research Summer Institute Conference, Productivity/Organizational Economics/Industrial Organization Joint Meeting, Cambridge, Massachusetts (July, 2003). Presented "Dynamics of Performance Measurement Systems."
- System Dynamics Society 21st International Conference, New York, New York (July, 2003). Presented "Dynamics of Performance Measurement Systems in JTPA: Exploring how learning processes and rule-following preferences influence changes in organizational rule systems."
- North American Econometric Society meetings, Chicago, Illinois (June, 2003). Presented "Labor Mobility of Scientists, Technological Diffusion, and the Firm's Patenting Decision."
- Association for Public Policy Analysis and Management Research Conference, Washington, D.C. (November, 2002). Presented "Making Government Accountable:

- Some Evidence on the Problem of Measuring Performance” and “Performance Incentives and Organizational Behavior: Evidence from a Federal Bureaucracy.” Society of Labor Economists meetings, Baltimore, Maryland (May, 2002). Presented “The Mobility of Research Personnel and Technological Spillovers.”
- Western Economic Association meetings, San Francisco, California (July, 2001). Presented “Performance Incentives with Award Constraints.”
- North American Econometric Society meetings, College Park, Maryland (June, 2001). Presented “Performance Incentives with Award Constraints.”
- National Bureau of Economic Research Productivity Conference, Cambridge, Massachusetts (March, 2001). Presented “Labor Mobility of Scientists, Technological Diffusion, and the Firm’s Patenting Decision.”
- Southern Economic Association meetings, special session honoring James J. Heckman, 2000 Nobel Laureate in Economics, invited paper (November, 2000). Presented “The Market for Scientists and the Recent Surge in Patenting.”
- Midwest Economic Association meetings, Chicago, Illinois (March, 2000). Presented “Explaining the Recent Surge in Patenting.”
- National Academy of Sciences Conference, "Devising Incentives to Promote Human Capital," Irvine, California (December, 1999). Presented “Designing Optimal Award Functions: Theory and Application to a Government Organization.”
- Centre for Market and Public Organisation, featured speaker at the one-day workshop, "Incentives in Public Sector Organisations," University of Bristol, Bristol, England (November, 1999). Presented “An Empirical Investigation of Gaming Responses to Performance Incentives.”
- North American Econometric Society meetings, Madison, Wisconsin (June, 1999). Presented “Performance Incentives and Bureaucratic Behavior: Evidence from a Federal Bureaucracy.”
- Society of Labor Economists meetings, Cambridge, Massachusetts (May, 1999). Presented “Performance Incentives and Bureaucratic Behavior: Evidence from a Federal Bureaucracy.”
- Midwest Economic Association meetings, Nashville, Tennessee (March, 1999). Presented “Performance Incentives and Bureaucratic Behavior: Evidence from a Federal Bureaucracy.”
- Royal Economic Society meetings, Nottingham, England (March, 1999). Presented “Performance Incentives and Bureaucratic Behavior: Evidence from a Federal Bureaucracy.”
- Midwest Economic Association meetings, Chicago, Illinois (March, 1998). Presented “An Empirical Investigation of Gaming Responses to Performance Incentives.”
- American Economic Association meetings, New Orleans, Louisiana (January, 1997). Presented “Measuring Government Performance: Lessons from a Federal Bureaucracy.”
- Seventh Karl Eller Center Business/Academic Dialogue, University of Arizona (May, 1995). Presented “Moral Hazard under Incentive Schemes: The Case of a Federal Bureaucracy.”
- Western Economic Association meetings, Lake Tahoe, California (June, 1993). Presented “Bureaucratic Incentives and Behavior: The Case of JTPA.”

Invited lectures and presentations in academic seminars

Binghamton University; Bocconi University; Case Western University; Higher School of Economics (Moscow, Russia); Institute for the Study of Labor (Bonn, Germany); European University Institute (Florence, Italy); London Business School; Milken Institute; National Bureau of Economic Research (Cambridge, MA); Ohio State University; Rensselaer Polytechnic Institute, Union College; University at Albany, SUNY; University at Buffalo, SUNY; University of Arizona; University of Bristol; University of British Columbia; University of Chicago; University of Maryland; University of Rochester; W.E. Upjohn Institute.

Professional service:

Referee (selected)

American Economic Journal: Applied Economics; British Journal of Industrial Relations; Contemporary Economic Policy; Economic Journal; Economics Letters; European Economic Review; Games and Economic Behavior; Industrial Innovation; International Journal of Manpower; International Monetary Fund Staff Papers; Journal of Economics and Management Strategy; Journal of Human Capital; Journal of Labor Economics; Journal of Law, Economics, and Organization; Journal of Policy Analysis and Management; Journal of Political Economy; Journal of Politics; Journal of Public Administration Research and Theory; Labour Economics; Management Science; Managerial and Decision Economics; National Institutes of Health; National Science Foundation; Research Policy; Review of Economics and Statistics; Social Sciences and Humanities Research Council of Canada; Strategic Management Journal

Member, Review Panel, National Science Foundation, 2019

Member, Review Panel, National Science Foundation, 2012

Member, Review Panel, National Institute of General Medical Sciences, 2012

Member, Study Group, National Institute of General Medical Sciences, 2011

Member, Human Resources Experts Panel, Division of Science Resources Statistics, National Science Foundation, 2006-2009

Professional associations:

American Economic Association
 Association for Public Policy Analysis and Management
 Econometric Society
 Midwest Economic Association
 Society of Labor Economists

Teaching:*Undergraduate Courses*

Economics of Science and Technology (Albany, Economics, ECO480/580)
 Environmental Economics (Albany, Economics, ECO 385)
 Intermediate Microeconomics (Buffalo, Economics)
 Labor Economics (Albany, Economics, ECO 370)
 Organizational Economics (Buffalo, Economics)

Graduate Courses

Economics of Science and Technology (Albany, Economics, ECO480/580)
 Economic and Financial Theory (Albany, Public Admin. & Policy, PhD, PAD 703)
 Labor Economics (Albany, Economics, PhD, ECO 802)
 Markets and Market Policy (Harvard, Kennedy School, MPP, API 101)
 Microeconomic Theory (Harvard, Kennedy/FAS/Business, PhD, API-112/Econ 2020b/HBS 4011)
 Performance Measurement and Contracting in Government (Albany, Public Admin. & Policy, MPA/MPP, PAD 532)
 Principles of Public Economics (Albany, Public Admin. & Policy, MPA/MPP, PAD 503)
 Quantitative Methods (Albany, Public Admin. & Policy, PhD, PAD 705)
 Science and Innovation Policy (Albany, Public Admin. & Policy, MPA, PhD, PAD 649)

Case method training: Attended week-long “Case Teaching Workshop,” conducted by Electronic Hallway, University of Washington, Seattle, Washington, Summer 1999.

Consulting and other activities:

Consultant, Harvard Medical School, Harvard Catalyst, 2009-2010
 Consultant, Webster Consulting Group, Inc., management consultants to the pharmaceutical, biotechnology, and medical industries (Bethlehem, PA), 2000-2007
 Consultant, Parta Corporation (Agoura, CA), 1990, 1994
 Workers' Compensation Claims Advisor, J.H. Askins, Inc. (San Francisco, CA), 1987