Amazon
Building 99, Office 4618
Seattle, WA 98052
+1.425.703.3085(o) +1.858.531.5170 (c)
jlariv@amazon.com

Jacob Sean LaRiviere
Director of Economics & Data Science
Amazon

Director of Economics & Data Science, Amazon
2021-current
- Lead development and measurement of holistic ecosystem-based view of Amazon.com sellers with cross-functional and cross-organization teams.
- Partner across organizations to build new products
- Lead team of economists, data scientists and engineers specializing in scalable econometrics, experimentation, and machine learning.

Senior Principal Research Manager, Office of the Chief Economist, Technology & Research, Microsoft
2019-2021 [Senior Principal Research Manager]
2017-2019 [Principal Research Manager]
2015-2017 [Principal Researcher]
- Lead team of economists, data scientists and engineers specializing in econometrics, experimentation, machine learning, algorithmic recommendations, pricing & forecasting.
- Source and execute cross-functional & cross-organization research projects throughout Microsoft
- Collaboratively communicate findings with executive and rank and file stakeholders
- Co-ideate product innovations with product group leadership
- Drive material revenue increases and costs savings via tactical and strategic insights and scalable tool development
- Member of Game Pass and Gaming Data Services leadership teams within Xbox
- Advance economics and data science via published insights and methodological improvements

Tenure Track Assistant Professor, Department of Economics, University of Tennessee
2010-2015
- Source and publish economics and applied statistics research projects
- Teach undergraduate & PhD students

CURRENT AFFILIATIONS:

2020-current   Coeditor, *Journal of the Association of Environmental and Resource Economists*
2016-current   Affiliate Faculty, University of Washington, Department of Economics
2015-current   Adjunct Assistant Professor, University of Tennessee, Department of Economics
2011-current   Research Fellow, Howard Baker Jr. Center for Public Policy, University of Tennessee

PREVIOUS AFFILIATIONS:

2018-2019   Affiliate Faculty, University of Washington, Evans School of Public Policy

Fall 2013   Visiting Assistant Professor, University of Washington, Department of Economics
2010-2015   Assistant Professor, University of Tennessee, Department of Economics

EDUCATION:

Ph.D., University of California, San Diego, Economics, 2010
M.A., University of California, San Diego, Economics 2006
B.A., University of California, Berkeley, Economics, 2003

RESEARCH FIELDS:

Primary Fields: Industrial Organization, Behavioral Economics, Public Economics, Machine Learning
Secondary Fields: Information and Uncertainty, Applied Microeconomics, Applied Theory

PUBLICATIONS:

[22] LaRiviere, J. and Lyu, X. (2022) Transmission Constraints, Intermittent Renewables and Welfare, *Journal of Environmental Economics and Management*, *forthcoming.*

[21] Kannan, A. LaRiviere, J. and McAfee, P. (2021) Characterizing the Usage Intensity of Public Cloud, *Transactions on Economics and Computation,* 9(3): 1-18*.*

[20] Cunningham, B., LaRiviere, J. and Wichman, C. (2021) Clustering for Control: Estimating Impacts of Water Infrastructure Failure on Traffic, *Economic Inquiry,* 59(3): 1417-1439*.*

[19] Chang, P., LaRiviere, J., and Thorpe, J. (2021) Time, Comfort and Preferences for Shared Transit, *Journal of the Association of Environmental and Resource Economists,* 8(2):441-442.

[18] Johnson, R., LaRiviere, J. and Wolff, H. (2019) Fracking, Coal and Air Quality*, Journal of the Association of Environmental and Resource Economists,* 6(5): 1001-1037.

[17] Holladay, S., LaRiviere J., Novgorodsky, D. and Price, M. (2019) Prices versus Nudges: What Matters for Search Versus Purchase of Energy Investments? *Journal of Public Economics,* 172: 151-173.

[16] LaRiviere, J., McMahon, M., and Roush, J. (2019) Second Best Prioritization of Environmental Cleanups, *Environmental and Resource Economics,* 72(4): 1225-1249*.*

[15] Holladay, S. and LaRiviere, J. (2018) How Does Welfare from Load Shifting Electricity Policy Vary with Market Prices? Evidence from Bulk Storage and Electricity Generation, *Energy Journal,* 39(6).

[14] Simpson, K., Czajkowski, M., Hanley, N., and LaRiviere, J. (2018) What is the Causal Effect of Knowledge on Preferences? *Resource and Energy Economics,* 54(1):69-89*.*

[13] Carson, R. and LaRiviere, J. (2018) Structural Uncertainty and Pollution Control: Optimal Stringency with Unknown Pollution Sources*, Environmental and Resource Economics,* 71(2): 337-355*.*

[12] LaRiviere, J., McMahon, M., and Neilson, W. (2018) Agency Problems and Dividend Policies: Experimental Evidence, *Management Science,* 64(7): 3108-3128.

[11] LaRiviere, J., Kling, D., Sanchirico, J., Sims, C., and Springborn, M. (2018) The Treatment of Uncertainty and Learning in the Economics of Natural Resource and Environmental Management, *Review of Environmental Economics and Policy,* 12(1): 92-112.

[10] Chu, Y., Holladay, S., and LaRiviere, J. (2017) Opportunity Cost Pass-through from Fossil Fuel Market Prices to Procurement Costs of the U.S. Power Producers, *Journal of Industrial Economics,* 65(4): 842-871.

[9] Holladay, S. and LaRiviere, J. (2017) The Impact of Cheap Natural Gas on Marginal Emissions from Electricity Generation and Implications for Energy Policy, *Journal of Environmental Economics and Management, 85: 205-227.*

[8] Jacobsen, M., LaRiviere, J., and Price, M. (2017) Public Policy and the Private Provision of Public Goods Under Heterogeneous Preferences, *Journal of the Association of Environmental and Resource Economists,* 4(1): 243-280.

[7] Boettiger, C., Bode, M., Sanchirico, J., LaRiviere, J., Hastings, A. and Armsworth, P. (2016) Optimal Stochastic Resource Management with Costly Policy Adjustment. *Ecological Applications,* 26(3): 808-817.

[6] Czajkowski, M., Hanley, N., and LaRiviere, J. (2016). Controlling for the Effects of Information in a Public Goods Discrete Choice Model. *Environmental and Resource Economics.* 63(3): 523-544.

[5] LaRiviere, J. and Wolff, H. (2015). The Power of the Little Blue Pill: Innovations and Implications of Lifestyle Drugs in an Aging Population. *Economic Inquiry.* 53(1): 540-556.

[4] Czajkowski, M., Hanley, N., and LaRiviere, J. (2015). The Effects of Experience on Preferences: Theory and Empirics for Environmental Public Goods. *American Journal of Agricultural Economics*, 97(1): 333-351.

[3] LaRiviere, J., Czajkowski, M., Hanley, N., Aanesen, M., Falk-Petersen, J. and Tinch, D. (2014). The Value of Familiarity: Effects Knowledge and Objective Signals on Willingness to Pay for a Public Good. *Journal of Environmental Economics and Management*, 68(2): 376-389.

[2] Cozad, M. and LaRiviere, J. (2013). Fuel Price Changes and the Timing of Household Driving Decisions. *Journal of Environmental Economics and Management*, 65(2): 194-207.

[1] Fissel, B., Gilbert, B., and LaRiviere, J. (2013). Technology Adoption and Diffusion with Uncertainty in a Commons. *Economics Letters*, 120(2): 297-301.

WORKING PAPERS:

Demand Estimation with Missing Data: An Application to Cloud Computing
Joint with Shuang Wang and Aadharsh Kannan (revisions requested)

Additionality, Mistakes and Energy Efficiency Investment
Joint with Ben Gilbert and Kevin Novan (revisions requested)

Efficiency Gains from Flexible Scheduling Policies in the Cloud
Joint with Ludwig Dierks, Aadharsh Kannan, and Thomas Moscibroda

The Welfare Effects of Subscription for Digital Goods: The Case of Video Games
Joint with Carol Hengheng Lu

OTHER PUBLICATIONS:

[Be Careful When Interpreting Predictive Models in Search of Causal Insights](#), *Towards Data Science,*
Eleanor Dillon, Jacob LaRiviere, Scott Lundberg, Jonathan Roth and Vasilis Syrgkanis

Crosta, P., LaRiviere, J., Soloway, S. (2019), Developing Successful Open Source Products. *Microsoft Journal of Applied Research,* 11: 145-157.

Collins, M., LaRiviere, J., Mandal, D., Wise, M., and Taddy, M (2017), Dangers in Estimating Causal Impacts: Application to Bots. *Microsoft Journal of Applied Research,* 7: 45-60.

[How Better Accounting Can More Cheaply Reduce Carbon Emissions](#), *Howard Baker Jr. Center Policy Brief*, August 2016. Jacob LaRiviere, Gavin McCormick and Sho Kawano

[Where Predictive Analytics is Having the Biggest Impact](#). *Harvard Business Review* online, May 2016, Jacob LaRiviere, Preston McAfee, Justin Rao, Vijay K. Narayanan, and Walter Sun

PATENT:

Patent Number 11232501. Machine Learning for Combinatorial Decisioning. Assignee: Microsoft Technology Licensing. January 25, 2022.

GRANTS & AWARDS:

2019	Buechel Award for Outstanding Contribution to the Undergraduate Program, Department of Economics, University of Washington. C+E Marketing Boost Award (Best collaboration, Azure), C+E Marketing Spot Award (Best external contributor, Azure)
2015-2016	Department of Homeland Security, *The Economic Value of Water Infrastructure Resilience*, Principal Investigator ($235,020)
2012	Baker Center Research Grants ($20,000 and $11,000)
2011	University of Tennessee SARIF Grant ($11,000)
2010	Best Undergraduate Course Teaching, UCSD

PROFESSIONAL PRESENTATIONS:

2019 AEA Annual Meeting, NBER Economics of Digitization Workshop
2018 World Congress for Environmental and Resource Economists, ACM Sigmetrics, National Association of Business Economists
2016 5th Annual Conference for Environmental and Resource Economists.
2015 4th Annual Conference for Environmental and Resource Economists.
2014 World Congress for Environmental and Resource Economists, NBER EEE Summer Institute.
2013 AEA Annual Meeting, NBER EEE Summer Institute, 3rd Annual Conference for Environmental and Resource Economists, Alberta, Canada
2012 2nd Annual Conference for Environmental and Resource Economists, Asheville, NC.
2011 9th Annual Conference for Industrial Organization Society, Boston, MA. 1st Annual Conference for Environmental and Resource Economists, Seattle, WA. NAAFE Conference, Honolulu, HI. WEAI Conference, San Diego, CA.
2010 World Congress for Environmental and Resource Economists, Montreal, Canada. International Institute for Fisheries Economists and Trade, Montpellier, France.
2008 European Association of Environmental and Resource Economists 16th Annual Conference, Gothenburg, Sweden.

SEMINAR PRESENTATIONS:

2019 TWEEDS, Energy Applications of Data Science at the Baker Center
2018 Colorado Environmental & Resource Economics Workshop, Heartland Environmental & Resource Economics Workshop at UIUC, FAO, World Bank, Federal Reserve Board.
2017 Penn State, Yale, Vanderbilt.
2016 Network Economics and Game Theory Symposium, UCLA.
2015 Oregon State University, University of Wyoming, Resources for the Future, University of California at Davis.
2014 Colorado Environmental and Resource Economics Workshop.
2013 Monash University, UC San Diego, UNC-Greensboro, University of Washington.
2012 TREE Seminar (NC State, RTI and Duke), Universidad de Alicante, Energy Institute at Haas.
2011 University of Minnesota, Colorado Environmental and Resource Economics Workshop.
2010 12th Occasional California Workshop on Environmental and Resources Economics, Universitat Autonoma de Barcelona, Tufts University, Portland State University, University of Tennessee, University of Oregon.
2009 University of South Carolina, Colorado Environmental and Resource Economics Workshop, University of California at San Diego.

INVITED WORKSHOPS

2011-2015: NIMBioS Working Group on Pretty Darn Good Control: Extensions of Optimal Control for Ecological Systems
2013: Mathematical Biosciences Institute, Ohio State University, Sustainable Management of Living Natural Resources.
2008: Workshop for Technical Change in Renewable Resource Economics, Helsingor, Denmark

SERVICE & CONSULTING:

Diversity and Inclusion Council for Microsoft Technology and Research, National Oceanic and Atmospheric Association, City of Knoxville, World Bank, US Department of Transportation, Federal Aviation Administration. Advisory Board member for National Institute of Mathematical and Biological Synthesis. University of Tennessee Microeconomics Qualifying Committee 2011-2015. Co-founder Baker Center Energy and Environment Forum. Ad Hoc reviewer for Sloan Foundation and National Science Foundation. The Prison Scholar Fund advisor. 2017 Microsoft Digital Economics Conference Organizer. Program Committee for AERE Annual Summer Conference & ACM Conference on Economics and Computation. Microsoft Journal of Applied Research editor.

PROFESSIONAL AFFILIATIONS:

AERE, AEA.

REFEREEING:

American Economic Journal: Economic Policy, American Journal of Agricultural Economics, Ecological Applications, Econometrica, Economic Inquiry, Economics Letters, Environmental and Resource Economics, Environmental Science and Technology, European Economic Review, Journal of the Association of Environmental and Resource Economists, Journal of Behavioral and Experimental Economics, Journal of Economic Behavior and Organization, Journal of Economic Psychology, Journal of Environmental Economics and Management, Journal of Environmental Management, Journal of Public Economics, Journal of Political Economy, Marine Resource Economics, Natural Resource Modeling, Resource and Energy Economics, SIAM Journal on Applied Mathematics.

TEACHING:

University of Washington
Economics 504: Executive Economics (Masters)
Economics 404: Industrial Organization and Data Science (Undergraduate)
Economics 487: Data Science and Pricing (Undergraduate)
Economics 399: Independent Study

Microsoft
Research Week: Econometrics and Pricing
Research Week: Causal Inference and Pricing
Data Science Summer School

University of Tennessee
Economics 678: Environmental Economics and Policy (PhD)
Economics 698: Interdisciplinary Research & Energy and Environmental Policy (PhD)
Economics 581: Mathematical Tools for Economists (PhD)
Economics 482: Introduction to Mathematical Economics (Undergraduate)
Economics 463: Environmental Economics (Undergraduate)
Economics 312: Managerial Economics (Undergraduate)

ADVISING:

PhD: Yin Chu, 2015, Zhongnan University of Economics and Law, Co-Chair
           Matt McMahon, 2015, University of Arkansas, Little Rock, Committee
           Sangsoo Park, 2015, Korea Institute of Industrial Economics and Trade, Committee
           Rachel Fovargue, 2017, Committee, Post-Doc, University of Oklahoma
Masters: Sharon Watson (Spring 2012, Committee)
Honors Thesis: Robert Davis (Spring 2013), Zach Hethmon (Spring 2014), Hannah Oakley (Fall 2014)