

Keith Waters

E-MAIL keith.waters@asu.edu • WEB keith-waters.com, mdurbaneconomics.com

EDUCATION

Doctor of Philosophy

George Mason University – Public Policy (Regional Development) 2018

Master of Arts

University of North Carolina at Charlotte – Geography (Urban Analysis) 2013

Bachelor of Arts

Western Michigan University – Economics, Geography, Mathematics 2010

EXPERIENCE

ASU School of Complex Adaptive Systems

Postdoctoral Researcher, Summer 2021 – Present

GMU Center for Regional Analysis

Senior Research Associate, Fall 2019 – Present

Adaptive Regional Solutions

Founder, Fall 2019 – Present

Regional Economic Modeling Inc.

Economist, Summer 2019 – Fall 2019. Amherst, MA

GMU Center for Regional Analysis

Senior Research Associate, Winter 2019 – Summer 2019

GMU Center for Regional Analysis & Stephen S. Fuller Institute

Graduate Research Assistant, 2013 – 2019

U.S. Economic Development Administration

Intern, Winter 2015

U.S. Economics and Statistics Administration

Intern, Summer 2014

UNC Charlotte Urban Institute

Graduate Research Assistant, 2011 - 2013

Northwest Michigan Council of Governments

Regional Planning Intern, 2011

W.E. Upjohn Institute for Employment Research

Regional Economics Research Intern, Summer 2010

W.E. Upjohn Center for Geographical Change

G.I.S. Technician, 2008 – 2010

PUBLICATIONS – PEER REVIEWED

- Waters, Keith, and Shatters, T. Shade. "Impacts of Skill Centrality on Regional Economic Productivity and Occupational Income." *Complexity*, 1-7, 2022.
- Shatters, T. Shade, Siebert Holger, Bastian Alm, and Waters, Keith. "Industry interconnectedness and regional economic growth in Germany." *Urban Science*, 22, 1-12, 2022.
- Shatters, T. Shade, and Waters, Keith. "Inferring networks of interdependent labor skills to illuminate urban economic structure." *Entropy*, 22, 1-12, 2020.

REPORTS – SELECTED

- Clower, Terry, and Keith Waters. "The Impact of Prohibiting Pocket-Listings on the NVAR Region." *Center for Regional Analysis*, George Mason University. Arlington, VA, April 2020.
- Clower, Terry, and Keith Waters. "Economic and Development Impacts of New Natural Gas Utility Services in Front Royal, Virginia." *Center for Regional Analysis*, George Mason University. Arlington, VA, June 2019.
- Waters, Keith. "The Impact of Changing Federal Procurement Outlays on Selected Sub-Sectors in the Washington Region's Economy: Custom Computer Programming Services." *Stephen S. Fuller Institute*, George Mason University. Arlington, VA, November 2017.
- Waters, Keith. "The Impact of Changing Federal Procurement Outlays on Selected Sub-Sectors in the Washington Region's Economy: Research and Development in the Social Sciences and Humanities." *Stephen S. Fuller Institute*, George Mason University. Arlington, VA, November 2017.
- Waters, Keith. "The Impact of Changing Federal Procurement Outlays on Selected Sub-Sectors in the Washington Region's Economy: Other Management Consulting Services." *Stephen S. Fuller Institute*, George Mason University. Arlington, VA, November 2017.
- Waters, Keith. "Federal Procurement Spending in the Washington Region: 2008 – 2016." *Stephen S. Fuller Institute*, George Mason University. Arlington, VA, 2017.
- Waters, Keith. "Fortune 500 Companies in the Washington Metropolitan Area." *Center for Regional Analysis*, George Mason University. Working Paper No. 2015-01. Arlington, VA, 2015.
- Waters, Keith. "The Potential Impact of the Panama Canal Expansion on the Port of Virginia." *Center for Regional Analysis*, George Mason University. Working Paper No. 2014-01. Arlington, VA, 2014.

PRESENTATIONS - CONFERENCES

- Rural Economic Tightness: From Rural to Populous Regions. *Southern Regional Science Association*. Virtual, April 6, 2021.
- Skills-Approximate Occupations: Using Networks to Guide Jobs Retraining. *Western Regional Science Association*. Virtual, February 24, 2021.
- Inter-Regional Migration Networks: Social Network Analysis of an Agent-Based Model of a System of Cities. *North American Regional Science Council*. Virtual, November 12, 2020.
- Geographic Location of Cities: An Agent-Based Model of Inter-Regional Job Search. *American Association of Geographers Annual Meeting*. Denver, CO, April 6, 2020.
- Firm Formation and Regional Labor Allocation. *Eastern Economic Association Annual Conference*. Eastern Economic Association, New York, NY, March 1, 2019.
- Poster Presentation: Knowledge Spillovers and Labor Agglomeration. *International Congress on Agent Computing*. George Mason University, Fairfax, VA, November 29, 2016.

Human Capital Agglomeration. *PhD Workshop*. George Mason University, Arlington, VA, October 24, 2016.

Inter-Metropolitan Migration Networks in the United States. *American Association of Geographers Annual Meeting*. San Francisco, CA, March 29, 2016.

Inter-Metropolitan Migration Networks in the United States. *Where I Fare Well, There is My Home: Migration, Past and Present Graduate Conference*. Duke University, Durham, NC, March 4, 2016.

PRESENTATIONS – INVITED TALKS

Washington Area Economy: Performance and Outlook. *Greater Washington Association for Financial Professionals*. Webinar, February 9, 2022.

Regional Economic Snapshot. *Leadership Alexandria*. November 19, 2021

State of the Maryland Real Estate Market. *Apartment and Office Building Association of Metropolitan Washington*. Webinar, January 11, 2021.

State of Virginia Multifamily and Commercial Housing Market. *Apartment and Office Building Association of Metropolitan Washington*. Webinar, December 17, 2020.

Washington Area Economy: Performance and Outlook. *Greater Washington Association for Financial Professionals*. Webinar, September 9, 2020.

Prince William County and the Greater Washington Area: Recent Trends and Outlook. *Prince William Economic Development Office and the Prince William County Chamber of Commerce*. Strategic Planning Roundtable, December 18, 2019.

Washington Area Economy: Performance and Outlook. *Financial Planning Association of the National Capital Area*. Luncheon, December 5, 2019.

The Economics of Universal Healthcare: Case Study of Vermont Public Option. *REMI*. Webinar, August 27, 2019. www.remi.com/event/the-economics-of-universal-healthcare-case-study-of-vermont-public-options-keith-waters-remi-recording/

Washington Area Economy: Performance and Outlook. *Greater Washington Association for Financial Professionals*. Webinar, February 13, 2019.

WORKS IN PROGRESS

Waters, Keith, and Shutters, Shade. "Impacts of Skills Centrality on Regional Economic Productivity and Occupational Income." Accepted.

Waters, Keith, and Shutters, Shade. "Skills-Approximate Occupations: Using Networks to Guide Jobs Retraining." *SSRN Electronic Journal*, 3759962, 1-12, <https://ssrn.com/abstract=3759962>, 2021.

Shutters, Shade, and Waters, Keith. "Industrial Structure and a Tradeoff Between Productivity and Resilience." *SSRN Electronic Journal*, 3702545, 1-20, <https://ssrn.com/abstract=3702545>, 2020.

Waters, Keith. "Firm Formation and the Regional Allocation of Labor."

Irving, Jacob; Waters, Keith; Clower, Terry; and Rifkin, Will. "Pandemic Regional Recovery Index."

Waters, Keith, and Shutters, Shade. "Regional Economic Tightness from Rural to Populous Regions."

GRANT APPLICATIONS

National Science Foundation SBE Postdoctoral Fellowship, 2019. Keith Waters (Principal Investigator), and Robert Axtell (Sponsoring Scientist). Inter-Regional Economic Dynamics: An Agent-Based Model of a System of Cities. Amount: \$138,000. Result: Declined.

TEACHING EXPERIENCE

- Instructor**, Spring 2021. George Mason University. POGO 511 - Intro Data Analysis for Policy and Government
- Instructor**, Spring 2019. George Mason University. POGO 511 - Intro Data Analysis for Policy and Government
- Guest Lecturer**, Fall 2019. George Mason University. GOVT 464 - Urban Economic Development in the Smart Growth Era
- Guest Lecturer**, Spring 2019. George Mason University. PUBP 602 – Regional Economic Development: Strategies and Applications
- Teaching Assistant and Guest Lecturer**, Spring 2019. George Mason University. PUBP 754 - GIS and Spatial Analysis for Public Policy
- Guest Lecturer** Spring 2019. George Mason University. PUBP 804 – Multivariate Statistical Analysis
- Guest Lecturer**, Fall 2018. George Mason University. GOVT 464 - Urban Economic Development in the Smart Growth Era
- Guest Lecturer**, Fall 2018. George Mason University. POGO 611 – Advanced Data Analysis for Policy and Government
- Co-Instructor**, Summer 2017. George Mason University. PUBP 555 - Economics Math Workshop
- Guest Lecturer**, June 2017. The World Bank SURR-MENA GIS Learning Weeks. Spatial Econometrics and Programming for G.I.S.
- Co-Instructor**, January 2017. George Mason University. PUBP 555 - Economics Math Workshop
- Teaching Assistant**, Spring 2017. George Mason University. PUBP 520 - GIS and Spatial Analysis for Public Policy
- Teaching Assistant**, Fall 2016. George Mason University. PUBP 511 - Statistical Methods for Policy Analysis
- Co-Instructor**, August 2016. George Mason University. PUBP 555 - Economics Math Workshop
- Teaching Assistant**, Spring 2016. George Mason University. PUBP 520 - GIS and Spatial Analysis for Public Policy

ACADEMIC SERVICE

- GMU - Vice President of the Association of Public Policy PhD Students; Conference Chair of the Advancements in Public Policy Conference, 2014.
- Western Michigan University, University of North Carolina at Charlotte - Gamma Theta Upsilon Member
- University of North Carolina at Charlotte - Graduate Senator

ADVANCED TECHNICAL SKILLS

Python, ArcGIS, STATA, GeoDa, R, Tableau, Pajek