

Haoluan Wang

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Agricultural and Resource Economics
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Visa status: F-1 (3-year OPT)

EDUCATION

- Ph.D. Agricultural and Resource Economics, University of Maryland, College Park, USA (expected May 2022)
- M.S. Agricultural and Resource Economics, University of Alberta, Canada (2015)
- B.A. International Economics and Trade, Zhejiang University, China (2013)

DISSERTATION

- Title: “Essays on Natural Resource Management”
- Committee: Prof. Erik Lichtenberg (Co-chair), Prof. David Newburn (Co-chair), Prof. Lars Olson, Prof. Anna Alberini

RESEARCH FIELDS

Agri-environmental Policy, Natural Resource Economics, Environmental Valuation, Spatial Modeling, Geographical Information System

RESEARCH EXPERIENCE

University of Maryland:

- Research Assistant for Prof. David Newburn, August 2018 - current
- Research Assistant for Prof. Erik Lichtenberg, January 2017 - July 2018

University of Alberta:

- Research Associate for Prof. Feng Qiu, August 2015 - July 2016
- Research Assistant for Prof. Brent M. Swallow, May 2014 - July 2015

TEACHING EXPERIENCE

Teaching Assistant at the University of Maryland:

- GEOG272: Introduction to Earth Observation Science, Fall 2021
- GEOG306: Introduction to Quantitative Methods for the Geographic and Environmental Sciences, Spring 2021
- AREC453: Natural Resource and Public Policy, Fall 2016 & Fall 2020
- AREC455: Economics of Land Use, Fall 2019
- ECON604: Microeconomic Analysis II (Ph.D. level), Spring 2019

PUBLICATIONS

- Biffi, Sofia, Rebecca Traldi, Bart Crezee, Michael Beckmann, Lukas Egli, Dietrich Schmidt, Nicole Motzer, Murat Okumah, Ralf Seppelt, Eleonore Slabbert, Kate Tiedeman, Haoluan Wang, and Guy Ziv (2021). “Aligning agri-environmental subsidies and environmental needs: A comparative analysis between the US and EU.” *Environmental Research Letters*, 16: 054067.
- Yang, Meng, Haoluan Wang, and Feng Qiu (2019). “The built environment of schools: Access to unhealthy food outlets and outdoor recreational facilities.” *Cities*, 87: 229–237.
- Wang, Haoluan and Feng Qiu (2018). “Spatial disparities in neighborhood public tree coverage: Do modes of transportation matter?” *Urban Forestry & Urban Greening*, 29: 58–67.
- Wang, Haoluan and Feng Qiu (2017). “Investigating the impact of agricultural land losses on deforestation: Evidence from a peri-urban area in Canada.” *Ecological Economics*, 139: 9–18.
- Wang, Haoluan and Feng Qiu (2017). “Investigation of the dynamics of agricultural land at the urban fringe: A comparison between two peri-urban areas in Canada.” *The Canadian Geographer*, 61(3): 457–470.
- Wang, Haoluan and Brent M. Swallow (2016). “Optimizing the use of financial resources for agricultural land conservation: Spatially-explicit estimation of benefits, budgets, costs and targets.” *Land Use Policy*, 59: 272–283.
- Wang, Haoluan, Feng Qiu, and Xiaofeng Ruan (2016). “Loss or gain: A spatial regression analysis of switching land conversions between agriculture and natural land.” *Agriculture, Ecosystems & Environment*, 221: 222–234.
- Wang, Haoluan and Feng Qiu (2016). “Fresh food access revisited.” *Cities*, 51: 64–73.
- Wang, Haoluan, Ling Tao, Feng Qiu, and Wes Lu (2016). “The role of socio-economic status and spatial effects on fresh food access: Two case studies in Canada.” *Applied Geography*, 67: 27–38.
- Wang, Haoluan, Feng Qiu, and Brent M. Swallow (2014). “Can community gardens and farmers’ markets relieve food desert problems? A study in Edmonton, Canada.” *Applied Geography*, 55: 127–137.

BOOK CHAPTER

- Newburn, David, Lori Lynch, and Haoluan Wang (2021). “Farmland and forest conservation.” G. Knaap et al. (eds.), *Handbook on Smart Urban Growth*. Elgar Publishing.

WORKING PAPERS

- Wang, Haoluan (2021). “Flood your neighbors: Spillover effects of levee building.” University of Maryland, College Park, October (Job Market Paper)
- Guignet, Dennis, Christopher Moore, and Haoluan Wang (2020). “Hot spots, cold feet, and warm glow: Identifying spatial heterogeneity in willingness to pay.” US EPA NCEE Working Paper, 2020-01.

WORK IN PROGRESS

- “Time and risk preferences for payments for ecosystem services contracts.” (with Erik Lichtenberg and David Newburn)
- “Dynamic additionality in payments for ecosystem services contracts.” (with Erik Lichtenberg and David Newburn)
- “Modeling Baltimore lawncare at multiple scales: Incorporating formal and informal neighborhood effects on fertilizing decisions.” (with Robert Johnston, David Newburn, Colin Polsky, and Tom Ndebele)

PRESENTATIONS

2022: Midwest Economics Association Annual Meeting (scheduled)

2021: 7th Canadian PhD and Early Career Workshop in Environmental and Resource Economics, Agricultural Economics Society Annual Meeting, Applied Young Economist Webinar, Association of Environmental and Resource Economists Summer Conference, Camp Resources XXVII, Canadian Resource and Environmental Economics Association Annual Conference, European Association of Environmental and Resource Economists Annual Conference, Northeastern Agricultural and Resource Economics Association Annual Meeting, Society for Benefit-Cost Analysis European Conference (scheduled), University of Maryland (AREC), Urban Economics Association North American Meeting (scheduled)

2020: Agricultural & Applied Economics Association Annual Meeting, Institute for Humane Studies Graduate Conference, Interdisciplinary Ph.D. Workshop in Sustainable Development at Columbia University, Southern Economic Association Annual Meeting, Young Scholars Initiative Plenary

2019: Agricultural & Applied Economics Association Annual Meeting, Association for Public Policy Analysis & Management Regional Student Conference, DC Area Student/Professor Environmental and Energy Economics Workshop (University of Maryland), Georgetown University (ECON), Land and Poverty Conference (World Bank), University of Maryland (AREC)

2018: Agricultural & Applied Economics Association Annual Meeting, Association for Public Policy Analysis & Management Regional Student Conference, Northeastern Agricultural and Resource Economics Association Annual Meeting

2017: Agricultural & Applied Economics Association Annual Meeting, Baltimore Ecosystem Study Annual Meeting, Northeastern Agricultural and Resource Economics Association Annual Meeting

Pre-PhD: Agricultural & Applied Economics Association Annual Meeting (2015, 2016), Canadian Agricultural Economics Society & Western Agricultural Economics Association Joint Annual Meeting (2016), Agricultural & Applied Economics Association & Western Agricultural Economics Association Joint Annual Meeting (2015), Northeastern Agricultural and Resource Economics Association & Canadian Agricultural Economics Society Joint Annual Meeting (2015), American Association of Geographers Annual Meeting (2015)

SELECTED AWARDS

- Hayek Fund for Scholars, Institute for Humane Studies, 2021
- Bessie H. DeVault Award (Best paper by a second-year Ph.D. student), Dept. of AREC, University of Maryland, 2018
- Mary Louise Imrie Graduate Student Award, University of Alberta, 2015
- Brett Cortus Memorial Scholarship, Dept. of REES, University of Alberta, 2014
- John Proskie Memorial Scholarship, Dept. of REES, University of Alberta, 2013
- First-class Scholarship for Outstanding Students and Merits (top 3%), Zhejiang University, 2012
- Zerun Scholarship, College of Economics, Zhejiang University, 2011& 2012
- First-rank Scholarship for Exchange Students, Zhejiang University, 2011

ACADEMIC AFFILIATIONS

- American Economic Association
- Agricultural & Applied Economics Association
- Association of Environmental and Resource Economists
- European Association of Environmental and Resource Economists

SKILLS AND PROFICIENCIES

Software: Stata, ArcGIS, QGIS, R, Python, NLOGIT, GeoDa
Languages: Chinese (native), English (fluent), German (beginner)

REFERENCES

Prof. Erik Lichtenberg	University of Maryland	elichten@umd.edu	(301) 405-1279
Prof. David Newburn	University of Maryland	dnewburn@umd.edu	(301) 405-8042
Prof. Anna Alberini	University of Maryland	aalberin@umd.edu	(301) 405-1267

WORKING PAPER ABSTRACTS

“Flood your neighbors: Spillover effects of levee building” (Job Market Paper)

Economists have long acknowledged the problem of social cost and externalities. Without clear compensation for potential damage from extra risk exposure, self-protective actions taken by some agents may force other agents to increase their own protective actions through risk spillovers, a scenario often referred to as arms race. Levee building along the Mississippi River appears to be a case in point. To reduce flood risks, jurisdictions build levees to divert water flow which push extra water to downstream neighbors, causing downstream to build higher levees. This paper studies the spillover effects of levee building in response to rising flood risks using the Great Mississippi Flood of 2011 as a natural experiment. Using newly digitized data on levee locations and elevations, I show that a 1% increase in the upstream levee elevation increased the downstream levee elevation by 0.7%. A back-of-the-envelope calculation suggests the external costs due to upstream levee building are at least \$0.2 billion, reducing the welfare of levee construction by 48%. A spatially explicit “levee tax” is proposed to address the externalities from upstream levee building. My

results highlight the importance of regional cooperation to manage large-scale natural disasters while mitigating inter-jurisdictional spillovers.

“Hot spots, cold feet, and warm glow: Identifying spatial heterogeneity in willingness to pay”
(with Dennis Guignet and Christopher Moore)

We propose a novel extension of existing semi-parametric approaches to examine spatial patterns of willingness to pay (WTP) and status quo effects, including tests for global spatial autocorrelation, spatial interpolation techniques, and local hotspot analysis. We are the first to formally account for the fact that observed WTP values are estimates, and to incorporate the statistical precision of those estimates into our spatial analyses. We demonstrate our two-step methodology using data from a stated preference survey that elicited values for improvements in water quality in the Chesapeake Bay and lakes in the surrounding watershed. Our methodology offers a flexible way to identify potential spatial patterns of welfare impacts, with the ultimate goal of facilitating more accurate benefit-cost and distributional analyses, both in terms of defining the appropriate extent of the market and in interpolating values within that market.