

# Junyoung Jeong

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Updated December 2023

## EDUCATION

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The Ohio State University  
Ph.D., Agricultural, Environmental, and Development Economics  
Columbus, OH  
Aug. 2019 – Aug. 2024 (expected)

The Ohio State University  
M.S., Agricultural, Environmental, and Development Economics  
Columbus, OH  
Aug. 2019 – Aug. 2021

Seoul National University  
M.A., Economics  
Seoul, Korea  
Sep. 2016 – Feb. 2019  
(Interdisciplinary Program in Technology Management, Economics, and Policy Major)

Korea University  
B.E., Electrical Engineering  
Seoul, Korea  
Mar. 2007 – Feb. 2014  
(2 years for national military service)

## RESEARCH INTEREST

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Environmental and Resource Economics, Integrated Assessment Model, Computational Economics

## REFERENCES

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- Dr. Yongyang Cai  
Professor, Dept. of Agricultural, Environmental, and Development Economics, The Ohio State University  
Email: [cai.619@osu.edu](mailto:cai.619@osu.edu)
- Dr. Elena Irwin  
Professor, Dept. of Agricultural, Environmental, and Development Economics, The Ohio State University  
Email: [irwin.78@osu.edu](mailto:irwin.78@osu.edu)
- Dr. Sathya Gopalakrishnan  
Professor, Dept. of Agricultural, Environmental, and Development Economics, The Ohio State University  
Email: [gopalakrishnan.27@osu.edu](mailto:gopalakrishnan.27@osu.edu)
- Dr. Brian Roe  
Professor, Dept. of Agricultural, Environmental, and Development Economics, The Ohio State University  
Email: [roe.30@osu.edu](mailto:roe.30@osu.edu)

## RESEARCH

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### Working Paper

*Uncertainty of Stringency and Timing in US Climate Policy* [Job Market Paper] [[Manuscript](#)]

- Abstract: Abstract Climate policy is far from certain in the United States. Major clean energy tax credits have experienced repeated cycles of short-term renewal and expiration, and the US government environmental policies tend to be greatly affected by changes in the political affiliation of the administration. Given that, the investigation into the uncertainty of climate policy and its economic and environmental impacts in the US is paramount. I develop a dynamic stochastic model of the US economy with major carbon-emitting sectors, explicitly incorporating the uncertainty and varying stringency of the government's climate policies. The simulation results highlight that, in the face of policy uncertainty, the investment decisions can be preempted or delayed depending on the current policy stringency, and a deterministic model can over-predict CO<sub>2</sub> emissions, 8-12% more than when a stochastic model is used. The examination of policy timing scenarios reveals that achieving lower emissions in 2050 requires enacting stricter policies close to the target year whereas minimizing the cumulative emissions, thus contributing less to global warming, is accomplished by earlier adoption of policies, though possibly repealed later. The analysis further suggests that scenarios with earlier policy adoption are associated with up to 35% lower abatement costs than those with later policy adoption. Lastly, an extended model that considers learning-by-doing effects in cost reductions for

low-emitting technologies shows that at least 20 years of subsidies are required to sustain the momentum of transitioning to solar and wind energy. The research would have policy implications for the significance of stringency and timing of the climate policy adoption and pathways to meet the US mid-century climate goal and mitigate global climate change.

*A Dynamic Regional Integrated Assessment Model to Assess the Impacts of Changing Globalization and Environmental Stewardship on the Regional Economy and Water Quality* [Slide] [Manuscript]

(with Brian Cultice, Soo Min Chun, C. Dale Shaffer-Morrison, Ziqian Gong, Jeffrey Bielicki, Yongyang Cai, Elena Irwin, Douglas Jackson-Smith, Jay Martin, Robyn Wilson)

## Work in Progress

*Food Waste Management and Regional Economy and Environment: A Dynamic General Equilibrium Approach*  
(with Brian Roe, Yongyang Cai)

*Energy Transition and Regional Heterogeneity in the United States*

*Integrated Assessment Model of Regional Economy and Water Pollution*

*Interactions between State and Federal Climate Change Policies in the Western US*

## Research Projects

NSF RISE-2108917, “*DISES: Coproducing Actionable Science to Understand, Mitigate, and Adapt to Cyanobacterial Harmful Algal Blooms (CHABS)*” (PI: Christine Kirchhoff, The Pennsylvania State University)

Supervisor: Dr. Yongyang Cai, The Ohio State University

Aug. 2023 – Present

NSF CBET-2115405, “*SRS RN: Multiscale RECIPES (Resilient, Equitable, and Circular Innovations with Partnership and Education Synergies) for Sustainable Food Systems*” (PI: Callie Babbitt, Rochester Institute of Technology)

Supervisor: Dr. Brian Roe and Dr. Yongyang Cai, The Ohio State University

Aug. 2023 – Present

- Project Website: <https://wastedfood.american.edu/>

NSF SES-1739909, “*INFIEWS/TI: Impacts of Deglobalization on the Sustainability of Regional Food, Energy, Water Systems*” (PI: Elena Irwin, The Ohio State University)

Supervisor: Dr. Yongyang Cai and Dr. Elena Irwin, The Ohio State University

Aug. 2022 – Present

- Project Website: <https://drfews.osu.edu/>
- Related Publication (non-peer reviewed)  
Stakeholder Final Report (2023), *Impacts of Deglobalization on Regional Sustainability Project Report* (Authors: Bielicki, J., Brown, C., Cai, Y., Chun, S., Cultice, B., Gong, Z., Irwin, E., Jackson-Smith, D., **Jeong, J.**, Jones, M., Kast, J., Kumar, K., Martin, J., Randall, A., Shaffer-Morrison, C.D., Sheldon, I., & Wilson, R.)

USDA NIFA-AFRI 2018-68002-27932, “*Building a sustainable and resilient agroecosystem through an understanding of climate and farmer behavioral variability*” (PI: Robyn Wilson, The Ohio State University)

Supervisor: Dr. Yongyang Cai and Dr. Robyn Wilson, The Ohio State University

Aug. 2022 – Present

- Project Website: <https://u.osu.edu/agroecosystemresilience/>

## OTHER PROFESSIONAL EXPERIENCE

Doosan Heavy Industries & Construction

Changwon, Korea

*Electrical Control System Engineer, Nuclear I&C Engineering Team*

Dec. 2013 – Aug. 2016

OCI Company

San Antonio, TX / Seoul, Korea

*Intern, Solar Power Team*

Jun. 2013 – Aug. 2013

## TEACHING EXPERIENCE

Lab Instructor, Advanced Quantitative Methods I and II, The Ohio State University

Fall 2021, Fall 2022

Lab Instructor, Data Analysis for Agribusiness and Applied Economics, The Ohio State University	Spring 2022
Guest Lecturer, Foundations of Data-Driven Sustainable Energy Systems, The Ohio State University (Subject: <i>Energy-Land-Human-Environment Systems</i> )	Fall 2023
Guest Lecturer, Environmental and Natural Resource Economics, The Ohio State University (Subject: <i>Environmental and Energy Justice</i> )	Spring 2022
Teaching Assistant, Strategic Management, The Ohio State University	Spring 2021
Teaching Assistant, Food, Population, and the Environment, The Ohio State University	Spring 2021
Teaching Assistant, Principles of Food and Resource Economics, The Ohio State University	Fall 2020

## **LEADERSHIP EXPERIENCE**

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<i>Treasurer</i> , Agricultural, Environmental, and Development Economics Graduate Student Association, The Ohio State University	July 2021 – July 2022
<i>Mentor Assistant</i> , International Energy Policy Program, Seoul National University,	Seoul, Korea Jan. 2018 – Feb. 2019
<i>Graduate Assistant</i> , Technology Management, Economics and Policy Program, Seoul National University,	Seoul, Korea Mar. 2018 – Aug. 2018

## **CONFERENCE, ACADEMIC WORKSHOP, MENTORING PROGRAM**

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### **Conferences/Academic Workshop Presentations**

#### ***Topic 1: Uncertainty of Stringency and Timing in US Climate Policy***

Heartland Workshop (University of Illinois Urbana-Champaign)	Champaign, IL Oct. 2023
Climate Economics Pipeline Workshop (Harvard Kennedy School)	Cambridge, MA June 2023
AERE @ Midwest Economics Association (MEA) Annual Conference	Cleveland, OH Mar. 2023
AERE 2022 Summer Conference	Miami, FL June 2022

#### ***Topic 2: A Dynamic Regional Integrated Assessment Model to Assess the Impacts of Changing Globalization and Environmental Stewardship on the Regional Economy and Water Quality***

AAEA @ 2024 ASSA Annual Meeting	San Antonio, TX Jan. 2024 (expected)
Sixth Annual Social Cost of Water Pollution Workshop	Washington, DC Oct. 2023
AERE 2023 Summer Conference	Portland, ME June 2023

#### ***Topic 3: Energy Transition and Regional Heterogeneity in the United States***

AERE @ Western Economic Association International (WEAI) Annual Conference	Portland, OR June 2022
INFORMS Annual Meeting 2021	Anaheim, CA Oct. 2021

### **Mentoring Program**

Mentee, Association for Mentoring and Inclusion in Economics (AMIE)	2023 – 2024
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### **Summer School**

Berkeley/Sloan Summer School in Environmental and Energy Economics	Berkeley, CA
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Aug. 2021

## **AWARDS & SCHOLARSHIPS**

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Sixth Annual Social Cost of Water Pollution Workshop (Travel Funded)	Washington, DC Oct. 2023
Climate Economics Pipeline Workshop (Harvard Kennedy School) (Travel Funded)	Cambridge, MA June 2023
Award for Technology Policy Research Paper & Proposal Competition, Seoul National University (KRW 3,000,000)	Feb. 2018

## **TECHNICAL SKILLS & LANGUAGES**

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- Mathematical optimization tools: GAMS
- Programming languages: Matlab
- Statistical analysis packages: R, STATA
- Languages: Korean (Native), English (Fluent), Chinese (Intermediate)