

# Pei Huang

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## Work Experience

### ZEW – Leibniz Centre for European Economic Research

Mannheim, Germany

RESEARCHER

Dec 2020 - Present

- Analyzing the impacts of climate and energy policy, in particular carbon pricing, in European.
- Analyzing climate change and energy transition risks.
- Writing academic papers and policy briefs.

### Yale University

New Haven, CT, USA

RESEARCH AFFILIATE

Aug 2017 - Present

- Collaborating with researchers for projects regarding energy transitions and environmental impacts.
- Supporting Ph.D. students and postdoctoral researchers to conduct scenario analyses of energy and climate policies using the National Energy Modeling System (NEMS).
- Publishing manuscripts in academic journals.

### Yale University

New Haven, CT, USA

POSTDOCTORAL RESEARCH ASSOCIATE

Jul 2017 - Jul 2020

- Designed macroeconomic scenarios of low-carbon energy transitions, including intensive energy efficiency improvements, abundant natural gas supply, electrifying transportation, decreased costs of distributed generation, and carbon pricing policy.
- Analyzed large energy, emissions, climate, and health datasets.
- Implemented and developed a Yale version of the NEMS model, a large-scale energy-economic general equilibrium model.
- Presented research in conferences and policy meetings.

### S&P Global Platts

London, UK

QUANTITATIVE ANALYST

Nov 2016 - Jun 2017

- Developed econometric and statistical models for forecasting energy demand.
- Initiated and developed new modeling framework, integrating SQL and R.
- Contributed to new market offerings – short-term energy market forecasts.
- Conducted data analyses of fundamentals and prices for natural gas markets.
- Created data visualization tools for market analysis.
- Wrote short-term and long-term market reports.

### Aurora Energy Research

Oxford, UK

MODELING ANALYST

Aug 2015 - Nov 2016

- Lead the development of large-scale economic models for the global natural gas markets.
- Initiated new product offerings, the analytics of global natural gas market.
- Developed a new modeling framework, integrating R, Python, SQL, Tableau, and GAMS.
- Documented model development history using the version control tool, Git.
- Created and maintained a geospatial energy transit dataset.
- Conducted scenario analyses for the European natural gas markets and infrastructure development.
- Created data visualization tools for the research team, facilitating report writing and market analyses.
- Provided training sessions of quantitative methods for colleagues.

### Texas A&M University

College Station, TX, USA

TOM SLICK RESEARCH FELLOW

Jan 2015 - Aug 2015

- Funded by the Tom Slick Graduate Research Fellowship Program at Texas A&M University.

### Texas A&M University

College Station, TX, USA

RESEARCH ASSISTANT

Jan 2012 - Dec 2014

- Developed statistic, econometrics, and economic models to evaluate the impact of climate variability on agriculture.
- Built an integrated assessment model for natural resource management.
- Collaborated with economists, biologists, and policymakers.

### Texas A&M University

College Station, TX, USA

COURSE INSTRUCTOR

Fall 2013 & 2014

- Taught Applied Mathematical Programming in GAMS.
- Teaching evaluations: 4.90/5.00 (Fall 2014); 4.34/5.00 (Fall 2013).

### Texas A&M University

College Station, TX, USA

TEACHING ASSISTANT

Spring 2012 & 2015

- Assisted in teaching Agribusiness Management and Environmental & Natural Resource Economics.

## Education

### Texas A&M University

PH.D. IN ENVIRONMENTAL AND RESOURCE ECONOMICS

College Station, TX, USA

Aug 2010 - Aug 2015

### Hunan Normal University

BACHELOR'S DEGREE IN MANAGEMENT

Changsha, Hunan, China

Sep 2005 - Jun 2009

## Publications

### ACADEMIC PAPERS

- Gillingham, K. and **P. Huang**. 2020. Long-Run Environmental and Economic Impacts of Electrifying Ports in the United States. *Environmental Science & Technology*. 54(16), 9824–9833. (Media: Nature Reviews Earth & Environment, Aug 6, 2020). Paper Link
- Gillingham, K. and **P. Huang**. 2019. Is Abundant Natural Gas a Bridge to a Low-carbon Future or a Dead-end?. *Energy Journal*. 40(2), 1–26. (Media: The Denver Post, Jan 31, 2020). Paper Link
- Wilberg, M.J., R.T. Woodward, **P. Huang**, and D. Tomberlin. 2019. Developing Precautionary Reference Points for Fishery Management Using Robust Control Theory: Application to the Chesapeake Bay Blue Crab Fishery. *Marine and Coastal Fisheries* 11(2), 177-188.
- Fernandez, M., **P. Huang**, B.A. McCarl, and V. Mehta. 2016. Value of Decadal Climate Variability Information for Agriculture in the Missouri River Basin. *Climatic Change*. 139(3–4), 517–533.
- Huang, P.** 2015. An Inverse Demand System for the Differentiated Blue Crab Market in Chesapeake Bay. *Marine Resource Economics* 30(2):139–156.
- Huang, P.**, R.T. Woodward, M.J. Wilberg, and D. Tomberlin. 2015. Management Evaluation for the Chesapeake Bay Blue Crab Fishery: An Integrated Bioeconomic Approach. *North American Journal of Fisheries Management* 35(2):216–228. (Selected as Best Paper Award for the journal in 2015)

### WORKING PAPERS

- The Climate and Health Benefits from Intensive Energy Efficiency Improvements. Resubmitted to *Science Advances* (with Kenneth Gillingham et al.), Paper Link
- Air Pollution, Health, and Racial Disparities: Evidence from Ports (Job Market Paper), Paper Link

### OTHER WRITING

- Shipping Shapes Health, *Public Health Post*, February 3, 2021. Article Link

## Skills

### ANALYTICS

- Energy System Modeling, Energy and Climate Policy Modeling, Environmental and Energy Economics, Energy Market Analysis, Data Analytics, Applied Econometrics, Economic Modeling, Climate Risk Analysis

### SOFTWARE

- Proficient in R, GAMS, NEMS (based on Fortran), SQL, Tableau, Microsoft Office Suite,  $\text{\LaTeX}$ , Git
- Familiar with Python, Stata, A.D. Model Builder (based on C++), Think-cell, VBA in Excel, SAS, Matlab (Octave)

### LANGUAGE

- English (Proficiency), Mandarin Chinese (Native)

## Certificates

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|------|--|------------------|
| 2016 | <b>Machine Learning (Stanford University)</b> , Coursera Certificates                              | Online           |
| 2016 | <b>Python Data Structures (University of Michigan)</b> , Coursera Certificates                     | Online           |
| 2016 | <b>Using Python to Access Web Data (University of Michigan)</b> , Coursera Certificates            | Online           |
| 2016 | <b>Data Visualization and Communication with Tableau (Duke University)</b> , Coursera Certificates | Online           |
| 2016 | <b>Managing Big Data with MySQL (Duke University)</b> , Coursera Certificates                      | Online           |
| 2012 | <b>Basic to Advanced GAMS Certificate</b> , GAMS Corporation                                       | Silverthorne, CO |

## Presentation

- 2021: 8th IZA Workshop in Environment, Health and Labor Markets (scheduled), 20th LAGV International Conference in Public Economics (scheduled), European Association of Environmental and Resource Economics Annual Conference (scheduled), ZEW Brownbag Seminar, Online Summer Workshop in Environment, Energy, and Transportation Economics (OSWEET)
- 2020: 6th Canadian PhD and Early Career Workshop in Environmental and Resource Economics, EAERE-ETH European Winter School, Yale Environmental Economics Seminar, The Hong Kong Polytechnic University, U.S. EPA Air, Climate and Energy (ACE) Centers Meeting
- 2019: China-UK Low-Carbon College, Shanghai Jiao Tong University, CU Environmental & Resource Economics Workshop, Tsinghua-Berkeley Shenzhen Institute, Association of Environmental and Resource Economists Annual Summer Conference

- 2018: Yale FES Research Day, Yale Climate Day (poster), Camp Resources XXV, United States Association for Energy Economics, Yale Environmental Economics Seminar
- 2015: Texas A&M University Symposium for Agricultural and Applied Economics Research, Annual Meeting of Agricultural & Applied Economic Association (poster), Seminar at the Gulf of Maine Research Institute
- 2014: 5th World Congress of Environmental and Resource Economists, Annual Meeting of Agricultural & Applied Economic Association (2 sessions)
- 2013: North American Association of Fisheries Economists Forum 2013, Annual Meeting of Agricultural & Applied Economic Association

## Honors & Awards

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2016	<b>Hall of Fame Award for Gas Market Offering</b> , Aurora Energy Research	<i>Oxford, UK</i>
2016	<b>Best Paper Award</b> , North American Journal of Fisheries Management	<i>USA</i>
2015	<b>Tom Slick Senior Graduate Fellowship</b> , Texas A&M University	<i>College Station, TX</i>
2013	<b>Member</b> , Gamma Sigma Delta ( $\Gamma\Sigma\Delta$ ) Honor Society of Agriculture	<i>USA</i>
2011	<b>Departmental Scholarship</b> , Texas A&M University	<i>College Station, TX</i>