

## SHUAI ZHOU

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### EDUCATION

- 2023 Ph.D. Rural Sociology and Demography (dual title), The Pennsylvania State University  
*Dissertation: Environmental Migration in the United States: A Spatio-Temporal Perspective, 1970-2020*
- 2019 M.S. Rural Sociology and Demography (dual title), The Pennsylvania State University  
*Thesis: Subsidized Relocation and the Willingness to Move: Evidence from the Targeted Poverty Alleviation Project in China*

### RESEARCH INTERESTS

Environmental Migration; Environmental Health; Spatial Demography; Circular Bionutrient Economy; Computational and Geospatial Analysis

### ACADEMIC EXPERIENCE

- 2023–present Postdoctoral associate, Department of Global Development, Cornell University
- 2017–2023 Research assistant, Department of AESE, Pennsylvania State University
- 2015 Part-time lecturer, Beijing City University

### PUBLICATIONS

#### Book chapters

Zhou, Shuai and Guangqing Chi, 2023. “Old data, old problems, new data, new challenges.” In: *Research Handbook of Rural Sociology*, edited by Ann Tickamyer and Carolyn Sachs. Cheltenham, United Kingdom: Edward Elgar Publishing. In preparation.

#### Peer-reviewed articles

- 2023 Zhou, Shuai and Guangqing Chi. 2023. “How Do Environmental Stressors Influence Migration? A Meta-regression Analysis of the Environmental Migration Literature.” *Demographic Research*. Accepted.
- 2023 Anderson, Cory, Shuai Zhou, and Guangqing Chi. 2023. “Population-Wide Vaccination Hesitancy among the Amish: A County-Level Study of COVID-19 Vaccine Adoption and Implications for Public Health Policy and Practice.” *Population Research and Policy Review*. 42: 70.

- 2022 Zhou, Shuai and Guangqing Chi. 2022. "Farmland Rental: The Impacts of Household Demographics and Livelihood Strategies in China." *Land*. 11(8): 1318.
- 2022 Li, Yanling, Zita Oravecz, Shuai Zhou, Yosef Bodovski, Ian J. Barnett, Naomi P. Friedman, Guangqing Chi, Scott I. Vrieze, and Sy-Miin Chow. 2022. "Bayesian Forecasting with a Regime-Switching Zero-Inflated Multilevel Poisson Regression Model: An Application to Adolescent Alcohol Use with Spatial Covariates." *Psychometrika*. 87(2): 376–402.
- 2021 Zhou, Shuai, Yanling Li, Guangqing Chi, Junjun Yin, Zita Oravecz, Yosef Bodovski, Naomi P. Friedman, Scott I. Vrieze, and Sy-Miin Chow. 2021. "GPS2space: An Open-source Python Library for Spatial Measure Extraction from GPS Data." *Journal of Behavioral Data Science*. 1(2): 127–155.
- 2021 Moss, Jennifer L., Siddhartha Roy, Karl T. Clebak, Julie Radico, Jarrett Sell, Christina Scartozzi, Shuai Zhou, Guangqing Chi, and Tamara Oser. 2021. "Area- and Individual-Level Correlates of Self-Rated Health: Implications for Geographic Health Disparities." *Journal of Primary Care and Community Health*. 12: 1–8.

### **Under review**

- 2023 Zhou, Shuai, Guangqing Chi, Huanguang Qiu, Zhen Lei, Erica A.H. Smithwick, and Jiquan Chen. "Subsidized Relocation and the Willingness to Move: Evidence from the Targeted Poverty Alleviation Project in China." *PLOS One*.
- 2023 Chi, Guangqing, Megan Mucioki, Shuai Zhou, Jessica Miller, Ekrem Korkut, Lance Howe, Junjun Yin, Davin Holen, Heather Randell, Kathleen E. Halvorsen, Lara Fowler, James Ford, and Ann Tickamyer. "Climate Impacts on Migration in the Arctic North America: Existing Evidence and Research Agenda." *Climate Change*.
- 2023 Fu, Haiyue, Yating Li, Penghui Jiang, Shuai Zhou, and Chuan Liao. "Transition Towards Sustainable Diets: Multi-objective Optimization of Dietary Pattern in China." *Sustainable Production and Consumption*.

### **Manuscripts in development (including target journal)**

- 2023 Zhou, Shuai, Guangqing Chi, and Brian C. Thiede. "Climate Variability and County-Level Migration in the United States, 1970 – 2010." *Demography*.

- 2023 Zhou, Shuai and Guangqing Chi. "Migratory Responses to Environmental Variability in the United States: A Multi-level Analysis of Microdata from the American Community Survey, 2010 – 2020." *Population and Environment*.
- 2023 Anderson, Cory, George M. Hayward, Shuai Zhou, Guangqing Chi, and Mary Shenk. "Persistently High Fertility in a Low Fertility Context: How Do America's Amish Heterogeneously Respond to Fertility-Reducing Structural Incentives?" *Demography*.
- 2023 Hou, Qing, Shuai Zhou, and Guangqing Chi. "The Factors Affecting Electric Vehicle Adoption in the United States, 2016 – 2021." *Energy Policy*.
- 2023 Sun, Yan, Lili Wu, Haiyue Fu, Shuai Zhou, and Chuan Liao. "Enhancing Urban Land Use Efficiency through Regional Economic Integration: A Network Synergy Analysis in the Yangtze River Delta."

### **Book reviews**

- 2018 Zhou, Shuai. "International Migration of China: Status, Policy and Social Responses to the Globalization of Migration" by Lu Miao and Huiyao Wang (Singapore: Springer, 2017. 135 pp. ISBN: 978-981-10-6073-1). *Rural Sociology*. 83(3): 700–702.

### **Other publications**

- 2020 Zhou, Shuai and Matthew M. Brooks. 2020. "Pennsylvania Pomp and Circumstance: Trends in High School Drop Outs." *Pennsylvania Population Network Briefs*. 3: 1–4.

## **RESEARCH GRANTS**

### **Unsuccessful grants**

- 2022 **PI**. "Environmental Migration in the United States: A Spatio-temporal Perspective, 1970 – 2020." Russell Sage Foundation. (**Co-PI** with Guangqing Chi). 2022 –2023. \$10,000.

## **CONFERENCE PARTICIPATION** (\* indicates presenter)

### **Conference presentations** (including forthcoming presentation)

- 2023 Zhou, Shuai\* and Guangqing Chi. 2023. "Migratory Responses to Environmental Variability in the United States: A Multi-level Analysis of Microdata from the American Community Survey, 2010 - 2020" 2023 Annual Meeting of the Population Association of America, April 12 – 15, 2023, New Orleans, LA.
- 2022 Zhou, Shuai\* and Guangqing Chi. 2022. "Migratory Responses to Environmental and Sociodemographic Factors in the United States: A Multi-level Approach." 2022 Annual Meeting of the Rural Sociological Society, August 04 – 07, 2022, Westminster, CO.

- 2022 Anderson, Cory, George M. Hayward, Shuai Zhou, Guangqing Chi, and Mary K. Shenk. 2022. "Persistently High Fertility in a Low Fertility Context: How Do America's Amish Heterogeneously Respond to Fertility-Reducing Structural Incentives?" 2022 Annual Meeting of the Population Association of America, April 6 – 9, 2022, Atlanta, GA.
- 2021 Zhou, Shuai\* and Guangqing Chi. 2021. "How Do Environmental Changes and Variations Influence Migration? A Meta-regression Analysis of the Environmental Migration Literature." 2021 Annual Meeting of the Rural Sociological Society, July 29 – August 01, 2021. (Held online due to COVID-19)
- 2020 Zhou, Shuai\* and Matthew M. Brooks. 2020. "Disparities in Transition to High School: An Evaluation of Rurality, Race and Ethnicity Composition, and Mobility at the Unified School District Level in the US." 2020 Annual Meeting of the Rural Sociological Society. (Canceled due to COVID-19)
- 2019 Zhou, Shuai\* and Guangqing Chi. 2019. "Land Rental in Rural China: The Impacts of Demographics, Household Economy, Land Endowment, and Social Welfare, 2012 – 2016." 2019 Annual Meeting of the Rural Sociological Society, August 07 – 10, 2019, Richmond, VA.
- 2019 Zhou, Shuai\*, Guangqing Chi, Brian C. Thiede, Zhen Lei, and Huanguang Qiu. 2019. "Subsidized Relocation and the Willingness to Move: Evidence from the Targeted Poverty Alleviation Project in China." 2019 Annual Meeting of the Population Association of America, April 10 – 13, 2019, Austin, TX.
- 2018 Zhou, Shuai\*, Guangqing Chi, Brian C. Thiede, Zhen Lei, and Huanguang Qiu. 2018. "Subsidized Relocation and the Willingness to Move: The First Look at the Targeted Poverty Alleviation Project in China." 2018 Annual Meeting of the Rural Sociological Society, July 26 – 29, 2018, Portland, OR.
- 2017 Zhou, Shuai\*. 2017. "Family Economy, Land Endowment, Social Security and Land Rent Behavior of Village Farmers: An Empirical Research Based on Logistic Model." 2017 Annual Rural Studies Conference, October 27 – 28, 2017, University Park, PA.

### **Invited talks**

- 2023 Zhou, Shuai. 2023. "Imbalanced Nutrient Supply and Demand for Regenerative Agriculture." Share Research and Ideas with Syngenta, October 11, 2023, Cornell University, Ithaca, NY.

- 2022 Zhou, Shuai. 2022. "Migration due to Climate Change." Geo-Resolution 2022—Geospatial Perspectives on Climate Change: Predicting and Mitigating Effects at Saint Louis University, September 28, 2022, St. Louis, MO.
- 2021 Zhou, Shuai and Yanling Li. 2021. "GPS2space: An Open-source Python Library for Spatial Measure Extraction from GPS Data." QuantDev Brownbag at Social Science Research Institute at Pennsylvania State University, February 10, 2021, University Park, PA.
- 2020 Zhou, Shuai. 2020. "Introduction to GPS2space." Intensive Longitudinal Health Behaviors Network Meeting (GPS Subgroup Meeting), October 21, 2020, University Park, PA.
- 2020 Zhou, Shuai. 2020. "Alaska Demographics and Data Sources." Pursuing Opportunities for Long-term Arctic Resilience for Infrastructure and Society (POLARIS) project, October 5, 2020, University Park, PA.

### **Conference posters**

- 2022 Zhou, Shuai and Guangqing Chi. 2022. "Migratory Responses to Environmental and Sociodemographic Factors in the United States: A Multi-level Analysis, 2010 – 2020." Population and Climate Change: The Defining Relationship of the 21<sup>st</sup> Century, November 30 – December 2, 2022, Vienna, Austria.
- 2022 Zhou, Shuai, Guangqing Chi, and Brian C. Thiede. 2022. "Migration and Climate Change and Variability in the Contiguous United States at the County Level, 1970 – 2010." 2022 Annual Meeting of the Population Association of America, April 6 – 9, 2022, Atlanta, GA.
- 2020 Zhou, Shuai and Guangqing Chi. 2020. "Land Rental in Rural China: The Impacts of Demographics, Household Economy, Land Endowment, and Social Welfare, 2012 – 2016." 2020 Annual Meeting of the Population Association of America, April 22 – 25, 2020, Washington, DC. (Canceled due to COVID-19)

### **Panel moderation**

- 2022 Health Access and Outcomes, 2022 Annual Rural Studies Conference, October 13 – 14, 2022, University Park, PA
- 2021 Agent-Based Modeling, 2021 Annual Population Research Institute Graduate Student Methodology Workshop, May 11, 2021, University Park, PA

2019 Alternative Food Systems and Sustainable Agriculture, 2019 Annual Rural Studies Conference, November 7 – 8, 2019, University Park, PA

## **AWARDS**

2022 Francena L. Miller and Michael F. Nolan Graduate Scholarship in Agricultural Economics and Rural Sociology, The Pennsylvania State University

2022 The College of Agricultural Sciences (CAS) Graduate Student Travel Awards, The Pennsylvania State University

2022 Rural Sociological Society (RSS) Graduate Student Travel Award, The Rural Sociological Society

## **TEACHING EXPERIENCE**

### **Penn State University**

2023 Guest lecture, Environmental Migration in the United States: A Spatio-temporal Perspective, April 20, 2023

2021 Guest lecture, Using Social Explorer for Spatial Analyses, February 15, 2021

2020 Guest lecture, Introductory Rural Sociology, January 28, 2020

2020 Guest lecture, Introductory to Stata, September 28, 2020

### **Beijing City University**

2015 Part-time lecturer, Social Survey Methods, March 2015 – July 2015

## **PROFESSIONAL TRAINING**

2023- NextGen Professors Program, October 24, 2023 – June 20, 2024, Cornell University, 2024 Ithaca, NY.

2023 Data and Modeling Approaches to Assessing Climate-Conflict Impact on Population Dynamics, April 12, 2023, New Orleans, LA.

2023 Leveraging Linked Census Data: Resources and Opportunities from Full Count IPUMS Data, April 12, 2023, New Orleans, LA.

2022 Summer Institute in Migration Research Methods, July 25 – August 2, 2022, University of California, Berkeley, Berkeley, CA.

2019 Data Reproducibility Boot Camp, June 3 – 7, 2019, The Pennsylvania State University, University Park, PA.

## PROFESSIONAL MEMBERSHIP

2020 – present International Union for the Scientific Study of Population  
2019 – present Population Association of America  
2018 – present Rural Sociological Society  
2017 – present Rural Sociology Graduate Association

## OPEN-SOURCE PACKAGE

2021 GPS2pace A Python library for constructing buffer- and convex hull-based activity space and shared space from raw GPS data, and performing the nearest distance query to user-specified landmarks.  
<https://pypi.org/project/gps2space/> (On PyPI)  
<https://github.com/shuai-zhou/gps2space> (On GitHub)  
<https://gps2space.readthedocs.io/en/latest/index.html> (Documentation)

## STATISTICAL/PROGRAMMING LANGUAGE

Python	Advanced level
Stata	Advanced level
R	Preliminary level

## REFERENCES

Available upon request.