SHUAI ZHOU

Department of Global Development, Cornell University
250 Warren Hall, Ithaca, NY 14853

sz675@cornell.edu
https://shuaizhou.net/

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, 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. *[Under review]*

Peer-reviewed articles

- Zhou, Shuai and Guangqing Chi. 2024. "How Do Environmental Stressors Influence Migration? A Meta-regression Analysis of the Environmental Migration Literature." Demographic Research. 50: 41–100.
- 2024 Chi, Guangqing, Shuai Zhou, Megan Mucioki, Jessica Miller, Ekrem Korkut, Lance Howe, Junjun Yin, Davin Holen, Heather Randell, Ayse Akyildiz, Kathleen E. Halvorsen, Lara Fowler, James Ford, and Ann Tickamyer. 2024. "Climate Impacts on Migration in the Arctic North America: Existing Evidence and Research Recommendations."

- Regional Environmental Change. 24: 47.
- 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.
- 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.
- 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

- Zhou, Shuai, Guangqing Chi, Huanguang Qiu, Zhen Lei, Erica A.H. Smithwick, and Jiquan Chen. "Relocation preference and settlement: Lessons from the Poverty Alleviation Relocation Program in China." *PLOS One*.
- 2024 Ludwig-Borycz, Elizabeth, Ana Baylin, Cheryl A. Moyer, Noah Kochanski, Nabin Pradhan, Sue Anne Bell, Joseph Eisenberg, Pamela Jagger, Nazeeba Siddika, Peter Larson, Shuai Zhou, Chuan Liao, and Arun Agrawal. "Higher Temperatures Are Associated with Lower Birthweight in Bangladesh." *Environment International*.
- 2024 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." *Habitational International*.

- 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*.
- 2024 Liao, Chuan, Jenny Kao-Kniffin, Wendong Zhang, Precious Tshabalala, Erik Andrus, Zachary Butler-Jones, Shuai Zhou, Radine Rafols, and Susan McCouch. "Rice Farming for Climate Change Adaptation in the US Northeast" *Proceedings of National Academy* of Sciences.

Manuscripts in development (including target journal)

- 2024 Zhou, Shuai, Chuan Liao, Ziqing Wei, and Guangqing Chi. "Beyond Pathogens: Unravelling Mortality through an Environmental Lens in the United States, 2000 2019."

 American Journal of Public Health
- Zhou, Shuai, Chuan Liao, Elizabeth Ludwig-Borycz, Seongmin Shin, Yujin Lee, Ziqing Wei, Jana Turner, Yulu Chen, Rodina Araia, Florence Cheung, and Arun Agrawal. "Navigating Environmental Health: A Comprehensive Synthesis and Future Prospects" Environmental Research
- Zhou, Shuai, Guangqing Chi, and Brian C. Thiede. "Climate Variability and County-Level Migration in the United States, 1970 2010." *Demography*.
- 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.
- 2024 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*.
- 2024 Hou, Qing, Shuai Zhou, and Guangqing Chi. "The Factors Affecting Electric Vehicle Adoption in the United States, 2016 2021." *Energy Policy*.

Other publications

2024 Hou, Qing, Shuai Zhou, and Guangqing Chi. 2024. "The Factors Affecting Electric Vehicle Adoption in the United States, 2016 – 2021." In: *Proceedings of the 7th International Conference on Economic Management and Green Development*, edited by Xiaolong Li, Chunhui Yuan, and John Kent. Singapore: Springer Nature Singapore.

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

Book reviews

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.

RESEARCH GRANTS

Funded grants

2024 **Co-PI.** "Agricultural Floodplain Rice Farming as Adaptation to Climate Change in NYS." Toward Sustainability Foundation Grant at Cornell University. (**PI:** Chuan Liao). 02/01/2024 – 01/31/2025. \$11,000.

Under review

- 2024 **Co-PI.** "Diversion of Organic Waste from Anaerobic Disposal to Regenerative Agricultural Products: Co-Benefits for Greenhouse Gas Emissions and Human Health." Environmental Defense Fund and the Cornell Atkinson Center for Sustainability. (**PI:** Chuan Liao and Veronica Southerland). 06/01/2024 05/31/2025. \$99,976.
- 2024 **Co-PI.** "Warming Planet, Unequal Burden: Chronic Kidney Disease Prevalence and Disparities among Elders in the United States" Cornell Center for Health Equity. (**PI:** Chuan Liao). 07/01/2024 06/30/2025. \$50,000.
- 2024 **Co-PI.** "Modeling Socio-Political Systems to Advance the Circular Bionutrient Economy." Polson Institute for Global Development. (**PI:** Johannes Lehmann). 2024 2025. \$20,000.
- 2024 **Key personnel.** "Energy and Society Research Working Group 2024-2027." Polson Institute for Global Development. (**PI**: Chuan Liao and Stephan Schmidt). 09/01/2024 05/31/2027. \$9,000.

Unsuccessful grants

2023 **Co-PI.** "Harnessing Agricultural Resilience through Visionary Eco-friendly Strategies (HARVEST): Promoting Rice Farming in New York State's Floodplains." Summer Undergraduate Mentored Research Grant at Cornell University. (**PI:** Chuan Liao). 05/20/2024 – 07/31/2024. \$25,832.

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

STUDENT MENTORING

Undergraduate students

2023 – 2024 Florence Cheung
 2023 – 2024 Yulu Chen
 2023 – 2024 Jana Turner
 2023 – 2024 Rodina Araia
 Cornell University
 University of Michigan
 University of Michigan

CONFERENCE PARTICIPATION

Conference presentations

- Zhou, Shuai, Chuan Liao, Ziqing Wei, and Guangqing Chi. 2024. "Environmental Impacts on Cause-specific Mortality in the United States, 2000 2019." 2024 Annual Meeting of the Rural Sociological Society, July 24 30, 2024, Madison, WI. [Forthcoming]
- Zhou, Shuai, Chuan Liao, Elizabeth Ludwig-Borycz, Seongmin Shin, Yujin Lee, Ziqing Wei, Jana Turner, Yulu Chen, Rodina Araia, Florence Cheung, and Arun Agrawal. 2024. "A Comprehensive Synthesis and Future Prospects of Environmental Health Literature, 2010 – 2023." 2024 Annual Meeting of the Rural Sociological Society, July 24 – 30, 2024, Madison, WI. [Forthcoming]
- 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.
- 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.
- 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)
- 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)
- 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.
- 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.
- 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.
- 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.
- 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.
- 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

- Zhou, Shuai, Chuan Liao, Ziqing Wei, and Guangqing Chi. 2024. "Beyond Pathogens: Unravelling Mortality through an Environmental Lens in the United States, 2000 2019."
 2024 Annual Meeting of the Population Association of America, April 17 20, 2024, Columbus, OH. [Forthcoming]
- 2024 Anderson, Cory, Shuai Zhou, and Guangqing Chi. 2024. "Which Way Does Religion Pull, and Why? Variation in COVID-19 Vaccination Rates among Major U.S. Religions." 2024 Annual Meeting of the Population Association of America, April 17 20, 2024, Columbus, OH. [Forthcoming]
- Zhou, Shuai, Chuan Liao, Elizabeth Ludwig-Borycz, Seongmin Shin, Yujin Lee, Ziqing Wei, Jana Turner, Yulu Chen, Rodina Araia, Florence Cheung, and Arun Agrawal. 2024. "Navigating Environmental Health: A Comprehensive Synthesis and Future Prospects." 2024 Annual Cornell Center for Health Equity Symposium, April 11, 2024, Ithaca, NY. [Forthcoming]
- 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 21st Century, November 30 December 2, 2022, Vienna, Austria.
- 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

SELECTED MEDIA COVERAGE

- 2023 "Amish Found to Be Under-vaccinated for COVID-19 but not Unvaccinated." *Today Headline*. September 6, 2023. Available at:

 https://todayheadline.co/amish-found-to-be-under-vaccinated-for-covid-19-but-not-unvaccinated/
- 2023 "Amish-populated Counties Tend to Have Lower Vaccination Rates, but Are not Unvaccinated." *My Best Medicine*. July 9, 2023. Available at:

 https://mybestmedicine.com/health-news/amish-populated-counties-tend-to-have-lower-vaccination-rates-but-are-not-unvaccinated/

PROFESSIONAL SERVICE

Grant proposal review

2023 Cornell University. Cornell Atkinson Center for Sustainability. 2024 Graduate Research Grants

Journal manuscript review

Socio-Economic Planning Sciences (2023) China Agricultural Economic Review (2024) PLOS One (2024) Spatial Demography (2024)

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

- 2024 Summer Institute in Migration Research Methods, June 10 June 12, 2024, University of California, Berkeley, Berkeley, CA. *[Forthcoming]*
- 2023 2024 NextGen Professors Program, October 24, 2023 June 20, 2024, Cornell University, Ithaca, NY.
- 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.