Yang Cheng, Ph.D.

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Education

Ph.D. Economics, Virginia Tech 2024
Dissertation: *Tasks, Skills, and Jobs in the Green Economy*
M.S. Agricultural Economics, China Agricultural University 2019
B.S. Agricultural Economics, China Agricultural University 2017

Fields

Research Interests: Regional Economics; Housing Economics; Food and Health Economics; Labor Economics; Applied and Spatial Econometrics; Quality of Life and Community Well-Being; Community Development.

Teaching Interests: Microeconomics; Applied Econometrics; Data Science and Analytics for Applied Economics; Data Visualization and Geospatial Analysis.

Work Experience

Postdoctoral Research Associate Jun 2024 to Present
University of Wisconsin-Madison, Dept. of Agricultural and Applied Economics

- Lead quantitative research for the Rural Livability Project on community development, quality of life, housing, and rural health, producing 4 published or accepted journal articles, 1 book chapter, 1 extension report, and 2 public data products.
- Designed and developed the Community Assets Index, an interactive visualization covering all 3,000+ U.S. counties used by policymakers and community leaders to benchmark community assets.
- Co-drafted a USDA NIFA grant proposal for the "Rural Livability: A Mixed Method" project, contributing to research scope design and statistical methodology.
- Presented 8+ research papers at academic conferences and to community stakeholders.

Data Analytics Instructor & Research Associate Summers 2021–2023
Virginia Tech, Data Science for the Public Good (DSPG) Program

- Taught R, Git, data visualization, and data analytics to a cohort of 20 interns as the program-wide instructor in Summer 2022; designed some of the teaching materials and consulted for all 5 project teams.
- Mentored 4 research teams as their graduate student lead, guiding them through the research workflow in applied data analysis, visualization, and geospatial analysis, and supporting their professional development.
- Facilitated collaboration with partners including the World Bank, the Zimbabwe Statistics Agency, and Virginia Cooperative Extension, and delivered 4 interactive dashboards, 3 technical reports, and presentations.

Peer-Reviewed Publications

Boyce, M., Schmidt-Larios, D., Gaede, E., & **Cheng, Y.** (2027). "The Community Capitals Dataset: Quantifying the Community Capitals Framework in the United States." *Journal of Rural Studies*, 129, 104487.

Cheng, Y., Conroy, T., & Deller, S.C. (2026, forthcoming). "Spatial Determinants of Community Well-Being: A Geographically Weighted Regression Analysis of U.S. Counties." *Review of Regional*

Studies.

Cheng, Y., Conroy, T., & Deller, S.C. (2026). "Move, Stay, and Commit: Place-based Quality of Life in the U.S." *Social Indicators Research*, 183(2), 23.

Cheng, Y., Conroy, T., & Deller, S.C. (2025). "Multidimensional Measures of Quality of Life: A Comparison of Methods Using U.S. County-Level Data." *Papers in Regional Science*, 105, 100129.

Cheng, Y., Conroy, T., & Boyce, M. "Rethinking (Rural) Livability: Why Existing Methods Fall Short and a New Approach to Measurement Using Community Assets." Under review.

Cheng, Y. & Chen, S.E. "Mapping Skill Readiness for the Green Transition: An Application to Appalachia in the U.S." Under review.

Gaede, E., **Cheng, Y.**, & Conroy, T. "Prioritizing Shelter, Sacrificing Nutrition: Housing Stress, Stigma, and Rural Health." Under review.

Chen, S.E., **Cheng, Y.**, & Katz, A. "Occupational Green Potential: A Continuous Task-Based Measure of Green Work." Under review.

Chapters in Edited Volumes

Boyce, M., **Cheng, Y.**, Gaede, E., & Schmidt-Larios, D. (2026). "Measuring Rural Livability: Challenges, Choices, and Considerations." Ch. 5 in T. Conroy & S.C. Deller (Eds.), *Redefining Community Economic Development Through Rural Livability*. Under revision.

Working Papers

Cheng, Y. "Ranking the Importance of Community Capitals for US County Quality of Life: A Geographical Random Forest Approach." Working paper.

Cheng, Y., Conroy, T., & Deller, S.C. "Economic Growth and Quality of Life: Is There a Rural-Urban Divide?" Working paper.

Cheng, Y. & Conroy, T. "Temporal Change in Quality of Life across U.S. County Typologies." Working paper.

Cheng, Y. & Chen, S.E. "A Green Skill-Based Recommendation System." Under revision.

Cheng, Y. & Zhang, Y. "When the Rural Hospital Next Door Closes: Spillover Effects on the Health Workforce of Neighboring Counties." Working paper.

Teaching Experience

Instructor of Record, *Virginia Tech*

AAEC 1005: Economics of the Food and Fiber System (introductory microeconomics; undergraduate, hybrid) Fall 2021

- Taught 40+ undergraduates, with class sessions both in person and online.
- Designed the course materials for in-person and online delivery.
- Constructed assignments and exams to assess learning, and supported students through review sessions and office hours.

Graduate Teaching Assistant, *Virginia Tech*

AAEC 5804: Fundamentals of Econometrics (master's, in person) Spring 2024
AAEC 5804: Fundamentals of Econometrics (master's, online) Spring 2023
AAEC 5804: Fundamentals of Econometrics (master's, in person) Fall 2022

AAEC 5026: Applied Microeconomics (master's, online) Spring 2021
AAEC 2104: Personal Financial Planning (undergraduate, in person) Spring 2020

Presentations

Cheng, Y. "Ranking the Importance of Community Capitals for US County Quality of Life: A Geographical Random Forest Approach." North American Regional Science Council (NARSC) Annual Conference, Philadelphia, PA, November 2026 (scheduled).

Cheng, Y. "Rural Livability." 66th C2ER + LMI Institute Annual Conference, Memphis, TN, June 2026.

Cheng, Y., Conroy, T., & Deller, S.C. "Economic Growth and Quality of Life: A Carlino-Mills Approach." Mid-Continent Regional Science Association (MCRSA) Annual Conference, Chicago, IL, June 2026.

Cheng, Y., Conroy, T., & Deller, S.C. "Temporal Change of Quality of Life." MCRSA Annual Conference, Chicago, IL, June 2026.

Cheng, Y., Conroy, T., & Deller, S.C. "Rural Livability: What's in the Air?" North American Regional Science Council (NARSC), Denver, CO, November 2025.

Cheng, Y., Conroy, T., & Deller, S.C. "Move, Stay, and Commit: Identifying the Most Preferred Places in the U.S." Southern Regional Science Association (SRSA), Louisville, KY, April 2025.

Cheng, Y., Conroy, T., & Deller, S.C. "Multidimensional Measures of Quality-of-Life." SRSA, Louisville, KY, April 2025.

Cheng, Y. "Using Spatial Bayesian Factor Analysis to Measure Livability." Applied Economics Workshop, Department of Agricultural and Applied Economics, University of Wisconsin-Madison, April 2025.

Cheng, Y. "Determinants of Quality of Life: Using the Community Capital Framework." NARSC Annual Conference, New Orleans, LA, December 2024.

Cheng, Y. "Defining Green Occupations: A Task-based Approach." Southern Agricultural Economics Association (SAEA) Annual Meeting, Atlanta, GA, February 2024.

Cheng, Y. "Green Skill Capital and Local Labor Markets: An Application to Appalachia." Agricultural and Applied Economics Association (AAEA) Annual Meeting, Washington, DC, August 2023.

Cheng, Y. "The Impact of Data Resolution from Remote Sensing on the Design of Agricultural Index Insurance." Center for Advanced Innovation in Agriculture (CAIA) Lightning Talk, Virginia Tech, December 2022.

Cheng, Y. "Green Skills and Green Potential Prevalence." Graduate Student Seminar, Department of Agricultural and Applied Economics, Virginia Tech, October 2022.

Cheng, Y. "Green Skills and Green Potential Prevalence." AAEA Annual Meeting (poster), Anaheim, CA, August 2022.

Cheng, Y. "Green Skills and Green Potential Prevalence." Women in Data Science (WiDS) Annual Meeting, Virginia Tech, April 2022.

Cheng, Y. "Using PICES Data to Visualize District-Level Multidimensional Poverty in Zimbabwe." CAIA Big Event, Virginia Tech, March 2021.

Cheng, Y. "Service Provision for Vulnerable Transition Aged Youth in Loudoun County." CAIA Big

Event, Virginia Tech, March 2021.

Cheng, Y. "Greening of Jobs in the U.S.: A Task-based Approach." AAEA Annual Meeting (poster), Atlanta, GA, July 2019.

Community Engagement & Outreach

Public Data Tools

Cheng, Y., Conroy, T., & Boyce, M. (2025). Community Assets Index Interactive Map. University of Wisconsin-Madison, Rural Livability Project.

Cary, M., Chen, S., **Cheng, Y.**, Moy, S., & Peregrino, V. (2023). VCE: Optimizing Extension Agent Services [interactive dashboard]. Virginia Tech Data Science for the Public Good.

Alwang, J., Burkholder, M., Chen, S., **Cheng, Y.**, Gupta, A., Jayapregasham, S., & Rex, A. (2021). Using PICES Data to Visualize District-Level Multidimensional Poverty in Zimbabwe [interactive dashboard]. Virginia Tech DSPG & University of Virginia Biocomplexity Institute.

Burcham, A., Chen, S., **Cheng, Y.**, Gupta, A., Jacobs, R., Katz, A., & Pierce, T. (2021). Appalachian Labor Markets: Preparing for Jobs of the Future [interactive dashboard]. Virginia Tech DSPG & University of Virginia Biocomplexity Institute.

Burcham, A., Bradburn, I., **Cheng, Y.**, Holmes, C., Jacobs, K., Rebstock, J., & Robinson, J. (2021). Service Provision for Vulnerable Transition Aged Youth in Loudoun County [interactive dashboard]. Virginia Tech DSPG & University of Virginia Biocomplexity Institute.

Applied Project Reports

Cheng, Y., Gaede, E., & Conroy, T. (2026). WIndicators: The Impact of Housing Financial Stress and Food Insecurity on Rural Health. University of Wisconsin-Madison Division of Extension.

Public Writing and Media

Gaede, E., **Cheng, Y.**, & Conroy, T. (2026, July 23). Research: Some Rural Residents Are Trading Nutrition for Shelter. *The Daily Yonder*.

Grants & Awards

Grant writing: Co-drafted USDA NIFA proposal, "Rural Livability: A Mixed Method" (UW-Madison)

Award: USDA-AMS/AAEA Food Economics Data Visualization Challenge, 2nd Place (2023)

Travel grant awards:

- Research Travel Grant, Center for Advanced Innovation in Agriculture (CAIA), Virginia Tech, $1,000 (2024)
- Annual Meeting Travel Grant, Agricultural and Applied Economics Association (AAEA), $800 (2023)
- Travel Fund Program, Graduate and Professional Student Senate (GPSS), Virginia Tech, $300 (2023)

Professional Service

Journal referee: *Review of Regional Studies*; *Networks and Spatial Economics*; *Journal of Rural Studies* (3 reviews)

Book chapter reviewer: *Redefining Community Economic Development Through Rural Livability* (T. Conroy & S.C. Deller, Eds.)

Professional Memberships and Affiliations

Agricultural and Applied Economics Association; Southern Agricultural Economics Association; Southern Regional Science Association; North American Regional Science Council

Graduate Student Affiliate Member, Center for Advanced Innovation in Agriculture (CAIA), Virginia Tech, Spring 2023

Skills

Programming:	R, Python, Stata, SQL, MATLAB, JMP
Methods:	Spatial econometrics, Bayesian model averaging, factor analysis, causal inference, machine learning, natural language processing, time series forecasting, remote sensing, survey design
Visualization & GIS:	ESRI ArcGIS, Google Earth Engine, Leaflet, Tableau, R Shiny
Tools:	LaTeX, Git, Microsoft Office, Qualtrics
Languages:	English (Fluent), Mandarin (Native)

References

Dr. Susan E. Chen
Associate Professor
Department of Agricultural Sciences
Clemson University

Dr. Matthew T. Holt
Vice President for Public Service and Agriculture
Dean, College of Agriculture, Forestry and Life Sciences
Clemson University

Dr. Tessa Conroy
Vilas Associate Professor and Extension Specialist
Dept. of Agricultural and Applied Economics
University of Wisconsin-Madison

Dr. Steven C. Deller
Vilas Distinguished Achievement Professor Emeritus
Dept. of Agricultural and Applied Economics
University of Wisconsin-Madison