

Xinran Liu

Department of Economics, University of California, Riverside
xliu342@ucr.edu | (206) 581-3713 | xinranliu.com

Fields of Specialization

Primary: Econometrics

Secondary: Macroeconometrics, Causal Inference, and Forecasting

Education

University of California, Riverside, Riverside, CA
Ph.D. in Economics; Advisor: Marcelle Chauvet

Expected June 2027

University of Warwick, Coventry, United Kingdom
M.Sc. in Economics, with Distinction

2019–2021

Shandong University, Jinan, China
B.A. in Finance

2015–2019

References

Marcelle Chauvet (Advisor)
Professor of Economics
University of California, Riverside
marcelle.chauvet@ucr.edu

Ruoyao Shi
Associate Professor of Economics
University of California, Riverside
ruoyao.shi@ucr.edu

Veronica Sovero
Assistant Professor of Teaching
University of California, Riverside
veronica.sovero@ucr.edu

Job Market Papers

Generated Instruments with Validation Data

Under review

with Dingli Wang

Monetary policy instruments may also capture nonpolicy news. We use historical benchmark data to quantify this instrument error, delivering identified sets and inference that account for weak instruments and validation uncertainty. Across 92 FOMC meetings, the evidence that nominal and real yields both rise is more robust than the conventional conclusion that real yields rise more.

Uniform Inference for Lag-Selected Local Projections

We show that conventional local projection confidence intervals can remain uniformly valid after data-dependent lag selection, without requiring consistent model selection. A sharp condition, covering AIC and BIC under potentially infinite-order dynamics, characterizes when this holds and clarifies the robustness of LPs relative to post-selection VAR inference.

Working Papers

Wasserstein Distributional Synthetic Controls

We construct distributional counterfactuals as Wasserstein-optimal convex mixtures of donor distributions, avoiding the smoothing artifacts of quantile averaging. We prove existence and uniqueness of the entropy-regularized target, a recovery bound, and consistency; in simulations, the method is more stable under tail contamination and better preserves multimodal distributions.

Certifying Donor-Mixture Adequacy in Distributional Synthetic Controls

A donor mixture that matches the risks of interest may still fail to reproduce the full target distribution. We develop finite-sample certificates of this irreducible mismatch, based on adversarial witnesses and requiring no estimation of mixture weights, together with risk-specific confidence bounds and learning and detection guarantees. In 2024 U.S. mortgage applications, three underwriting risks can be jointly approximated within two percentage points, while the full distribution shows a substantially larger, statistically certified mismatch.

Seminars and Conference Presentations

Midwest Econometrics Group (MEG), Cincinnati, OH <i>Generated Instruments with Validation Data</i>	October 2026
Econometrics Colloquium, University of California, Riverside <i>Generated Instruments with Validation Data</i>	October 2026
Asian Meeting of the Econometric Society (AMES), Hong Kong <i>Wasserstein Distributional Synthetic Controls</i>	June 2026

Honors, Awards & Fellowships

Campbell Family Dissertation Fellowship, University of California, Riverside	2026
Outstanding Teaching Assistant Award, University of California, Riverside	2024, 2026
Graduate Division Fellowship, University of California, Riverside	2021–Present

Teaching Experience

Instructor of Record , University of California, Riverside	2025–2026
• World Economic History (ECON 124), Summers 2025 and 2026.	
Teaching Assistant , University of California, Riverside	2022–Present
• Introduction to Statistics (ECON 101); Introduction to Macroeconomics (ECON 003); Intermediate Macroeconomics (ECON 105A, 105B); Introduction to Microeconomics (ECON 002); Intermediate Microeconomics (ECON 104B); Industrial Organization (ECON 162/BUS 162).	
• Led R-based statistics labs and macroeconomics discussions; recorded problem-solving walkthroughs highlighted in ECON 105B student evaluations (Spring 2025).	
Teaching Interests: Econometrics, Statistics, Macroeconomics, Macroeconometrics, Causal Inference, Forecasting, Economic History	

Research Experience

Research Assistant to Professor James Fenske , University of Warwick	2019–2020
• Constructed a longitudinal spatial dataset on India's economic development by integrating historical records and geographic information using ArcGIS for empirical research.	
Research Assistant to Associate Professor Guanting Chen , Tsinghua University	2018–2020
• Prepared and analyzed firm-level panel data for 998 publicly listed Chinese firms and processed high-frequency financial data in Stata to support empirical research.	
Research Assistant to Professor Chicheng Ma , The University of Hong Kong	2017–2019
• Compiled and harmonized historical economic records from multiple sources to construct datasets for empirical research on China's economic history.	

Computing & Languages

Computing: Python (PyTorch, NumPy, pandas, scikit-learn), R, Stata, MATLAB, LaTeX
Languages: Mandarin Chinese (native), English (fluent)