# QI WANG

## CONTACT INFORMATION

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## EDUCATION

**Ph.D. in Statistical Science**, University of California, Santa Cruz — Expected May 2026
**M.S. in Statistics**, University of California, Irvine — Sept. 2019 - May 2021
**B.S. in Applied Statistics**, Central University of Finance and Economics — Sept. 2015 - July 2019

## RESEARCH INTERESTS

Spatial and spatio-temporal processes, deep learning for complex data, time series analysis, Bayesian statistics

## PUBLICATIONS

- **Spatial Deep Convolutional Neural Networks**
  (**Wang, Q.**, Parker, P.A. and Lund, R., 2025. Spatial deep Convolutional Neural Networks. *Spatial Statistics*, 66, p.100883.)

- **Hierarchical Count Echo State Networks With Application to Graduate Student Trends**
  (**Wang, Q.**, Parker, P.A. and Lund, R., 2025. Hierarchical Count Echo State Network Models with Application to Graduate Student Enrollments. *Data Science in Science*, 4(1), p.2565243.)

- **A Spatial-Temporal Study of Planetary Snow Trends**
  (**Wang, Q.**, Parker, P.A. and Lund, R., 2025+ Under review at *Journal of the American Statistical Association*)

## ONGOING RESEARCH PROJECTS

- **A Unified Copula Approach to Dependent Data Modeling via Neural Networks**
  - Developed a deep learning approach for estimating marginal and joint cumulative distributions of dependent data (spatial, temporal, or spatio-temporal) using a Gaussian copula.
- **Change Point Detection for Cell Populations Measured by Flow Cytometry**
  - Utilized neural networks to detect change points in multivariate Gaussian mixture data.
- **Bridging Probability and Nonprobability Sampling: A Review of Methods, Theory, and Integration Strategies**
  - Reviewed theoretical frameworks and recent advances for making valid inferences using nonprobability and integrated survey data.

## PEER REVIEW EXPERIENCE

- *Journal of Statistical Computation and Simulation* (1 Article)
- *Renewable Energies, Environment & Power Quality Journal (REE&PQJ)* (1 Article)

## TEACHING

- **Graduate Student Instructor**: UCSC STAT/CSE-266A (Graduate Level Data Visualization and Statistical Programming in R), Spring 2025.

- **Graduate Student Instructor**: UCSC STAT-07L (Statistical Methods for the Biological, Environmental, and Health Sciences Laboratory), Summer 2021.
- **Teaching Assistant**: UCSC STAT-07 (Statistical Methods for the Biological, Environmental, and Health Sciences), Fall, Winter, Spring 2021, and Winter 2025.
- **Teaching Assistant**: UCSC STAT-131 (Introduction to Probability Theory), Fall 2023.

## AWARDS

- UCSC Dissertation-Year Fellowship ($33,000 plus tuition for the academic year), Spring 2025
- UCSC First Generation Graduate Group Research and Travel Award, Spring 2025
- UCSC Graduate Dean's Research Travel Grant, Winter 2025
- UCSC Regents Fellowships, Spring 2022

## TALKS

- (Topic-contributed Session) 2025 Joint Statistical Meetings(JSM), Hierarchical Count Echo State Network Models with Application to Graduate Student Enrollments in "Hierarchical Modeling and Machine Learning for Complex Survey Data"
- International Symposium on Forecasting 2025, Hierarchical Count Echo State Network Models with Application to Graduate Student Enrollments.
- (Contributed Session) 2024 Joint Statistical Meetings(JSM), Spatial Deep Convolutional Neural Networks in "Recent Advances in Machine Learning Based Methods for Spatio-Temporal Analysis"

## PROFESSIONAL AFFILIATIONS AND SERVICE

- Member, American Statistical Association (ASA)
- Member, Eastern North American Region (ENAR)