

# Qian Zhao

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Assistant Professor  
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Department of Mathematics and Statistics  
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## Employment

<b>Assistant Professor</b> Department of Mathematics and Statistics University of Massachusetts Amherst	2024-Present
<b>Postdoctoral Scholar</b> Department of Biomedical Data Science Stanford University	2022-2024

## Education

<b>Stanford University</b> , Stanford, CA Ph.D., Statistics	2016-2021
<b>University of Chicago</b> M.S., Statistics	2014-2016
<b>Fudan University</b> B.S., Physics	2010-2014

## Publications

*Submitted/In Revision*

**Zhao, Q.**, Service, S., Bearde, C.E., Lopze-Jaramillo, C., Nelson, F., Sabatti, C. (2025). [Mapping beyond diseases: Controlled variable selection for secondary phenotypes using tilted knockoffs.](#)

Walther, G., **Zhao, Q.** (2023). [Beta-trees: Multivariate histograms with confidence statements.](#)

*Published*

**Zhao, Q.**, Candès, E. (2025). [An adaptively resized parametric bootstrap for inference in high-dimensional generalized linear models.](#) *Statistica Sinica*, 35(1).

**Zhao, Q.**, Sur, P., Candès, E. (2022). [The asymptotic distribution of the MLE in high-dimensional logistic models: Arbitrary covariance.](#) *Bernoulli*, 28(3).

Zhu, J., **Zhao, Q.**, Katsevich, E., Sabatti, C. (2019). [Exploratory gene ontology analysis with interactive visualization.](#) *Scientific Reports* 9.

Orlova, D.Y., Meehan, S., Parks, D., Moore, W.A., Meehan, C., **Zhao, Q.**, Ghosn, E.E.B., Herzenberg, L.A., Walther, G.(2018). [QFMatch: Multidimensional flow and mass cytometry samples alignment](#). *Scientific Reports* 8.

## Funding

The Institute of Diversity Sciences Seed Grant 2025-2026  
Title: Are healthy and affordable meals within reach? A geographical analysis of Massachusetts' food affordability

Center for Teaching and Learning Flex Grant 2025

Stanford University, Teaching Advancement Grant 2022

## Honors and Awards

Stanford University, Departmental Teaching Assistant Award 2020

## Presentations

### *Invited Talks*

“Integrating multilevel data to assess Massachusetts food vulnerability.” *Joint Statistical Society Meetings, Nashville, TN, 2025*.

“Beta-Trees: Multivariate histograms with confidence statements.” *New England Statistics Symposium, Storrs, CT, 2024*.

“A resized parametric bootstrap method for inference of a high-dimensional generalized linear model.” *International Conference on Econometrics and Statistic, Virtual, 2024*.

“Near-peer mentoring in data science — two experiences at Stanford University.” *Western North American Region of International Biometric Society Annual Meeting, Fort Collins, 2024*.

“Controlled variable selection with a biased sample using tilted knockoff.” *Department of Statistics, University of Connecticut, Storrs, CT, 2024*.

“Inferring model parameters of a high-dimensional Generalized Linear Model, with application to genetic studies.” *New England Statistics Symposium, Boston MA, 2023*.

### *Contributed Talks*

“Near-peer mentoring in data science — two experiences at Stanford University.” *Western North American Region of International Biometric Society Annual Meeting, Fort Collins, 2024*.

“Beta-trees: Multivariate histograms with confidence statements.” *Western North American Region of International Biometric Society Annual Meeting, Fort Collins, 2024*.

“Selecting genetic variants using knockoffs under collider bias.” *Stanford Causal Science Conference, Stanford, CA, 2022.*

“Forecasting platelet blood bag demand to reduce inventory wastage at the Stanford Blood Center.” *RStudio Conference, San Francisco, CA, 2020.*

#### *Poster Presentation*

“Two research questions arising in selection of participation in statistical inference and selection.” *Institute of Mathematical Statistics New Researchers Conference, Nashville, TN, 2025.*

“Mapping beyond diseases: Controlled variable selection for secondary phenotypes using tilted knockoffs.” *American Human Genetics Society Annual Meeting, Denver, CO, 2024.*

“Co-creating learning experience with students in group data science projects.” *US Conference on Teaching Statistics, State College, PA, 2023.*

## Teaching

### **STAT 310 Fundamental Concepts of Statistics**

University of Massachusetts Amherst

Spring 2024, Fall 2024, Fall 2025

### **STAT690DF Distribution-free methods in statistics**

University of Massachusetts Amherst

Spring 2025

## Student Advising

### **Oral Exam Committee Member**

Junhui Yang

2024

### **Honors Thesis Chair**

Samantha Sheedy

2024

### **Undergraduate Research Mentoring**

Youcef Sabri, Justina Lam, Mari Cornwall-Brady, Samantha Sheedy, Vutjiya Senabunyarithi 2025

### **Independent Studies**

Yaqi Lin

2025

Julia Epshtein

2024

## Service and Outreach

### **University of Massachusetts Amherst**

ADVANCE Faculty Fellow

2024-2025

### **Student Paper Committee**

New England Statistics Symposium

2024-2025

Consortium for the Advancement of Undergraduate Statistics Education Undergraduate Statistics Project Competition 2025

Western North American Region of International Biometric Society Annual Meeting 2023

**Reviewer**

Statistical Methods and Applications, Annals of Statistics, Journal of Graphical and Computational Statistics, Information and Inference

**Outreach**

Stanford Future Advancers of Science and Technology

2020-2023