

# Zhenghao Zeng

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Research Interests	Causal inference, nonparametric statistics, high-dimensional statistics	
Academic Position	<b>Stanford University</b>	Stanford, CA
	Postdoc Scholar at Graduate School of Business	09/2025 – present
	Mentor: Prof. Stefan Wager, Ramesh Johari and Guido Imbens	
Education	<b>Carnegie Mellon University</b>	Pittsburgh, PA
	Ph.D. in Statistics	08/2020 – 08/2025
	Advisor: Prof. Edward H. Kennedy	
	<b>Carnegie Mellon University</b>	Pittsburgh, PA
	M.S. in Statistics	08/2020 – 05/2021
	<b>University of Science and Technology of China</b>	Hefei, Anhui
	B.S. in Statistics	08/2016 – 06/2020
Honors and Awards	Student Paper Award, Statistical Learning and Data Science Section, ASA	2024
	ENAR Distinguished Student Paper Award (International Biometric Society ENAR Spring Meeting)	2023
	Guo Moruo Scholarship (summa cum laude at USTC)	2019
	National Scholarship of China (USTC)	2018
Publications	Levis, A. W., Bonvini, M., <b>Zeng, Z.</b> , Keele, L., and Kennedy, E. H. (2023). Covariate-assisted bounds on causal effects with instrumental variables. <i>Journal of the Royal Statistical Society Series B: Statistical Methodology</i> , qkaf028.	
	Du, J. H., <b>Zeng, Z.</b> , Kennedy, E. H., Wasserman, L., and Roeder, K. (2025). Causal inference for genomic data with multiple heterogeneous outcomes. <i>Journal of the American Statistical Association</i> , (just-accepted), 1-24.	
	<b>Zeng, Z.</b> , Kennedy, E. H., Bodnar, L. M., and Naimi, A. I. (2023). Efficient generalization and transportation. arXiv preprint arXiv:2302.00092. Accepted by <i>Statistical Science</i> .	
	<b>Zeng, Z.</b> , Arbour, D., Feller, A., Addanki, R., Rossi, R., Sinha, R., and Kennedy, E.H. (2024). Continuous Treatment Effects with Surrogate Outcomes. <i>International Conference on Machine Learning</i> , 2024.	

**Zeng, Z.**, Gu, Y., and Xu, G. (2023). A Tensor-EM Method for Large-Scale Latent Class Analysis with Binary Responses. *Psychometrika*, 88(2), 580-612.

He, Y., Meng, B., **Zeng, Z.**, and Xu, G. (2021). On the phase transition of Wilks' phenomenon. *Biometrika*, 108(3), 741-748.

### Preprints

**Zeng, Z.**, Levis, A.W., Lee, J.H., Kennedy, E.H., and Keele, L. (2025). Nonparametric Estimation of Local Treatment Effects with Continuous Instruments. arXiv preprint arXiv:2504.03063.

**Zeng, Z.**, Balakrishnan, S., Han, Y., and Kennedy, E. H. (2024). Causal Inference with High-dimensional Discrete Covariates. arXiv preprint arXiv:2405.00118.

Bonvini, M., **Zeng, Z.**, Yu, M., Kennedy, E. H., and Keele, L. (2023). Flexibly Estimating and Interpreting Heterogeneous Treatment Effects of Laparoscopic Surgery for Cholecystitis Patients. arXiv preprint arXiv:2311.04359.

### Working Papers

**Zeng, Z.**, Arbour, D., Feller, A., Dasgupta, I., Sinha, A., and Kennedy, E. H. Handling Missing Responses under Cluster Dependence with Applications to Language Model Evaluation.

### Experience

**Adobe Research** San Jose, CA  
Research Intern 05/2024 – 08/2024  
Mentors: David Arbour, Ishita Dasgupta, Atanu Sinha and Avi Feller (Berkeley)  
Handling missing responses under cluster dependence with applications to language model evaluation.

**Adobe Research** San Jose, CA  
Research Intern 05/2023 – 08/2023  
Mentors: David Arbour and Avi Feller (Berkeley)  
Continuous treatment effects with surrogate outcomes.

**University of Michigan, Ann Arbor** Ann Arbor, MI  
Research Assistant 06/2019 – 09/2019  
Mentor: Prof. Gongjun Xu  
Large-scale latent class analysis and high-dimensional testing.

### Teaching

**Teaching assistant, Carnegie Mellon University** 08/2020–05/2022  
36-225 Introduction to Probability  
36-401 Modern Regression  
36-402 Advanced Methods for Data Analysis (×2)

**Teaching assistant, USTC** 09/2019 – 05/2020

Single-variable Calculus

Regression Analysis

## Talks

### Econometrics Lunch

Stanford, CA

Causal inference with high-dimensional discrete covariates

01/2025

### International Conference on Computational & Methodological Statistics (CMStatistics)

Virtual

Continuous treatment effects with surrogate outcomes

12/2024

### Joint Statistical Meetings (JSM)

Portland, OR

Causal inference with high-dimensional discrete covariates

08/2024

### American Causal Inference Conference (ACIC)

Seattle, WA

Causal inference with high-dimensional discrete covariates

05/2024

### Causal Inference and Missing Data Group at Inria

Virtual

Efficient generalization and transportation

02/2024

### American Causal Inference Conference (ACIC)

Austin, TX

Causal inference with high-dimensional discrete covariates

05/2023

### International Biometric Society ENAR Spring Meeting

Nashville, TN

Efficient generalization and transportation

03/2023

## Academic Service

### Reviewer

*Annals of Statistics* (1)

*American Journal of Epidemiology* (1)

*Biometrika* (4)

*Biostatistics* (1)

*Electronic Journal of Statistics* (5)

*Journal of American Statistical Association* (4)

*Journal of Causal Inference* (4)

*NeurIPS* (5)

*Statistics in Medicine* (1)

*Statistica Sinica* (1)

### Organizer

CMU Causal Inference Reading Group (2024-2025)