# Zhenghao Zeng

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Research interests Causal inference, nonparametric statistics, high-dimensional statistics

Education Carnegie Mellon University Pittsburgh, PA

Ph.D. in Statistics 08/2020 – Present

Advisor: Prof. Edward H. Kennedy

Carnegie Mellon University Pittsburgh, PA

M.S. in Statistics 08/2020 – 05/2021

University of Science and Technology of China Hefei, Anhui

B.S. in Statistics 08/2016 – 06/2020

Honors and awards 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 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 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.

Zeng, Z., Kennedy, E. H., Bodnar, L. M., and Naimi, A. I. (2023). Efficient gen-

eralization and transportation. arXiv preprint arXiv:2302.00092.

Levis, A. W., Bonvini, M., Zeng, Z., Keele, L., and Kennedy, E. H. (2023).

Covariate-assisted bounds on causal effects with instrumental variables. arXiv

preprint arXiv:2301.12106.

Experience Adobe Research San Jose, CA

Research Intern 05/2023 – 08/2023

Mentors: David Arbour and Prof. 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 experience

## 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

Presentations

### **American Causal Inference Conference**

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

Electronic Journal of Statistics (4)

American Journal of Epidemiology (1)

Journal of American Statistical Association (1)

#### Miscellaneous

#### Coursework

Mathematics and Probability: Mathematical Analysis(A+), Linear Algebra(A+), Real Analysis(A+), Functional Analysis(A+), Advanced Probability Theory(A+),

Stochastic Process(A+), Probability Limiting Theory(A+)

Statistics: Mathematical Statistics(A+), Regression Analysis(A+), Multivariate Analysis(A+), Bayesian Analysis(A+), Nonparametric Statistics(A+), Advanced Statistical Theory(A)

Machine Learning: Advanced Machine Learning(A+), Convex Optimization(A+), Probabilistic Graphical Models(A+), Deep Learning(A+)

Programming: Statistical Computing(A+), Deep Learning System(A), Founda-

tions of Algorithms(A+)