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

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

Zeng, Z., Kennedy, E. H., Bodnar, L. M., and Naimi, A. I. (2023). Efficient generalization and transportation. arXiv preprint arXiv:2302.00092. Accepted by *Statistical Science*.

Zeng, Z., Arbour, D., Feller, A., Addanki, R., Rossi, R., Sinha, R., and Kennedy, E.H. (2024). Continuous Treatment Effects with Surrogate Outcomes. *International Conference on Machine Learning*, 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., Balakrishnan, S., Han, Y. and Kennedy, E. H. (2024). Causal Inference with High-dimensional Discrete Covariates. arXiv preprint arXiv:2405.00118.

Du, J. H., **Zeng, Z.**, Kennedy, E. H., Wasserman, L. and Roeder, K. (2024). Causal Inference for Genomic Data with Multiple Heterogeneous Outcomes. arXiv preprint arXiv:2404.09119.

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.

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.

Working Papers	**Zeng, Z.**, Levis, A.W., Kennedy, E.H., and Keele, L. Nonparametric Estimation of Derivative of Dose-Response Curve: with Application to Estimating Local Instrumental Variable Curves.
	Zeng, Z., Arbour, D., Feller, A., Dasgupta, I., Sinha, A. Missing Response under Cluster Dependence.

Experience	**Adobe Research**	San Jose, CA
	Research Intern	05/2024 – 08/2024
	Mentors: David Arbour, Ishita Dasgupta, Atanu Sinha and Avi Feller (Berkeley)	
	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 ($\times$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)
Electronic Journal of Statistics (5)
Journal of American Statistical Association (2)
Journal of Causal Inference (1)

Organizer
CMU Causal Inference Reading Group (2024-2025)