Publication List

(* means corresponding author, † means equal contribution, ◇ means supervised students)

Journal articles

6. Hao Zeng, Wei Zhong, and Xingbai Xu (2025). Transfer learning for spatial autoregressive models with application to U.S. presidential election prediction. *Journal of Business & Economic Statistics*, accepted.

5. Kangdao Liu, Tianhao Sun, Hao Zeng, Yongshan Zhang, Chi-Man Pun, and Chi-Man Vong (2025). Spatial-aware conformal prediction for trustworthy hyperspectral image classification. *IEEE Transactions on Circuits and Systems for Video Technology*.

4. Hao Zeng, Chuang Wan, Wei Zhong, and Tuo Liu (2024). Robust integrative analysis via quantile regression with homogeneity and sparsity. *Journal of Statistical Planning and Inference*.

3. Chuang Wan†, Hao Zeng*†, Wenyang Zhang†, Wei Zhong†, and Changliang Zou† (2024). Data-driven estimation for multithreshold accelerated failure time model. *Scandinavian Journal of Statistics*.

2. Wenqian Chen, Hao Zeng, Xiaoya Wang, Qiuping Xu, Panpan Liu, Liwei Zhang, Yingyue Hou, Qing Luo, Xueye Liu, Zhe Jiang, Zhiyuan Zhou, Jiang Chen, and Jing Guo (2022). A structural equation modeling approach to determine the correlation between the vertical and sagittal skeletal patterns and posterior basal bones mismatching in patients with skeletal Class III malocclusion. *American Journal of Orthodontics and Dentofacial Orthopedics*.

1. Wenqian Chen, Hao Zeng, Luna Sun, Qiuping Xu, Zhenxue Chen, Yunhan Sun, Qi Jia, Chengyun Liu, and Jing Guo (2021). Match of the bimaxillary basal bone arches and its variations among individuals. *Scanning* 2021(1): 9625893.

Conference papers

3. Hao Zeng†, Kangdao Liu†, Bingyi Jing, and Hongxin Wei (2025). Parametric scaling law of tuning bias in conformal prediction. *Forty-Second International Conference on Machine Learning*.

2. Huajun Xi◇, Kangdao Liu, Hao Zeng, Wenguang Sun, and Hongxin Wei (2025). Robust online conformal prediction under uniform label noise. *Thirty-Ninth Annual Conference on Neural Information Processing Systems*.

1. Kangdao Liu, Hao Zeng, Jianguo Huang, Huiping Zhuang, Chi-Man Vong, and Hongxin Wei (2025). C-Adapter: Adapting deep classifiers for efficient conformal prediction sets. *Twenty-Eighth European Conference on Artificial Intelligence*.

Working papers

12. Jingyi Zhang, Yang Yue, Wei Zhong, and Hao Zeng* (2025). Robust estimation of grouped network vector autoregression: An empirical analysis based on China air quality data. Submitted to *Statistical Research*.

11. Huipeng Huang$^{\diamond}$, Wenbo Liao, Huajun Xi, Hao Zeng, Mengchen Zhao, and Hongxin Wei (2025). Selective labeling with false discovery rate control. Submitted to *ICLR 2026*.

10. Zhenlong Liu$^{\diamond}$, Hao Zeng, Weiran Huang, and Hongxin Wei (2025). High-power training data identification with provable statistical guarantees. Submitted to *ICLR 2026*.

9. Hao Zeng†, Jianguo Huang†, Bingyi Jing, Hongxin Wei, and Bo An (2025). PAC reasoning: Controlling the performance loss for efficient reasoning. Submitted to *ICLR 2026*.

8. Hongfu Gao, Feipeng Zhang, Hao Zeng, Deyu Meng, Bingyi Jing, and Hongxin Wei (2025). Exploring imbalanced annotations for effective in-context learning. Submitted to *ICLR 2026*.

7. Hao Zeng, Huipeng Huang$^{\diamond}$, Bingyi Jing, and Hongxin Wei (2025). Conditional tuning in conformal prediction. Working paper.

6. Hao Zeng, Bingyi Jing, and Hongxin Wei (2025). The double descent of conformal prediction. Working paper.

5. Hao Zeng, Kangdao Liu, Bingyi Jing, and Hongxin Wei (2025). On tuning bias in conformal prediction. Working paper.

4. Hao Zeng, and Jianguo Huang (2025). PAC accelerate: A statistically guaranteed acceleration method for large generative models. Working paper.

3. Hao Zeng, and Jianguo Huang (2025). Group-conditional PAC reasoning: Groupwise efficient reasoning with statistical guarantees. Working paper.

2. Hao Zeng, Wei Zhong, and Jiajun Sun (2025). Test time valid selection of conformal sets via Gaussian stability. Working paper.

1. Hao Zeng, Junxian Liu$^{\diamond}$, Bingyi Jing, and Hongxin Wei (2025). Efficient backward conformal prediction. Working paper.

Software

1. Chuang Wan, Hao Zeng, Wei Zhong, and Changliang Zou (2023). MTAFT: Data-driven estimation for multi-threshold accelerate failure time model. `https://cran.r-project.org/web/packages/MTAFT/index.html`.