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教育经历

邹至庄经济研究院，厦门大学   2020 年 9 月 – 2024 年 6 月

统计学，理学博士，导师：钟威，许杏柏，刘拓

王亚南经济研究院，厦门大学   2018 年 9 月 – 2020 年 6 月

数量经济学，经济学硕士，导师：钟威   转博至统计学博士

数学学院，山东大学   2014 年 9 月 – 2018 年 6 月

数学学士（彭实戈班：金融数学与金融工程基地班）

研究领域

统计机器学习：模型无关统计推断、共型预测、迁移学习
交叉学科研究：大型语言模型、空间统计、计量经济学、生物统计

工作与教学经历

南方科技大学、新加坡国立大学联合博士后项目   2024 年 7 月 – 至今

统计学博士后，导师：荆炳义，魏鸿鑫，周望

统计与数据科学系，新加坡国立大学   2023 年 5 月 – 2023 年 10 月

访问学生，导师：余涛

经济学院，厦门大学   2019 年 9 月 – 2022 年 6 月

助教：高级计量经济学 I（研）、高级概率论（研）、实变函数（本）两次、概率论导论（本）

埃森哲（中国）   2018 年 4 月 – 2018 年 8 月

电力企业管理咨询项目

学术成果

(* 表示通讯作者，† 表示共同贡献，◇ 表示指导学生。)

期刊文章

6. **Hao Zeng**, Wei Zhong, & Xingbai Xu (2025). "Transfer Learning for Spatial Autoregressive Models with Application to U.S. Presidential Election Prediction." **Journal of Business & Economic Statistics**. (已接收，统计学、计量经济学顶级期刊，ABS 4⋆)

5. Kangdao Liu, Tianhao Sun, **Hao Zeng**, Yongshan Zhang, Chi-Man Pun, & Chi-Man Vong (2025). "Spatial-Aware Conformal Prediction for Trustworthy Hyperspectral Image Classification." **IEEE Transactions on Circuits and Systems for Video Technology** 35 (9): 8754–8766. (中科院一区，计算机顶级期刊)

4. **Hao Zeng**, Chuang Wan, Wei Zhong, & Tuo Liu (2024). "Robust Integrative Analysis via Quantile Regression with Homogeneity and Sparsity." **Journal of Statistical Planning and Inference** 234 (January): 106196.

3. Chuang Wan[†], **Hao Zeng**[†]*****, Wenyang Zhang[†], Wei Zhong[†], & Changliang Zou[†] (2024). "Data-driven Estimation for Multithreshold Accelerated Failure Time Model." **Scandinavian Journal of Statistics** 52 (1): 447-468.

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, & 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** 162 (6): e277-294. (封面文章)

1. Wenqian Chen, **Hao Zeng**, Luna Sun, Qiuping Xu, Zhenxue Chen, Yunhan Sun, Qi Jia, Chengyun Liu, & Jing Guo (2021). "Match of the Bimaxillary Basal Bone Arches and Its Variations among Individuals." **Scanning** 2021 (1): 9625893.

会议文章

3. **Hao Zeng**[†], Kangdao Liu[†], Bingyi Jing, & Hongxin Wei (2025). "Parametric Scaling Law of Tuning Bias in Conformal Prediction." **42nd International Conference on Machine Learning (ICML 2025)**. (AI/ML 顶级会议)

2. Huajun Xi[◇], Kangdao Liu, **Hao Zeng**, Wenguang Sun, & Hongxin Wei (2025). "Exploring the Noise Robustness of Online Conformal Prediction." **39th Annual Conference on Neural Information Processing Systems (NeurIPS 2025)**. (AI/ML 顶级会议)

1. Kangdao Liu, **Hao Zeng**, Jianguo Huang, Huiping Zhuang, Chi-Man Vong, & Hongxin Wei (2025). "C-Adapter: Adapting Deep Classifiers for Efficient Conformal Prediction Sets." **28th European Conference on Artificial Intelligence**.

工作论文

19. 张静怡[◇]，岳阳，钟威，曾浩 * (2025). "分组网络向量自回归的稳健估计——以全国空气质量数据分析为例." (已提交至 **统计研究**)

18. **Hao Zeng**, & Chao Liu (2025). "TL-FCSAR: A Transfer Learning Model for Heterogeneous Spatial Effects in U.S. Presidential Elections." (已提交至 **Spatial Statistics**)

17. Wenqian Chen[†], **Hao Zeng**[†], Jiawen Lei, Yuanning Hou, Chunchun Du, Yiyao Zhang, Yi Lin, Xinan Chen, & Tianrong He (2025). "Sex-specific Associations between Craniofacial Skeletal Patterns and Condylar Morphology and Position in Temporomandibular Joint Osteoarthritis: A Three-dimensional Latent Variable Analysis." (已提交至 **Journal of Dentistry**)

16. Huipeng Huang[◇], Wenbo Liao, Huajun Xi, **Hao Zeng**, Mengchen Zhao, & Hongxin Wei (2025). "Selective Labeling with False Discovery Rate Control." (提交至 **The 14th International Conference on Learning Representations (ICLR 2026)**)

15. Zhenlong Liu[◇], **Hao Zeng**, Weiran Huang, & Hongxin Wei (2025). "High-Power Training Data Identification with Provable Statistical Guarantees." (提交至 **The 14th International Conference on Learning Representations (ICLR 2026)**)

14. **Hao Zeng**[†], Jianguo Huang[†◇], Bingyi Jing, Hongxin Wei, & Bo An (2025). "PAC Reasoning: Controlling the Performance Loss for Efficient Reasoning." (提交至 **The 14th International Conference on Learning Representations (ICLR 2026)**)

13. Hongfu Gao, Feipeng Zhang, **Hao Zeng**, Deyu Meng, Bingyi Jing, & Hongxin Wei (2025). "Exploring Imbalanced Annotations for Effective In-Context Learning."(提交至 **The 14th International Conference on Learning Representations (ICLR 2026)**)

12. Xuanning Zhou[◇], Zihao Shi[◇], **Hao Zeng**, Xiaobo Xia, Bingyi Jing, & Hongxin Wei (2025). "Semi-Supervised Conformal Prediction with Unlabeled Nonconformity Score." (已提交至 **The IEEE/CVF Conference on Computer Vision and Pattern Recognition 2026 (CVPR 2026)**)

11. **Hao Zeng**, Bingyi Jing, & Hongxin Wei (2025). "Conditional Tuning in Conformal Prediction."

10. **Hao Zeng**, Bingyi Jing, & Hongxin Wei (2025). "The Double Descent of Conformal Prediction."

9. **Hao Zeng**, Kangdao Liu, Bingyi Jing, & Hongxin Wei (2025). "On Tuning Bias in Conformal Prediction."

8. **Hao Zeng**, & Jianguo Huang[◇] (2025). "PAC Accelerate: A Statistically Guaranteed Acceleration Method for Large Generative Models."

7. **Hao Zeng** (2025). "A Note on the Impossibility of Conditional PAC-Efficient Reasoning."

6. **Hao Zeng**, & Jianguo Huang[◇] (2025). "Group-Conditional PAC Reasoning: Groupwise Efficient Reasoning with Statistical Guarantees."

5. **Hao Zeng**, Jiajun Sun[◇], Bingyi Jing, & Wei Zhong (2025). "Test-time Valid Selection of Conformal Sets via Gaussian Stability."

4. **Hao Zeng**, Junxian Liu[◇], Bingyi Jing, & Hongxin Wei (2025). "Efficient Backward Conformal Prediction."

3. **Hao Zeng**, Wei Zhong, Chuang Wan (2025). "Selective Inference for the Identified Groups in Network Vector Autoregressive Model."

2. **Hao Zeng**, Huipeng Huang[◇], Jianguo Huang[◇], Bingyi Jing, & Hongxin Wei (2025). "HyPAC: Cost-Efficient LLM–Human Hybrid Annotation with PAC Error Guarantees."

1. Xiaoqi Qiu[†◇], **Hao Zeng**[†], Bingyi Jing, & Hongxin Wei (2025). "LLM Provenance Testing via Constrained Model Confidence Sets."

开源软件
1. Chuang Wan, **Hao Zeng**, Wei Zhong, & Changliang Zou (2023). "MTAFT: Data-Driven Estimation for Multi-Threshold Accelerate Failure Time Model." https://cran.r-project.org/web/packages/MTAFT/index.html

学术报告与会议

2021 年全国数量经济学博士生学术论坛 **报告**	*2021 年 12 月，厦门*
2021 年厦门大学现代统计学研讨会 **报告**	*2021 年 12 月，厦门*
NSFC 计量建模与经济政策研究基础科学中心项目 2023 博士生年度论坛 **邀请报告**	*2023 年 11 月，北京*
全国工业统计学教学研究会青年统计学家协会 2024 年年会暨第二届中国青年统计学家论坛 **海报展示**	*2024 年 3 月，徐州*
首届国科大与厦大经济管理统计优秀博士毕业生论坛 **邀请报告**	*2024 年 6 月，厦门*
第二届全国统计与数据科学联合会议 **邀请报告**	*2024 年 7 月，昆明*
第十三届全国概率统计会议 **报告**	*2024 年 11 月，厦门*
第三届全国统计与数据科学联合会议 **海报展示**	*2025 年 7 月，杭州*
第 42 届国际机器学习大会 (ICML) **海报展示**	*2025 年 7 月，加拿大温哥华*
2025 年厦门大学现代统计学研讨会 **报告**	*2025 年 12 月，厦门*

学术服务

期刊审稿人 *International Statistical Review，Journal of Multivariate Analysis，Spatial Economic Analysis，Quarterly Journal of Economics and Management*

会议审稿人 *International Conference on Artificial Intelligence and Statistics (AISTATS), AAAI Conference on Artificial Intelligence(AAAI), International Conference on Machine Learning (ICML), International Conference on Learning Representations (ICLR), IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*

荣誉与奖项

厦门大学经济学院 2022-2023 学年秋季优秀助教	*2024*
Meritorious Winner, Interdisciplinary Contest in Modeling, USA	*2016*
中国大学生数学竞赛省级三等奖	*2016*
中国大学生数学建模竞赛省级二等奖	*2015*
山东大学优秀学生一等奖 (前 5%)	*2015*
山东大学"三好学生"(前 5%)	*2015*