

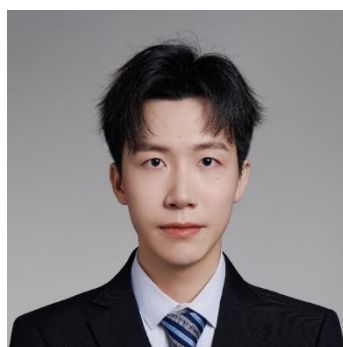
Recipients of the HKSS - John Aitchison Prize in Statistics, 2025-26

It is our pleasure to announce the joint recipients of the HKSS - John Aitchison Prize in Statistics for 2025/26.

Established in 2022 by the Hong Kong Statistical Society (HKSS), the prize is awarded in honor of the distinguished career and contributions of Professor John Aitchison (1926-2016), Chair Professor of Statistics at the University of Hong Kong between 1976 and 1989, and the founder and first President of the HKSS.

The purpose of the prize is to recognize excellence in PhD research, as demonstrated by a research paper, in Statistics or a closely related discipline. The prize is awarded once per year, with its current value set at HK\$12,000. While normally only one award is given annually, the Adjudication Panel may recommend multiple awards.

After careful deliberation, the adjudication panel decided to jointly award the prize for 2025/26 to both Dr Youqian GAO (2025 PhD Graduate at the Chinese University of Hong Kong) and Dr Zhiwei WANG (2025 PhD Graduate at the Hong Kong University of Science and Technology) for their papers, “*Word-Level Maximum Mean Discrepancy Regularization for Word Embedding*” and “*A Unified Framework for Identification of Cell-Type-Specific Spatially Variable Genes in Spatial Transcriptomic Studies*”, respectively.



Dr Youqian GAO



Dr Zhiwei WANG

Dr GAO’s paper has been published in the *Journal of the American Statistical Association*, Vol. 121, Issue 553 (2026). His paper is a joint work with Ben DAI. His paper introduces a novel regularization framework, word-level MMD (wMMD), to address overfitting in word embedding models, a persistent challenge in natural language processing. By explicitly leveraging word-level distribution discrepancies across labels, the proposed method enhances robustness and generalization while effectively serving as a dimension-reduction mechanism. Supported by rigorous theoretical analysis and strong empirical performance on simulated and real-world datasets, wMMD consistently outperforms existing regularization techniques. Dr GAO’s research makes a significant methodological contribution with clear practical relevance, advancing both the theory and application of embedding-based NLP models.

Dr WANG’s paper was published in the *Proceedings of the National Academy of Sciences of the United States of America*, Nov 2025, Vol. 122, No. 46. His paper is a joint work with Yeqin ZENG, Ziyue TAN,

Yuheng CHEN, Xinrui HUANG, Hongyu ZHAO, Zhixiang LIN and Can YANG. His paper presents the Mixture of Mixed Models (MMM), an elegant and powerful framework for identifying cell-type-specific spatially variable genes in spatial transcriptomics data. By directly modeling RNA count data, correcting for platform effects, and accounting for cell type composition, MMM achieves high statistical power while maintaining rigorous error control. Demonstrated across diverse datasets and technologies, including high-resolution and 3D tissue models, the method delivers robust and biologically meaningful discoveries. MMM represents a significant methodological advance, providing a versatile and principled tool for uncovering spatial gene expression patterns underlying complex traits and diseases.

The Adjudication Panel for the 2025-26 award consists of Professor Alan WAN Tze-kin (Chairman) of the City University of Hong Kong, Professor Rob HYNDMAN of the Monash University, and Professor Jinchi LV of the University of Southern California.

The Prize is supported by funds provided by the following sponsors:

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Congratulations once again to Dr Youqian GAO and Dr Zhiwei WANG on their outstanding achievements.