



Department of Data Science

香港城市大學  
City University of Hong Kong

# DS SEMINAR

## From Data to Donations: Optimal Fundraising Campaigns for Non-Profit Organizations

Date: 17 January 2025 (Friday)

Time: 3:00pm - 4:00pm

Venue: Rm 6-209, Lau Ming Wai Academic Building,  
City University of Hong Kong

### ABSTRACT

Non-profit organizations play a vital role in addressing global challenges, yet their financial sustainability often hinges on the effectiveness of their fundraising campaigns. We collaborate with a major international non-profit organization to develop and test data-driven approaches to increase the efficiency of their fundraising efforts. Our partner organization conducts multiple annually recurring campaigns, which are thematically linked. The short lifespan of individual donors necessitates efficient learning of both the connections between campaigns and response patterns across donors. To this end, we propose two learning algorithms that integrate principles from multi-armed bandits and clustering. We provide theoretical guarantees for these algorithms and validate their performance on synthetic and real-world data from our partner organization. The results highlight the potential to significantly enhance the organization's fundraising effectiveness.



### Mr. Zhengchao WANG

#### GUEST SPEAKER'S PROFILE

WANG Zhengchao is a fifth-year PhD candidate at Imperial College Business School, working with Professor Wolfram Wiesemann and Professor Heikki Peura. His research centers on data-driven decision-making, with a focus on leveraging robust optimization and machine learning to address challenges in operations research. His work spans diverse domains, including revenue management, sustainable energy system management, and the operational management of non-profit organizations. Zhengchao's research has been published in *Operations Research* and *Applied Energy*. In addition to his academic contributions, he serves as a reviewer for leading journals, including *Operations Research*, *Operations Research Letters*, and *Applied Energy*, as well as for top artificial intelligence conferences such as NeurIPS, ICML, and ICLR.

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All are welcome