

The Hong Kong University of Science and Technology
Dept of Information Systems, Business Statistics and Operations Management
OM Seminar Announcement



**Dynamic Persuasion Strategies for
Mitigating the Spread of Fake Content**

by

Ms. Wenjuan Li

PhD candidate

Date : **27 Sep 2024 (Friday)**
Time : **11:00a.m. – 12:00p.m.**
Venue : **LSK 1027, LSK Business Building**



Abstract:

Digital platforms have transformed the landscape of content creation and sharing, facilitating unprecedented levels of connection and engagement among users. However, the increasing prevalence of fake news and misinformation presents significant challenges for society. This study examines how digital content platforms can design signaling mechanisms to mitigate the spread of fake content while maintaining profitability. We develop a theoretical model of a monopolistic platform hosting a content creator and serving a heterogeneous consumer population. The platform randomly inspects content to determine the content's authenticity and strategically signals to consumers. We investigate optimal public and private signaling mechanisms. Our findings reveal that neither signaling mechanism can completely mitigate the spread of fake content; specifically, the optimal public mechanism signals fake content only before a deterministic time, while the optimal private mechanism signals fake content only to a subset of consumers. We find that the private mechanism consistently outperforms the public one. Interestingly, our analysis indicates that user reporting systems can enhance the platform's profits and help reduce the spread of fake news. Additionally, we demonstrate the robustness of our analysis through various extensions. This research contributes to the ongoing discourse on managing misinformation on digital platforms while balancing platform profitability and social responsibility

Bio:

Wenjuan Li is a fourth-year Ph.D. candidate in Operations Management at the Department of Information Systems, Business Statistics and Operations Management (ISOM) at the HKUST Business School, supervised by Prof. Dongwook Shin. She received her bachelor's degree in Management from the University of Science and Technology of China and her master's degree in Finance from Johns Hopkins University. Her research interests include platform operations, information design, and dynamic programming.

All interested are welcome!
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