

# The Hong Kong University of Science and Technology

Department of Information Systems, Business Statistics and Operations Management

## Seminar Announcement



### Jump Starting the AI Engine: The Complementary Role of Data and Management Practices

By

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**Date** : **Tuesday, 10 January 2023**  
**Time** : **9:00 am - 10:30 am (Hong Kong Time)**  
[Click here to join Zoom](#)  
**Zoom Details** : **Meeting ID: 967 7602 3919 (Passcode: 733095)**



**Abstract:** Artificial intelligence is transforming business and society, but evidence that AI is boosting productivity is limited. To address this gap, I construct novel measures of AI investment for a large longitudinal sample of publicly-traded U.S. firms, as well as their data and management practices. I find that the average effects of AI investment on the firms' productivity and stock market performance are noisy. However, instrumental variable regressions suggest a strong and sizeable positive causal impact. I also find significant heterogeneity across firms: The distribution of AI investment is skewed, and the impact of AI is only salient for a subgroup of distinctive firms. In particular, AI has a positive effect for firms with more intensive data or management practices, while the marginal effect of AI may not be statistically different from zero if the complementary practices are low. These findings highlight the complementary role of data and management in leveraging AI investment to boost firms' productivity and market value.

**Bio:** I am currently a postdoctoral fellow at Stanford's Institute for Human-Centered Artificial Intelligence Digital Economy Lab and a visiting fellow at NYU Stern Center for the Future of Management. My research stands at the nexus of economics of technology and technical change, future of work and labor, and organizations. I study the impact of digital and information technologies, such as AI and robotics, on future of work, firms and society, how human and organizational capital shape technological innovation and adoption, and these factors' implications for firm behavior, entrepreneurial activities and policy. I am also interested in the diffusion and impacts of advanced technologies and technical skills on firms and workers, and how uncertainty shocks and competition affect firm investment, innovation, and reorganization decisions. I received my Ph.D. in Business Administration from Ross School of Business at the University of Michigan. I hold a BA in Math and Economics from the University of Michigan and an MA in Economics from Duke University.