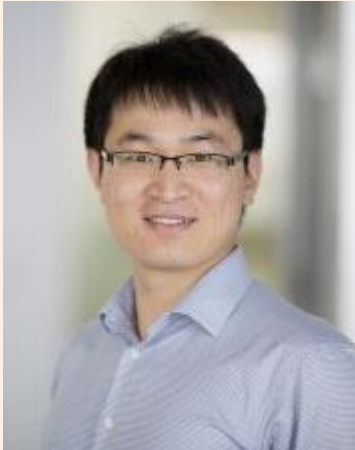


The Hong Kong University of Science and Technology

Dept of Information Systems, Business Statistics and Operations
Management

Dept of Industrial Engineering & Decision Analytics
Joint Seminar Announcement



Integrated Optimization of Farmland Cultivation and Fertilizer Application: Implications for Farm Management and Food Security

**by
Prof. Lusheng SHAO
The University of Melbourne**

Date : **1 March 2024 (Friday)**
Time : **10:30 – 11:45 AM**
Venue : **Room 4047, LSK Business Building**



Abstract:

Motivated by the fresh produce industry, this paper studies a farmer's joint cultivation and fertilizer application decisions facing uncertainties in both the crop's market price and farm yield where yield is stochastically increasing in the fertilizer application rate. We develop a two-stage stochastic program that captures the trade-offs facing a farmer growing a single crop in a single season. We leverage the model to develop some managerial insights and policy implications for farm management and food security. Our analytical analysis is complemented by numerical experiments calibrated to data.

Bio:

Professor Lusheng Shao is a Professor of Operations Management in Faculty of Business and Economics at The University of Melbourne. His research interests include competition in supply chains, contracts and incentives, and more recently, sustainable operations. Professor Shao's research has been published in leading operations journals such as *Operations Research*, *Manufacturing & Service Operations Management*, and *Production and Operations Management*. He is currently an Associate Editor of *Decision Sciences* and an editorial board member of *Production and Operations Management*.

All interested are welcome!
Enquiries: Dept of ISOM