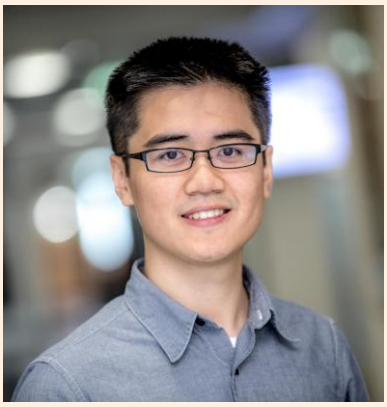
The Hong Kong University of Science and Technology

Dept of Information Systems, Business Statistics and Operations Management
Dept of Industrial Engineering & Decision Analytics
Joint Seminar Announcement



Augmenting the Operations Manager with a Prediction Machine

By

Professor Tao LU

University of Connecticut School of Business

Date	:	**6 November 2026 (Friday)**
Time	:	**10:30 – 11:45 AM**
Venue	:	**Classroom 2003, 2/F, LSK Business Building**

Abstract:
Demand forecasting is central to operations management, and firms look to artificial intelligence (AI)-enabled forecasting engines ("prediction machines") to augment their managers' own forecasting capabilities and thus improve sales-and-operations planning outcomes. Deployment of a prediction machine may cause an unintended reduction in a manager's own forecasting effort, which in turn diminishes the value of machine adoption. We model a firm facing uncertain demand that delegates a procurement quantity decision to a human manager who can exert effort to generate a demand prediction. The firm deploys a machine that provides the manager with a demand-prediction signal. Adopting a Bayesian persuasion approach, we fully characterize the firm's optimal machine disclosure policy and establish when partial-disclosure policies – either exaggerating low predictions or downplaying high predictions – are optimal. Our results prescribe how a firm should tailor its disclosure policy to the product's cost-to-revenue ratio and when it should introduce bias by exaggerating or downplaying the machine's prediction to retain managerial effort. Unless the machine is significantly more accurate than the human, it can be optimal to disclose less information as the machine's prediction capability increases. Information design remains valuable if firms can adjust compensation upon machine deployment, because preserving managerial effort through incentive payments increases agency costs.

Bio:
Tao Lu is an associate professor at the University of Connecticut School of Business. Prior to joining UConn, he taught at Rotterdam School of Management, Erasmus University in the Netherlands. He holds a PhD in Industrial Engineering and Logistics Management from Hong Kong University of Science and Technology. His research interests lie broadly in supply chain management, sustainable operations, platform economics and transport logistics. His work has been published in premier journals such as Management Science, Manufacturing & Service Operations Management, Operations Research, and Information Systems Research. He currently serves as an Associate Editor for Management Science and Service Science.

All interested are welcome!
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