

*The Hong Kong Polytechnic University*  
*Department of Logistics and Maritime Studies*  
*Research Seminar*

## **Dynamic Operations Management with Strategic Customers**

by

**Dr Stephen SHUM**  
**Associate Professor**  
**College of Business**  
**City University of Hong Kong**

**Date: 13 September 2017 (Wednesday)**  
**Time: 10:30am - 11:30am**  
**Venue: V304, Jockey Club Innovation Tower**  
**The Hong Kong Polytechnic University**

**(Conducted in English)**

### **Abstract:**

How should a firm dynamically manage its availability/pricing decisions when facing strategic customers? The talk will cover two studies that attempt to answer this question.

The first study considers a firm's dynamic inventory and markdown decisions for perishable products. Each period consists of two phases, clearance phase and regular-sales phase. Strategic customers may buy the product during clearance sales for future consumption. Hence, markdown may cannibalize future sales at regular price. We show that the firm should either put all of the leftover inventory on discount or dispose all of it, and the choice depends on the amount of leftover inventory from the previous period. This study is joint work with Peng Hu and Man Yu.

The second study considers the dynamic pricing and rationing policy of a firm facing strategic customers under the influence of shortage effect. We provide conditions under which it is optimal for the firm to ration. We also characterize the firm's long-run optimal policy. This study is joint work with Peng Hu and Hanqing Liu.

### **Bio:**

Stephen Shum is an associate professor in the College of Business at the City University of Hong Kong. He received his PhD Degree in Operations Research from MIT, and his bachelor degrees in Electrical Engineering and Mathematics from UCLA. His research focuses in pricing and revenue management, supply chain management, and customer behavior in operations management. Prior to joining the City University of Hong Kong, he was on the faculty of HKUST Business School.

Please email to [irene.lam@polyu.edu.hk](mailto:irene.lam@polyu.edu.hk) for enquiries.

**All are welcome!**