

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

## **Using Game Theory to Mitigate Production Disruption in a Cruise Supply Chain**

by

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**Date: 23 May 2018 (Wednesday)**  
**Time: 10:30am - 11:30am**  
**Venue: R501, Shirley Chan Building**  
**The Hong Kong Polytechnic University**

**(Conducted in English)**

### **Abstract:**

The cruise service supply chain, integrated with cruise lines and cruise service suppliers, provides seamless transition to enhance the best possible passenger experiences. Due to a short resupply window for the vessel and the nature of delayed payments for the suppliers, a written contract is usually executed to avoid the urgency of replenishment. However, disruptions occur due to unforeseen weather issues or over/under estimation of on-board consumption. In response, cruise companies tend to provide incentives when recruiting and renegotiating contracts to reach a mutually beneficial outcome. Game theory with hidden actions of flexibility of suppliers is considered to fix possible adverse selection and moral hazard. Customized incentive mechanisms are further developed for various suppliers with unique industry features.

**Keywords:** Cruise supply chain, disruption of production, natural disaster, game theory

### **Bio:**

Dr. Grace W.Y. Wang is Associate Professor in Maritime Administration at Texas A&M University at Galveston. She received her PhD in Economics from Texas A&M University. Her research focuses are in the areas of port efficiency, port economic impacts, incentive mechanism design in seaport concessions. Her research also includes policy implications of the global banking crises, deposit insurance, and the early warning systems in predicting banking failures. She has published 28 journal papers, 17 conference papers, and 34 research presentations as well as editing journal issues. Her articles have appeared in high-ranked journals such as *Transportation Research Part E: Logistics and Transportation Review*, *Maritime Policy & Management*, *Maritime Economics and Logistics*, *Research in Transportation Business & Management*, *International Journal of Shipping and Transport Logistics*, etc.

Dr. Grace Wang has been recognized several times (2007, 2012, 2013) by the international research best paper awards and awarded grants including from the U.S. Army Corp of Engineers (2015-present) and the International Association of Maritime University (2016-2017). She is also the Vice President for the Academic Affairs of the Transportation Research Forum, and an active member of the International Association of Maritime Economists, Port Performance Research Network, and PortEconomics.eu.

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**All are welcome!**