

# GPRA 2015

## Global Port Research Alliance Conference on “Port and Logistics Connectivity”

### Academic Session D1: Safety and Security

- ❖ **Date:** 22 May 2015
- ❖ **Time:** 11:00am – 12:30pm
- ❖ **Venue:** R1109, R Core (Shirley Chan Building), PolyU

Safety and security are important issues to explore. This session covers important areas in proposing risk assessment approach, defining variables that influencing crew safety, investigating the insurance policy procurement behaviour of maritime pilots, and evaluating the effects of safety climate and safety performance:

- Risk assessment is a critical procedure in the decision-making process regarding effective evaluation of the vulnerability of seaport operations. The first study proposes a house-of-security-based (HOS-based) fuzzy risk assessment approach for organisational security decision-making process and security system design.
- The second study examines crew safety in offshore shipping. The authors use the tools of ordinal logistic regression model (ologit) and generalised ordinal logistic regression model (gologit) to examine the relationship among the study variables.
- The third study investigates factors influencing the insurance policy procurement behaviour of maritime pilots in Taiwan. The authors conduct empirical study by using binary logistic regression to analyse the personalities of pilots. The findings provide insights on the design and promotion of insurance products.
- The fourth study empirically evaluates the effects of safety climate and safety performance in handling of bulk cargo. Based on a factor analysis, seven factors are extracted from the safety climate attributes. The authors also use structural equation modelling (SEM) as a tool to examine safety climate and safety performance.

**Session Chair: Dr Kee-Hung Lai, The Hong Kong Polytechnic University**

<b>Paper Title</b>	<b>Author</b>
A house-of-security-based fuzzy risk assessment approach to measure effectiveness of security management system of seaport	Hong Yan (The Hong Kong Polytechnic University), and Haisha Zheng (Southwest Jiaotong University)
Crew Safety in Offshore Shipping	Carolina de Korte (Allseas Engineering B.V.), and Michele Acciaro (Kühne Logistics University)
The Study of Seafarers’ Insurance Policy Procurement Behaviour: An Empirical Survey of the Marine Pilots in Taiwan	Taih-Cherng Lirn, and Shenchi Yen (National Taiwan Ocean University)
Safety climate and safety performance in dry bulk terminal operations	Chin-Shan Lu, Kee-Hung Lai, Venus Y.H. Lun, and Hsiang Kai Weng (The Hong Kong Polytechnic University)

# GPRRA 2015

## Global Port Research Alliance Conference on “Port and Logistics Connectivity”

### Academic Session D2: Port Research

- ❖ **Date: 22 May 2015**
- ❖ **Time: 11:00am – 12:30pm**
- ❖ **Venue: R1205, R Core (Shirley Chan Building), PolyU**

This session aims to provide research outputs in port studies. These studies consist of conducting content analysis to examine port competition, examining the regional effects of port accessibility, developing calibrated logistics network estimation model for port hinterlands, and using systemic approach to examine the Brazilian New Port Legislation and evaluating its impact.

- The first study aims to gather, categorise, and analyse the works related to port competition published in academic journals. The authors conduct a content analysis to investigate the three clusters of port completion: (1) port selection, (2) port efficiency and performance and (3) port competitiveness.
- The second study examines the positive and negative effects of port accessibility by using the case of Korean leather, bag and shoe industry. On one hand, enhancement of container port accessibility improves productivity and promotes regional agglomeration. On the other hand, it facilitates foreign competitor and low price materials to invade easily into existing domestic markets.
- The third study presents a strategic policy analytic model to describe intermodal freight distribution network and perform policy experimentations. The authors use a multi-stage logistics network model to develop a novel approach to: (1) approximate the locations of the distribution centres on a given continent, and (2) approximate the supply patterns from the seaports to the distribution centres and from the distribution centres to the consumption regions.
- The other two studies of this session deal with the Brazilian New Port Legislation. The fourth study uses a three-step systemic approach to analyse the the main changes resulting from the enactment of the new Law. The next study examines the impact of the he Brazilian New Port Legislation from the perspective of private port operator.

**Session Chair: Dr Ioannis Lagoudis, Malaysia Institute for Supply Chain Innovation**

Title	Author(s)
Port Competition: A Content Analysis	Ioannis Lagoudis (Malaysia Institute for Supply Chain Innovation), Ioannis Theotokas (University of the Aegean), and Dimitrios Broumas (Hellenic Open University)
Spatial Development of Leather, Bag and Shoe Industry and Container Ports in Korea	Yong An Park (Korea Maritime Institute), and Francesca Romana Medda (University College London)
Modelling distribution networks in port hinterlands: method and an application for Europe	Ronald Halim, Jan Kwakkel, and Lorant Tavasszy (Delft University of Technology)
The impact of the Brazilian New Port Legislation from the viewpoint of the Private Operator	Luiza Rosa Fernandes, Guilherme Dalmonechi Thompson de Paula, and Marta Monteiro da Costa Cruz (Federal University of Espirito Santo)
Design System Approach of the Brazilian New Port Legislation	Luiza Rosa Fernandes, Guilherme Dalmonechi Thompson de Paula, G. G. Reis, Marta Monteiro da Costa Cruz, and L. M. Reduzino (Federal University of Espirito Santo)

# GPRA 2015

## Global Port Research Alliance Conference on “Port and Logistics Connectivity”

### Academic Session D3: Supply Chain Management and Safety

- ❖ **Date: 22 May 2015**
- ❖ **Time: 11:00am – 12:30pm**
- ❖ **Venue: R1206, R Core (Shirley Chan Building), PolyU**

Issues of security and safety are important research topics. This session covers four studies to investigate supply chain security, cruise industry safety, supply chain contract typology, and strategies for intermodal development.

- The first study examines securing supply chain by investigating the relationship between Customs-Trade Partnership Against Terrorism (C-TPAT) and firm performance. The authors examine 140 C-TPAT certified firms from U.S listed firms and analyse various indicators by using longitudinal event study methodology.
- The second study examines the underlying factors of cruise ship accidents in the Asian regions by evaluating 48 cruise ship incidents through an intensive review. The authors also develop comprehensive safety measurement for future research and policy making on the Asian regions where cruise industry is in rapid development.
- The objective of the third study is to analyse contractual relations between shipping clines, ports, intermodal operators, and shippers in the context of the buyer-supplier intermodal supply chain typology. Starting from a generic supply chain structure, contractual relationships between members of the port-based intermodal supply chain are modelled using seven variables. A modelling framework is developed in this study and applied to a real case scenario.
- The fourth study investigates the motives and potentials of port landside strategies, and the need to integrate them within the extended intermodal and logistics systems. Various models for port's intermodal integration are reviewed and categorised, and spatial, institutional, and operational constraints are analysed. A framework for appropriate tools of assessment is developed along with generic guidelines for strategy and policy making.

**Session Chair: Dr Khalid Bichou, Imperial College London**

<b>Title</b>	<b>Author(s)</b>
Securing supply chain: Institutional drivers or high reliability mechanism?	Xun Tong, Kee-Hung Lai, Chris K.Y.Lo, and T.C.E Cheng (The Hong Kong Polytechnic University)
A critical review of safety in cruise shipping companies in the Asian regions	Yui Yip Lau (The Hong Kong Polytechnic University), Ka-Chai Tam (Hong Kong Baptist University), and Adolf K.Y. Ng (University of Manitoba)
Analysis of Supply Chain Contract Typology in Intermodal Transport	Khalid Bichou (Imperial College London)
Port Landside Logistics: Strategies for Intermodal Development and Management	Khalid Bichou (Imperial College London)

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## Global Port Research Alliance Conference on “Port and Logistics Connectivity”

### Academic Session D4: Container Shipping Management

- ❖ **Date: 22 May 2015**
- ❖ **Time: 11:00am – 12:30pm**
- ❖ **Venue: R1106, R Core (Shirley Chan Building), PolyU**

This session aims to deal with various issues of container shipping management. The first two studies focus on liner strategic management from the perspectives of internalisation of port congestion and utilisation of maritime container. The third study examines business models.

- The first study builds a theoretical model to illustrate the strategic effect of port congestion internalization. In this study, the authors empirically validate the hypothesis of “given the negative externality of a delay ship on the other ships stopping at the same port, a liner with a higher market share at the port will tend to invest more in improving its on-time performance” with historical data of the west coast ports in North America.
- The second study identifies twenty two strategies leading to optimisation of maritime containers, and classifies these strategies into categories (i.e., pricing, forecasting, operations, collaboration, and customer care). The authors also evaluate twelve factors that potentially impact container inventory management strategies of carriers.
- The purpose of the third study is to identify and analyse business models used by shipping companies and investigate the ways to improve these business models. The contents of this study include: (1) collect information on types of business models, (2) conduct interview with practitioners for result analysis and verification, and (3) provide managerial recommendations based on the analysis.

**Session Chair: Prof. Jin Zhihong, Dalian Maritime University and Mr Lalith Edirisinghe, CINEC Maritime Campus**

<b>Title</b>	<b>Author(s)</b>
Internalization of Port Congestion: Strategic Effect behind Shipping Line Delay	Hamed Hasheminia (San Francisco State University), Changmin Jiang (University of Manitoba), and Anming Zhang (University of British Columbia)
Assessment of Strategies that Lead to Optimization of Utilization of Maritime Containers in Sri Lanka	Lalith Edirisinghe (CINEC Maritime Campus), A.W. Wijeratne (Sabaragamuwa University of Sri Lanka), and Jin Zhihong (Dalian Maritime University)
Analysing business models of liner shipping companies	Hui Neng Wong and Jasmine Siu Lee Lam (Nanyang Technological University)