

LOGMS

6th International Conference on Logistics and Maritime Systems

The University of Sydney Business School CBD Campus

Level 17, 133 Castlereagh Street, Sydney, Australia

20-23 June 2016



THE UNIVERSITY OF
SYDNEY



Queensland University
of Technology

LOGMS 2016 Local Organising Committee

University of Technology,
Sydney
Dikai Liu

University of Sydney
Michael Bell
Behnam Fahimnia
Xiaowen Fu
Collins Teye
Persa Paflioti
Supun Perera

Queensland University of
Technology
Erhan Kozan

MONDAY 20 JUNE (TUTORIALS on Floor 17)

08:00 – 09:00 Registration (Floor 17)

09:00 – 10:30 Tutorial 1

Port Operations and Economics

Xiaowen Fu

10:30 – 11:00 Morning tea (Floor 17)

11:00 – 12:30 Tutorial 2

Container Line Network Design

Rommert Dekker

12:30 – 13:30 Lunch (Floor 17)

13:30 – 15:00 Tutorial 3

Cargo Routing and Empty Container Repositioning

Panagiotis Angeloudis

15:00 – 15:30 Afternoon tea (Floor 17)

15:30 – 17:00 Tutorial 4

Operation Scheduling at Container Terminals

Kap Hwan Kim

17:00 – 19:00 Reception (drinks & canapes) on Floor 16

TUESDAY 21 JUNE (SYMPOSIUM DAY 1)

08:00 – 09:00 Registration (Floor 17)

09:00 – 10:30 Opening (Floor 17)

Opening & Welcome

Michael Bell, Chair of the Local Organising Committee, and Elizabeth Cowley, Deputy Dean of Sydney University Business School

Keynote presentation 1: Rise of the Machines

Hugh Durrant-Whyte

Keynote presentation 2: Green Vehicle Routing

Gilbert Laporte

10:30 – 11:00 Morning tea (Floor 17)

11:00 – 12:30 Industry Panel 1: Stakeholder Industrial Panel
(Floor 17)

Chair: Peter Creeden from Hamburg Süd

12:30 – 13:30 Lunch (Floor 17)

13:30 – 15:30

Session 1A (Floor 17)

Chair: Chung-Yee Lee

Theme: Logistics (Bullwhip effects, data and Industrial logistics)

The Bullwhip Effect of Make-to-Order Manufactures that Consider Rush Order in Two-Stage Decentralized Supply Chain Systems

Yufang Chiu, Chen-An Ma and He-Hsuan Hsu

Industrial Logistic Performance Evaluation: A Case of Bulk Feed Truck Manufacturing Company in Thailand

Kanda Boonsothonsatit and Baromasak Bedavanija

Data Driven Newsvendor Problem

Renrong Weng, Javier Loh, Giulia Pedrielli and Loo Hay Lee

Empirical Investigation of Supply Chain Structure using Network Theory

Supun Perera, Mahendrarajah Piraveenan, Michael Bell and Michiel Bliemer

13:30 – 15:30

Session 1B (Floor 16)

Chair: Panagiotis Angeloudis

Theme: Ports (Port connectivity and efficiency)

Terminal Allocation with Considering Bunker Consumption

Lu Zhen

Optimal Path Design for Mesh-like Structure in GRID System

Chenhao Zhou, Zhi Chao Poh, Ek Peng Chew and Loo Hay Lee

An Integrated Approach for Operational Problems in Dry Bulk Terminals

C. Ozgur Unsal and Ceyda Oguz

Optimizing Service System Designs with Congestion by Conic Optimization Formulations

Julio C. Góez and Miguel F. Anjos

15:30 – 16:00

Afternoon tea (Floor 17)

16:00 – 18:00

Session 2A (Floor 17)

Chair: Shuaian Wang

Theme: Ports (Berth and crane scheduling problems)

Robust Berth Allocation for Minimizing Conflicts with Planned Schedule

Fan Wang, Jinjia Huang and Zhou Xu

The Quay Crane Scheduling Problem with Steel Rope Renewals

Feifeng Zheng, Zizhen Zhang, Yanzhi Li and Songshan Guo

Measurement of Port Operational Performance using Data Envelopment Analysis

Sirawadee Arunyanart

An Integrated Scheduling of Berth and Quay Cranes with Maintenance Activities

Feifeng Zheng, Ying Li and Ming Liu

16:00 – 18:00

Session 2B (Floor 16)

Chair: Thalís Zis

Theme: Maritime (Water freight)

The Potential for Water Freight in the South West UK

Sapna Chacko, Michael Roe and John Dinwoodie

The Cargo Fare Class Mix Problem Extended

Bart van Riessen, Rudy Negenborn and Rommert Dekker

The Impact of Canvasser and Bargaining Agent on Equilibrium Structure of Maritime Service Supply Chain

Fan Wang and Xiaopo Zhuo

Analytical Model to measure Sea Cargo Export Demand in Sri Lanka

Thilini Ranatunga and Baudhi Abeysekara

WEDNESDAY 22 JUNE (SYMPOSIUM DAY 2)

9:00 – 10:30

Industry Panel 2: Supply Chain Industrial Panel (Floor 17)

Chair: Thomas Vitsounis from Data 61

10:30 – 11:00

Morning tea (Floor 17)

11:00 – 12:30

Session 3A (Floor 17)

Chair: Jin Chun

Theme: Logistics (Cross-dock scheduling, Urban consolidation and Warehousing)

Urban Consolidation Centre for Improving Shopping Mall Logistics in Singapore

Giulia Pedrielli, Laura Gunarso, Ek Peng Chew and Loo Hay Lee

Data Driven based Clustering and Routing for Third-party Logistics

Chenhao Zhou, Giulia Pedrielli, Liang Hong Lee, Loo Hay Lee and Ek Peng Chew

Sharing Storage Spaces in Warehouses Owned by Independent Profit Makers

Kap Hwan Kim, Kang Tae Park, Xiao Ruan, Xuehao Feng and Xuefeng Jin

11:00 – 12:30

Session 3B (Floor 16)

Chair: Rommert Dekker

Theme: Maritime (Environment)

Artificial Neural Network Model for Ship Fuel Consumption Prediction with Applications to the In-Service Ship Fuel Consumption Management

Yuquan Du and Qiang Meng

The Implications of Environmental Regulation on Sailing Speed Optimization

Thalis Zis, Panagiotis Angeloudis, Michael Bell and Harilaos Psaraftis

Tactical Bunker Management for Operational Flexibility and Risk Management in SECAs

Stein W. Wallace, Xin Wang and Yewen Gu

12:30 – 13:30

Lunch (Floor 17)

13:30 – 15:30

Session 4A (Floor 17)

Chair: Persa Paflioti

Theme: Ports (Models for optimising port or terminal operations)

Collaborative Subcontracting Delivery Requests for Inter-Terminal Transshipment Containers

Dongwon Jang, Benedikt Vornhusen and Herbert Kopfer

Investigating Alternative Approach to the Gravity Model of International Trade in Evaluating International Trade Policies

Collins Teye, Michael G. H. Bell and Persa Paflioti

Massively Parallelising Genetic Algorithms on Apache Spark to Schedule Straddle Carriers

Haye Lau and Shuai Yuan

A Simulation Optimization based Platform for Container Port Capacity Planning

Haobin Li, Chenhao Zhou, Loo Hay Lee and Ek Peng Chew

13:30 – 15:30

Session 4B (Floor 16)

Chair: Qiang Meng

Theme: Maritime (Liner shipping and freight rate)

Containership Deployment on a Liner Service

Shuaian Wang, Zhiyuan Liu, Xiaobo Qu and Lu Zhen and Hongtao Hu

Multivariate Modelling of Regional Ocean Freight Rates

Roar Adland, Steen Koekebakker and Fred Espen Benth

Will Liner Ships Make Fewer Port Calls Per Route?

Judith Mulder and Rommert Dekker

Resource Sharing Coordination for Carrier Alliances

Zhou Xu, Xiaofan Lai and Liming Liu

15:30 – 16:00

Afternoon tea (Floor 17)

16:00 – 18:00

Session 5A (Floor 17)

Chair: Stein W. Wallace

Theme: Logistics (Network designs and transport operations)

A Coalitional Game-Theoretical Approach to the Design of Express Delivery Service Network Based on Strategic Alliance

Hong Bae Kim, Byung Nam Kim and Chang Seong Ko

Network Design and Transport Operation by Assigning Cargo Aircrafts and Time-Space Network

Shunan Yu and Zhongzhen Yang and Kang Chen

Hybrid Strategies for Order Picking in a Warehouse for Fashion E-Commerce

Giulia Pedrielli, Vinsensius Albert, Ek Peng Chew and Loo Hay Lee

Construction of a Comprehensive Analysis Foundation for an Optimal Nodes Placement

Shinya Mizuno, Yoshikazu Fujisawa and Naokazu Yamaki

16:00 – 18:00

Session 5B (Floor 16)

Chair: Loo Hay Lee

Theme: Ports (Intermodal terminal operations and intermodal transport planning)

Scheduling and Routing of Trucks in Drayage Services with Foldable Containers

Ruiyou Zhang, Haishu Zhao and Shixin Liu

Operational Analysis Approach on Intermodal Terminal Considering Railway Traffic Linked with Container Terminal Based on Simulation

Chun Jin and Jingshu Wang

Integrated Yard Crane Deployment and Storage Allocation in a Transshipment Container Hub

Xinjia Jiang

Case Study of a Refrigerated Warehouse Design and Analysis using i-AOMA

Gyusung Cho and Kwangyeol Ryu

19:00 – 22:00

Conference Dinner (O Bar and Dining)

THURSDAY 23 JUNE (SYMPOSIUM DAY 3)**09:00 – 10:30****Session 6A (Floor 17)****Chair: Kap Hwan Kim****Theme: Industrial Session 1 (Logistics Technologies)****A Study on Pick-Face Blocking Delay between two Pickers in a Wide-Aisle Circular Passage System***Boa nam, Jeonghwan Kim and Soondo Hong***How Much Energy Leaks Through a Loading Dock?***Yong-Joo Kim, Kyung-Ho Moon, Youn Keun Bhang and Jae Hyun Park***Impacts of Mega Vessel and Challenges to Ports***Hyongmo Jeon***A Study on an Order Batching Model Considering the Depot Selection***Jihyun Kim, Thuy Mo Nguyen and Soondo Hong***09:00 – 10:30****Session 6B (Floor 16)****Chair: Collins Teye****Theme: Ports (Straddle Carrier Automation and Routing of AGVs in container terminals)****Straddle Carrier Automation - An Example of Research to Commercialisation***Anil Agrawal and Haya Lau***A Two-Stage Approach for Large Scale AGV Routing in the Automated Container Terminal***Zhipeng Qiu, Ek Peng Chew and Loo Hay Lee***Real-time Deadlock-free Routing for AGV System in Container Terminal***Qitong Zhao, Ek Peng Chew and Loo Hay Lee***10:30 – 11:00****Morning tea (Floor 17)****11:00 – 12:00****Session 7A (Floor 17)****Chair: Kap Hwan Kim****Theme: Industrial Session 2 (Automation in Container Terminals)****Determination of AGV Lane Directions in an Automated Container Terminal for Optimal Traffic Flow***Taekwang Kim and Kwang Ryel Ryu***A Simulation Study of the Operation for an Automated Container Terminal with Overhead and Floor Rails***Jeong Hoon Seo, Xuefeng Jin, Kap Hwan Kim and Byung-Nam Kim***11:00 – 12:00****Session 7B (Floor 16)****Chair: Xiaowen Fu****Theme: Maritime (Carrier Alliances, port connectivity and Maritime transport Policies)****Emission Charge and Liner Shipping Network Configuration- An Economic Investigation of the Asia-Europe Route***Wayne Lei Dai, Xiaowen Fu, Tsz Leung Yip, Hao Hu and Kun Wang***Potential Impacts of International Maritime Transportation Policies on the Pacific Region: A Case Study in Melanesia***Yu Lu, Ryuichi Shibasaki and Hironori Kato***12:00 – 12:45****Conference Closure (Floor 17)****Word from the Chairman of the LOGMS Scientific Advisory Committee***Rommert Dekker***Word from the host of LOGMS 2017***Stein W. Wallace***Word from the host of LOGMS 2016***Michael G. H. Bell***12:45 – 14:00****Lunch (Floor 17)****14:00 – 18:00****Tour of Patrick and DP World Terminals (Meet at the entrance to 133 Castlereagh Street)****LOGMS Scientific Advisory Committee****Michael Bell***University of Sydney***Rommert Dekker***Erasmus University***Erhan Kozan***Queensland University of
Technology***Herbert Kopfer***University of Bremen***Lee Chung-Yee***Hong Kong University of Science and Technology***Kap Hwan Kim***Pusan National University***Tang Loon Ching***National University of
Singapore***Stein W. Wallace***Norwegian School of
Economics*