



# LOGMS 2023

The 11<sup>th</sup> International Conference  
on **Logistics** and **Maritime Systems**

September 4th-7th, 2023

Busan Port International Exhibition & Convention Center(BPEX), Korea



Program Book

Hosted by



Organized by





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## Information

LOGMS 2023 provides a platform for establishing international networks among researchers and practitioners in logistics and maritime systems. The LOGMS conference is a meeting among maritime logistics and systems experts to share research methodologies and results with each other and explore future development directions. We hope that every people in this area can get useful information from this event and contribute to improving this platform.

<b>Title</b>	The 11th International Conference on Logistics and Maritime Systems
<b>Date</b>	September 4th - 7th, 2023
<b>Venue</b>	Busan Port International Exhibition&Convention Center(BPEX) in Busan, Korea
<b>Hosted by</b>	Korea Maritime Institute, Korea, Pusan National University, Korea
<b>Organized by</b>	Research Institute of Intelligent Logistics Big Data (iLB)
<b>Sponsored by</b>	Busan Port Authority Busan Tourism Organization Korea Shipowners' Association POSCO PNU-PIONEER SMART CHAIN Gurobi
	

## Opening Ceremony

### Opening Remarks



**Jong-Deog Kim**

President

Korea Maritime Institute

### Welcome Remarks



**Chung-hwan Jeon**

Vice President for External Affairs

Pusan National University

### Congratulatory Remarks



**Hyun-soo Yoon**

Director General

Shipping and Logistics Bureau, Ministry of Oceans and Fisheries

## LOGMS 2023 Welcoming address

Dear colleagues and participants,

On behalf of the Korea Maritime Institute, I would like to welcome you all to the 11th International Conference on Logistics and Maritime Systems (LOGMS 2023) at the Busan Port International Exhibition & Convention Center (BPEX).

First, I am very pleased to be able to welcome all our long standing members as well as those who are new to the LOGMS. The decision to call this Conference was made last October, in my view, there is no better place than Busan for it to take place, as a port city with its unique history, can surely be the inspiration for all of us during the conference.

At present, significant changes due to geopolitical factors and a downturn in the global economy has resulted in the global supply chain becoming increasingly unstable, thus, a new international logistics system has been formed. In addition, the smartization of ports has accelerated with the development of language models such as ChatGPT having the potential to revolutionize the logistics industry.

Therefore, under the theme of "Data-driven logistics and maritime systems", LOGMS 2023 provides a timely forum in Busan for the discussion of these and other issues that are transforming maritime logistics, while helping to broaden our professional networks and share up-to-date research outcomes.

Finally, I am excited to welcome you to LOGMS 2023 again, and with active participation, we hope to fuel positive contribution to the development of maritime logistics.

Jong-Deog Kim  
President  
Korea Maritime Institute

## Committees

### Honorary Chair

Sung-Jin Kim Chair, Forum for Next Logistics Technology (NeLT), Korea

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Hyerim Bae Pusan National University, Korea

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 Panagiotis Angeloudis Imperial College, UK  
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Umji Kim Korea Maritime Institute, Korea

### Main assistants

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 Gwanguk Han Pusan National University, Korea  
 Boonchae Park Pusan National University, Korea

## Keynote Presentation 1 .....



### Port Digitalization – The case of Rotterdam

#### Prof. Rommert Dekker

Rommert Dekker is a full professor of Quantitative Logistics and Operations Research at the Erasmus University Rotterdam. He has worked on several fields, like supply chain management, reverse and sustainable logistics and transportation. Yet, supporting the port of Rotterdam has long been his special desire. Starting initially with supporting container terminals with automation, he turned to optimizing other port processes especially related to maritime and hinterland transport. Apart from publishing about optimization solutions these problems, he supported many port companies with help of his students.

#### Abstract

Digitalization is more than digitizing; it implies changing existing and creating new processes into a digital way. This opens opportunities for computerized decision making. In this presentation we discuss several steps on digitization the port of Rotterdam has taken in the last decade.

We start with initiatives with other ports on setting standards for data definitions. We highlight the importance of data standardization for further developments. The port authorities very much stimulated the creation of start-ups bringing digitalization to the next level. Next, we switch to AI tools predicting ship arrivals in the ports, which act as a basis to improve planning by several organizations in the port, such as pilots, bunkers, tugs etc. Another step has been the development of information providing and cargo exchanging platforms for hinterland transport. Another example we would like to mention is OptiPort, providing a scheduling tool for tugs, not only in Rotterdam, but also in some US ports. As Rotterdam is a tri-modal port, with a very important share of barges bringing containers to the hinterland, we discuss the waiting times many barges have experienced so far. Some support tools were developed to facilitate mooring places for barges. A very sophisticated planning tool, called Nextlogic, was developed to plan barge visits to several terminals in the port, which, after a very long testing period, has finally gone live. All these examples show that digitalization is proceeding, but it is far from easy, especially if many organizations have to cooperate.

## Keynote Presentation 2 .....



### Global Uncertainty and Sustainable SCM in S.Korea

\*Subtitle : Supply Chain Leadership : POSCO FLOW Case Study

#### Kihyung Kim, Ph.D

Currently, he is working as the leader of domestic contract section of POSCO Flow Domestic Steel Group, and teaches SCM at Dankook University graduate school.

As the leader of POSCO Logistics Integration TF, he established POSCO Group's logistics future strategy and promoted logistics innovation. He served as POSCO International Smart Logistics PJT Leader and POSCO China China Logistics Team Leader. His main thesis was on ESG (Supply Chain Growth), and he received a PhD in Logistics Management and a Master's in International Logistics.

#### Abstract

The presented content covers several key aspects of the logistics industry.

It begins by discussing digital transformation and its impact on transportation and services. The concept of "deglobalized supply chains" influenced by the pandemic is explored, followed by insights into the Ukraine conflict's effects on prices and supply chains. Environmental, social, and governance (ESG) issues are highlighted in the context of corporate responsibility and sustainability. Stakeholders, including associations, labor, academia, and government bodies, are examined.

Notable case studies from companies like POSCO Flow demonstrate efforts in environmental conservation, community support, and collaboration with partners.

The role of major enterprises in driving transformative changes within the supply chain is emphasized as a means of achieving Win-win growth and enhanced performance.

# Program

## Program at a Glance

	4 September (Mon.)	5 September (Tue.)				6 September (Wed.)				7 September (Thu.)						
09:00 ~ 10:00	Registration	Opening Ceremony (Conference Hall A,F)				Room A Port Logistics II (WA1)	Room B Smart Logistics I (WB1)	Room C SCM and OM II (WC1)	Room D Manufacturing and Warehousing (WD1)	Industry Tour (Busan New Port)						
10:00 ~ 10:30						Coffee Break					Room A Terminal Operation II (WA2)	Room B Smart Logistics II (WB2)	Room C SCM and OM III (WC2)	Room D Data-driven Logistics I (WD2)		
10:30 ~ 11:00																
11:00 ~ 12:00		Lunch (Coference Hall A, F)				Room A Terminal Operation III (WA3)	Room B Green Logistics (Code : WB3)	Room C SCM and OM IV (Code : WC3)	Room D Data-driven Logistics II (WD3)	SIG Meeting						
12:00 ~ 12:30																
12:30 ~ 13:00		Coffee Break				Room A YOURS Session (TA4)	Room B Industrial Session II (TB3)	Room C Port Logistics I (TC4)	Room D SCM and OM I (TD4)	Room A Best Paper Award (WA4)	Room B Decarbonization of Maritime Industry (WB4)	Room C Maritime Transportation (WC4)	Room D Data-driven Logistics III (WD4)			
13:00 ~ 14:00																
14:00 ~ 15:00		YOURS Dinner Meeting (Invited Only)				Industrial Dinner Meeting (Invited Only)				Banquet / Closing Ceremony (Coference Hall A, F)						
15:00 ~ 15:30																
15:30 ~ 16:00		SIG Meeting				YOURS Dinner Meeting (Invited Only)				Industrial Dinner Meeting (Invited Only)				Banquet / Closing Ceremony (Coference Hall A, F)		
16:00 ~ 17:00																
17:00 ~ 17:30	SIG Meeting				YOURS Dinner Meeting (Invited Only)				Industrial Dinner Meeting (Invited Only)				Banquet / Closing Ceremony (Coference Hall A, F)			
17:30 ~ 18:00																
18:00 ~ 18:30	SIG Meeting				YOURS Dinner Meeting (Invited Only)				Industrial Dinner Meeting (Invited Only)				Banquet / Closing Ceremony (Coference Hall A, F)			
18:30 ~ 19:30																

- Room A : Conference Room 1+2
- Room B : Conference Room 3+4
- Room C : Conference Room 6+7
- Room D : Conference Room 8+9

# Program

## 5 September Tue.

Opening Ceremony (Conference Hall A,F)				
10:00 ~ 10:30	<b>Opening Remarks</b> Jong-Deog Kim (Korea Maritime Institute / President) <b>Welcome Remarks</b> Chung-Hwan Jeon (Pusan National University / Vice President for External Affairs) <b>Congratulatory Remarks</b> Hyun-soo Yoon (Shipping and Logistics Bureau, Ministry of Oceans and Fisheries / Director General)			
10:30 ~ 12:30	<b>LOGMS2023 Overview</b> Hyerim Bae (Pusan National University / Professor) <b>Keynote Speech ①</b> Rommert Dekker (Erasmus University, Netherlands / Professor) <b>Keynote Speech ②</b> Kihyung Kim (POSCO FLOW Domestic Logistics Contract Section / Leader)			
12:30 ~ 14:00	Lunch (Conference Hall A,F)			
	Room A (Conference Room 1+2)	Room B (Conference Room 3+4)	Room C (Conference Room 6+7)	Room D (Conference Room 8+9)
	<b>Memorial Session [ TA3 ]</b> Co-chairs : Il-Kyeong Moon, Haobin Li	<b>Industrial Session I [ TB3 ]</b> Co-chairs : Sung-Jin Kim, Sewon Kim	<b>Terminal Operation I [ TC3 ]</b> Co-chairs : Hang Yu, Mingzhong Huang	<b>Port Economics [ TD3 ]</b> Chair : Yi Xiao
	Improving Resilience in an Intermodal Transport Network via Bulk Cargo Transport Coordination and Empty Container Repositioning	Enterprise Intelligenitization of Semiconductor Manufacturing in Taiwan	Benders Decomposition for Stack-based Yard Template Generation in Automated Container Terminal	Accident Risk Analysis of At and Near-Port Areas Reflecting Regional Heterogeneous Characteristics
	<b>Xuehao, Feng,</b> Zilong Wang, Guangqiong Ye	<b>Morris Fan</b>	<b>Mingzhong Huang,</b> Hang Yu, Junliang Hec, Caimao Tan	<b>Nuri Park,</b> Hyeonsoo Kim, Juneyoung Park
	Multi-Objective Optimization for Container Truck Haulage Scheduling Problem: A Case Study in Singapore	A Study on Technology Development Strategy and Operation Process for Introducing Piggyback Transportation System	<b>Online</b> Integrated Scheduling of Container Terminals Research--A Classification Review	Research on the Framework for Measuring Port Resilience Under the Epidemic
	Xin Chu, <b>Haobin Li,</b> Ek Peng Chew	Wookeol Cho, <b>Soyoung [Iris] You,</b> Inmook Lee, Yongjang Kwon	<b>Zhihao Deng,</b> Min Tu	<b>Jing Wu,</b> Min Tu, Junjie Li
14:00 ~ 15:30	Analysis on Cyclic Delivery Services of Shuttles and Cargo Bikes in Residential Last-Mile Deliveries	Green network design for finished vehicle logistics: Case study of the automobile industry in South Korea	Scheduling Optimization of Container Terminal Yard Crane Considering Noise Influence	Considering the Influencing Factors Uncertainty and Interpretability for Ship Detention in Port State Control Based on Uncertain Random Forest
	<b>Byung Kwon Lee,</b> Young Joo Kim, Young Ho Rhee	Jinsung Kim, Keyju Lee, <b>Jaejun Lee</b>	<b>Yuan Hanbo,</b> Takashi Irohara	<b>Yi Xiao,</b> Xianping Du, Kevin Li
	Real-Time Policy for Yard Allocation of Transshipment Containers	Introduction to Siemens SILs and HILs Solutions for TMS	Optimal Job Assignment and Path Finding of Autonomous Yard Tractors to Minimize Traffic Congestion in Automated Container Ports	Framework for a Comprehensive Port Index System for Container Ports Based on the Best Practices
	<b>Abdo Abouelrous,</b> Rommert Dekker, Laurens Bliet, Yingqian Zhang	<b>Franz S. Kim</b>	<b>Donghyun Kang,</b> Jeonghwa Lee, Hoon Lee, Taesun Yu	<b>Yanan Li,</b> Vedpal Arya, Cao Xinhua, Haobin Li, Ek Peng Chew
		Coffee Break (15:10-15:20)		Price-Cutting or Incentive? Differentiated Competition Between Regional Asymmetric Ports
		<b>Industrial Session II [ TB3 ]</b> Chair : Sung-Jin Kim		<b>Bo Lu,</b> Lijie Fan, Huipo Wang, Shiyuan Zheng, Ilkyeong Moon
		Stepwise Implementation of Digital Twins for Container Terminals		
15:30 ~ 16:00	Coffee Break	<b>Holger Schütt</b>	Coffee Break	

# Program

## 5 September Tue.

	Room A (Conference Room 1+2)	Room B (Conference Room 3+4)	Room C (Conference Room 6+7)	Room D (Conference Room 8+9)
	<b>YOURS [ TA4 ]</b> Chair : Jun-Hee Han	<b>Industrial Session II [ TB3 ]</b> Chair : Sewon Kim	<b>Port Logistics I [ TC4 ]</b> Chair : Branislav Dragović	<b>SCM and OM I [ TD4 ]</b> Chair : Shengnan Shu
	Influence Index Analysis of Inland Waterway Ports along the Yangtze River	HD Hyundai's AI Solutions for Future Autonomous Ship	Multi-Dimensional Port and Change of Urban Logistics System	Modeling the Equilibrium of Global Shipping Markets: A Cyclic Spacetime Supernetwork Approach
	<b>Yanjie Zhou</b> , Liping Luo, Qian Qian Zhao, Haonan Chen, Zehao Qian	<b>Hyung-Taek Kim</b>	<b>Bo-Kyung Kim</b> , Hye-Ryeong Lee, Min-Jeong Park	<b>Zhongjun Ma</b> , Xi Lin, Xiwen Bai
	Joint Optimization of Vessel Plan and Ticket Pricing in Archipelago Scenic Area	ChainPortal ; The case study of data sharing platform based on blockchain in Busan port	Research on Evaluation of Multimodal Transport hub Based on the Systems Theory—A Case of Port Luoyang in China	Optimizing Continuous-Time Service Network Design with Holding Costs
	<b>Dengke Li</b> , Xuehao Feng	<b>Kyungcheol Park</b>	<b>Zehao Fang</b> , Tu Min	<b>Shengnan Shu</b> , Zhou Xu, Roberto Baldacci
	Optimal Demurrage and Detention Processes under Uncertainty	<b>Coffee Break (16:10-16:20)</b>	Route Evaluation and Ship-Scheduling on Container Shipping with Linear Programming Method by Randomly Generated Routes Algorithm	Supplier Selection and Order Allocation Problems with the Uncertainty of Supply Disruptions and Demand Fluctuations
		<b>Industrial Session III [TB4]</b> Chair : Sung-Jin Kim		
<b>16:00 - 17:30</b>	<b>Yoonjea Jeong</b> , Gwang Kim, Youngchul Shin, Changseong Ko, Lu Bo, Ilkyeong Moon	<b>Discussion (16:20-17:20)</b> Chair : Sung-Jin Kim (NeLT Chair, Korea) - Morris Fan - Holger Schütt - Kap Hwan Kim - Rommert Dekker	<b>Christine Natalia</b> , Ching-Jung Ting, Yun-Chia Liang, Christoforus Jason	<b>Jongmin Lee</b> , Ilkyeong Moon
	Sequence Prediction for Flexible Covering and Routing Allocation Problem (FCRP) in Recycling Facilities for Supply Uncertainties		Influential Scholars in the Logistics and Maritime Systems	Adaptive Inventory Replenishment Using Structured Reinforcement Learning by Exploiting an Optimal Policy Structure
	<b>Prita Meilanitasari</b> , Maulin Masyito Putri, Muhammad Faisal Ibrahim		<b>Andro Dragović</b> , Nenad Zrnić, Branislav Dragović	<b>Hyungjun Park</b> , Dong Gu Choi, Daiki Min
	Spatial-Temporal Analysis of the Relationship Between Ship Activities and Port Pollution Using Automatic Identification System and Explainable AI			Analyzing the Impacts of COVID-19 on Maritime Supply Chains: Enhancing Resilience through Organizational and Technological Measures
	<b>Sunghyun Sim</b>			<b>Syahirah Muyassarah Binte Aziz</b> , Vedpal Arya, Haobin Li, Ek Peng Chew
	Some Optimization Cases in Supply Chain Management			
	<b>Kyuhyeon Shin</b>			
	Gurobi 101 & Academic Program			
	<b>Chung-Kyun Han</b>			

# Program

## 6 September Wed.

	Room A (Conference Room 1+2)	Room B (Conference Room 3+4)	Room C (Conference Room 6+7)	Room D (Conference Room 8+9)
	<b>Port Logistics II [ WA1 ]</b> Chair : Leonard Heilig	<b>Smart Logistics I [ WB1 ]</b> Chair : Yun-Chia Liang	<b>SCM and OM II [ WC1 ]</b> Chair : Angela Hsiang-Ling Chen	<b>Manufacturing and Warehousing [ WD1 ]</b> (Session of HRD Project in Circular Manufacturing industry) Co-chairs : You-Jin Park, Soondo Hong
	Identify Key Indicators to Conduct Demand Forecasting for Container Shippers and Bulk Carriers	Application of a Harmony Search Algorithm on Electric Vehicle Routing Problem	A Stacked RFM Model for Customer Behavior Segmentation	A Case Study of Data-Driven Yard Template Planning with Feature Engineering
	<b>Chih-Hsuan Wang</b>	Yun-Chia Liang, <b>Vanny Minanda</b>	Angela Hsiang-Ling Chen, <b>Sebastian Gunawan</b>	<b>Bonggwon Kang</b> , Permata Vallentino Eko Joatiko, Jungtae Park, Zhuo Sun, Soondo Hong
	Real-Time Risk Detecting Algorithm in Port with IoT Technologies Using Simulations	Solving the Inter-terminal Truck Routing Problem for Delay Minimization Using Simulated Annealing with Normalized Exploration Rate	The Function of Third-Parties in International Sale: A Game-Theoretic Analysis	A Cluster Impurity-based Resampling Technique for Imbalanced Classification Problem
<b>09:00 - 10:30</b>	<b>Hojae Kim</b> , Seung-oh Son, Hyeonseo Kim, Sungjun Lee, Juneyoung Park	<b>Muhammad Hanif Ramadhan</b> , Imam Mustafa Kamal, Dohee Kim, Hyerim Bae	<b>Kevin Li</b> , Yuhan Zhu, Yi Xiao	<b>You-Jin Park</b>
	Digital Twins in Seaports: Case Studies and Implementation in the Port of Hamburg	Incorporating Time-Dependent Uncertainty in Optimizing Flight Retiming	A Simulation Model of Entrance Queue at a Passenger Railway Station in Jakarta	Genetic Algorithm for Twin Crane Job Assignment Problem
	<b>Leonard Heilig</b>	Jing Zhu, Yu Liu, Hong Ma, <b>Zhou Xu</b>	<b>Shakrya Ayudia Manou</b> , Aine Rahmawati, Frans Yohanes, Muhammad Ronaldy, Yelita Anggiane Iskandar, Rahmad Inca Liperda	<b>Bosung Kim</b> , Jeongtae Park, Soondo Hong
	A Study on the Status of Standards Between Ships and Ports and Considerations for Future Standard Development	Flight Rescheduling of Airline under Ground Delay Program Considering Delay Propagation in Multiple Airports		
	<b>Jinhong Lim</b> , Hyerim Bae	<b>Jiyeon Lee</b> , Ilkyeong Moon, Changseong Ko		
	Maritime Logistic Efficiency Improvement Quantitative Analysis Based on the Development of Smart Port Technology			
	<b>Jeongon Eom</b> , Sewon Kim, Eon-Kyung Lee, Jisung Jo			
<b>10:30 - 11:00</b>	<b>Coffee Break</b>			



## Program

### 6 September Wed.

	Room A (Conference Room 1+2)	Room B (Conference Room 3+4)	Room C (Conference Room 6+7)	Room D (Conference Room 8+9)
	<b>Terminal Operation II [ WA2 ]</b> Chair : Seunghwan Won	<b>Smart Logistics II [ WB2 ]</b> Chair : Liangqi Cheng	<b>SCM and OM III [ WC2 ]</b> Chair : Koichi Nakade	<b>Data-driven Logistics I [ WD2 ]</b> [Session of DS Graduate school [Data Science]] Chair : Kihun Kim
	<b>Online</b> Cause Analysis and Operation Strategies for Safety Accidents in Overhead-Shuttle Container Terminals	Analysis of Coordinated Development of Multimodal Transport Entities: A Case Study of Wuhan-Ezhou-Huanghuang City Clusters	Worker Scheduling Problem under Task-Switching Policy for Order Picking and Packing Process in Warehouses	A Method for Forecasting Inter-Regional Freight Demand of Fine-Categorized Commodities Based on High-Fidelity Spatial Economic and Multimodal Transportation Supernetwork Modeling
	<b>Sungwoo Cho,</b> Seunghwan Won, Eon-Kyung Lee	<b>Haoran Xu,</b> Min Tu, Bin Zhao	<b>Thao Huong Tran-Vo,</b> Soondo Hong	<b>Ming Zhong,</b> Zongbao Wang, Guihua Deng, Muhammad Safdar, John Douglas Hunt
<b>11:00 ~ 12:30</b>	Performance Analysis of Different Types of Container Storage Yard Systems	Research on Optimization of Hub-And-Spoke Multimodal Transport Network	An NPV Analysis of Opportunity-based Age Replacement Models in Discrete-Time	A Study on the Prediction of the Industrial Scale of Dynamic Positioning Systems in the Offshore Wind Farm Industry Using System Dynamics
	<b>Wei Lin, Seunghwan Won,</b> Eon-Kyung Lee	<b>Bin Zhao,</b> Min Tu, Haoran Xu	<b>Jing Wu,</b> Cunhua Qian, Tadashi Dohi	<b>Jeong-Min, Kim,</b> Sang Seop, Lim, Byeong-Deok, Yea
	A Branch-and-price Algorithm for the Integrated Berth Allocation and Yard Assignment Problem in Bulk Cargo Port	A Tailored Optimization Methodology for Direct Transshipment	Job Shop Scheduling to Minimize the Electricity Cost under the Variable Cost Rate Over Time	Deep Q-Learning Design for Schedule Generation for Non-Zero Ready Times of Uniform Parallel Machines
	<b>Jiefu Yang,</b> Defeng Sun	<b>Liangqi Cheng,</b> Xi Lin, Xiwen Bai	Kaito Nakanishi, <b>Koichi Nakade</b>	<b>Yelita Anggiane Iskandar,</b> Taufik Nur Adi, Muhammad Hanif Ramadhan, Hyerim Bae, Hyemee Kim
	-	Characteristic Analysis for Autonomous Vehicle Routing with Constrained Random Walk on Road Network	-	Shortest Path Calculation Algorithm for Multiple Demand
	-	<b>Da-Young Lee,</b> Hwan-Gue Cho	-	<b>EunGyu Seo,</b> Hwan-Gue Cho
<b>12:30 ~ 14:00</b>	Lunch [Conference Hall A,F]			

## Program

### 6 September Wed.

	Room A (Conference Room 1+2)	Room B (Conference Room 3+4)	Room C (Conference Room 6+7)	Room D (Conference Room 8+9)
	<b>Terminal Operation III [ WA3 ]</b> Chair : Defeng Sun	<b>Green Logistics [ WB3 ]</b> Chair : Sang Jeong Lee	<b>SCM and OM IV [ WC3 ]</b> Chair : Gang Dong	<b>Data-driven Logistics II [ WD3 ]</b> [Session of SCSC Research Center] Chair : Sunghyun Sim
	A Decomposition Method for the Group-based Quay Crane Scheduling Problem	Government Subsidy Allocation on Zero-Carbon Technology Adoption in A Green Shipping Corridor	Distribution Decision for the COVID-19 Vaccine in Humanitarian Supply Chain	Comparative Evaluation of Vae-based Monitoring Statistics for Real-Time Anomaly Detection in Ais Data
	<b>Defeng Sun,</b> Lixin Tanga, Roberto Baldacci, Zihan Chen	<b>Sang-Jeong Lee,</b> Qiang Meng	<b>Gang Dong,</b> Jin Li, Paul Tae-Woo Lee	<b>YongKyung Oh,</b> Kwonin Yoon, Jaemin Park, Sungil Kim
	An MCTS-Enhanced Algorithm for the Dynamic Container Relocation Problem	Life Cycle Analysis of Alternative Fuels for Inland Ships in the Yangtze River Delta	A Mixed-Integer Linear Programming Model for COVID-19 Vaccine Distribution in Indonesia	Application of Machine Learning to Ship Classification and Deficiency Association in Port State Control
	<b>Zhanluo Zhang,</b> Kok Choon Tan, Keyi Xu, Wei Qin, Ek Peng Chew	<b>Jun Yuan</b>	<b>Dominico Laksma Paramestha,</b> Yun-Chia Liang	<b>Yi-Yang Hung,</b> Wu-Hsun Chung, Chien-Chung Yuan, Li-Jen Liu
<b>14:00 ~ 15:30</b>	Sequencing Ship Operations Considering Dual Cycling and Detail Cycle Time	Hazardous Wastes Reverse Logistics Network Operation Optimization for Cruise Construction Under HSE Management Perspective	Shelf-Life Extension of Fresh Fruits and Vegetables Using BT100 for Even Sustained Release of Chlorine Dioxide	Data-driven Optimization of Maritime Logistics Autonomous Vessel Platooning Network Using Online Submodular Optimization
	<b>Baolin Wen,</b> Xuehao Feng, Kap-Hwan Kim	<b>Huilin Li,</b> Jiaqi Yang, Wei Zhang, Qiwen Zhang, Yuanjia Guan	<b>Shambhavi Sharma,</b> Duckshin Park	<b>Sang Yoon Cha</b>
	Optimization-based Evacuation on Cruise Vessels Using Two-way Communication	Predictive Analysis of Fuel Oil Consumption in Vessels: Interpretable Modeling with Emphasis on Load Conditions	Immobilized Celite/Zinc Oxide/ High-Density Polyethylene Composite for Use in Active Packaging of Seafood Products	A Study of Forecasting on National Grain Cargo Volumes Using System Dynamics
	<b>Andres Velez,</b> Stein W. Wallace	<b>Melia Putri Handayani,</b> Donghyun Kim, Sangbong Lee, Jihwan Lee	<b>Korakot Charoensri,</b> Hyun Jin Park, Yang Jai Shin	<b>Su-Young Lee</b>
	-	Development of AIS-based Ship Emissions Estimation Model	Improving Safety in an International Food Supply Chain	-
	-	<b>Moohong Kang,</b> Eon-Kyung Lee, Gunwoo Lee	<b>Bosung Kim,</b> Jiho Yoon	-
<b>15:30 ~ 16:00</b>	Coffee Break			

# Program

## 6 September Wed.

Time	Room A	Room B	Room C	Room D
16:00 ~ 17:30	Best Paper Award [ WA4 ] Chair : Bosung Kim	Decarbonization of Maritime Industry [ WB4 ] Chair : Paul Tae-Woo Lee	Maritime Transportation [ WC4 ] Chair : Zhongzhen Yang	Data-driven Logistics III [ WD4 ] (Session of BK21 FOUR) Chair : Tae-sun Yu
	TBD	Government Ship Scheduling with the Consideration of Environmental Effects <b>Yiwei Wu</b> , Shuaian Wang, Lu Zhen	Optimization of Railway Ferry Service for Korea-Europe Container Sea-Rail Intermodal Transportation <b>Ruru Chen</b> , Zhongzhen Yang, Feng Lian	A Multi-Objective Reinforcement Learning for Berth Allocation Problem in Tidal Bulk Terminals <b>Dohee Kim</b> , Kikun Park, Tae-Sun Yu, Hyerim Bae
	TBD	Carbon Peak Pathway for Regional Container Intermodal Networks <b>Xiaoyan Guo</b> , Junliang He, Hang Yu, Yu Wang	Tramp Shipment Routing and Scheduling with Inventory and Stowage Constraints <b>Pinar Şentürk</b> , Ceyda Oğuz	A Data-Driven Ship Route Planning Framework with Maritime-Enhanced Shortest Path Algorithm for Real-Time Services <b>Minseo Choi</b> , Gwang-Jong Ko, Jaewon Kim, Haneul Kim, Taesu Cheong, Chaehyok Lim, Kyu-II Lee, Eunjeong Park
	TBD	China's Strategic Development of Securing Iron Ore Resources in Association with Decarbonization of the Maritime Industry <b>Paul Tae-Woo Lee</b> , Zhao-Yu Song, Sung-Ho Shin, Prem Chhetri	Methodology for Designating Maritime Traffic Route Network Using AIS Data and Topographic Statistics <b>Jongseo Yim</b> , Wan Hee Kim, <b>Sung Jin Cho</b> , Chan Woong Kim, Jae Young, Park	Import Container Dwell Time: Analysis of Determinant Factors with Explainable Artificial Intelligence <b>Yongjae Lee</b> , Hyunjae Lee, Jonghyuk Lee, Seonkwan Yeo, Hyerim Bae
	TBD	<b>Online</b> Low Carbon Vehicle Path Optimization Problem Based on Improved Genetic Algorithm <b>Xinyue Liang</b> , Min Tu	Model of Inventory Multi Ship Routing and Scheduling considering Draft Limit of Ships and Split Delivery for Distribution of Bulk-Fertilizer <b>Ahmad Rusdiansyah</b> , Zahrani Ayu Putri, Fadila Isnaini	
	TBD	<b>Online</b> Study on Green Development Efficiency of Major Ports in the Yangtze River Basin During the Epidemic -- Calculation Based on the Three-Stage DEA-SBN Model <b>Junjie Li</b> , Min Tu, Jing Wu	Development of the Model Inventory Ship Routing Problem with Fixed Cargo and Split-Delivery for Oil Fuel Distribution <b>Ahmad Rusdiansyah</b> , Mario Sendy Irawan, Fadila Isnaini	
	TBD	<b>Online</b> Carbon Emission Calculation and Driving Factors Analysis of the Transportation Industry in Jiangsu Province <b>Xinyue Liang</b> , Min Tu		

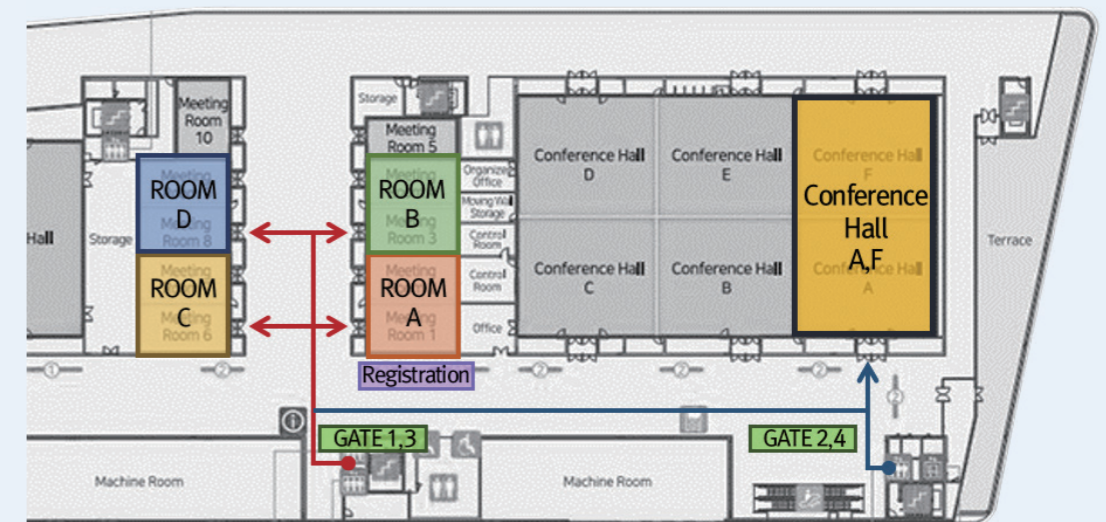
# Venue at BPEX

## BPEX



- **Directions** : Busan Station Exit No. 9, 10 → Skywalk → Busan Port International Passenger Terminal
- **Distance/travel time** : 1km / about 5-10 min.

### 5<sup>th</sup> Floor



BPEX is located on the 5th floor of Busan Port International Passenger Terminal.

**BPEX address** 5th floor(Choryang-dong, Busan Port International Passenger Terminal), 206, Chungjang-daero, Dong-gu, Busan, 48751, Republic of Korea

## Industry Tour

**Date** 7 September (Thu.) from 09:00 to 12:30

**Venue** Busan New Port

**Address** 372, Sinhangnam-ro, Gangseo-gu, Busan (Songjeong-dong)

**Directions** Bus departs from Busan Station Exit 4 at 9:00 am  
 ➔ Tour Busan New Port  
 ➔ Return to Busan Station at 12:30 pm

**Notice** To visit Busan New Port, you must bring your passport.  
 Please be sure to bring your passport. Buses to Busan New Port can be boarded in front of Exit 4 of Busan Station starting at 8:30. There will be a staff member on the bus holding a conference picket.  
 • Industry Tour is limited to those who sign up in advance



## Special Issues



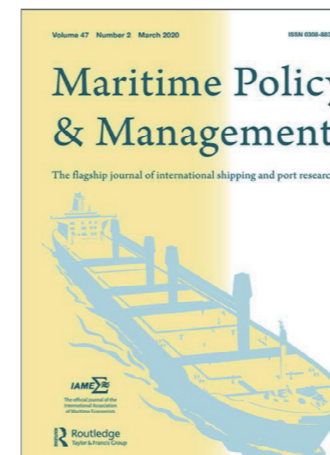
### International Journal of Industrial Engineering (SCIE)

**Editor-in-Chief :** Prof. Gyu M Lee

Pusan National University, South Korea

This refereed bi-monthly journal publishes significant research, theoretical works, technical and methodological applications, case studies, short communications, and surveys and reviews concerned with all aspects of Industrial Engineering.

\*IJE : Theory, Applications and Practice may require publication fees, and it follows the policy of the journal.



### Taylor & Francis - Maritime Policy & Management (SCIE/SSCI)

**Special Issue Editor(s) :**

**Hyerim Bae** Department of Industrial Engineering,  
Pusan National University, South Korea

**Kap-Hwan Kim** Maritime Logistics and Free Trade Islands Research  
Center, Zhejiang University, China

**Frank Meisel** Supply Chain Management at the Christian-  
Albrechts-University zu Kiel, Germany

**Kun Soo Park** Department of Industrial Engineering, Seoul National  
University, South Korea



### Journal of Marine Science and Engineering (SCIE)

**Guest Editor :** Prof. Paul Tae-Woo Lee

Zhejiang University

**Topic :** Sustainable maritime and freight transportation:  
greening issues



The 11<sup>th</sup> International Conference  
on **Logistics and Maritime Systems**