Program for Ai-MAST 2015

*International conference on* **A***dvanced* **I***ntelligent* **Ma***ritime* **S***afety and* **T***echnology*

Main Issue: “e-Navigation and Ocean Economy”

* Date : 12-14 Nov., 2015
* Venue : Riviera Hotel, Daejeon, KOREA
* Organized by KRISO & KAIMST of MMU
* Sponsored by Ministry of Ocean and Fisheries
* Supported by Korea Ship Safety Technology Authority, Korea Shipowners’ Association, Korea Association of Aids to Navigation, Korea P&I Club, Dongju Co. LTD, e-Marine CO. LTD, GMT Co. LTD
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| Secretary-General | S. June KIM | MMU, Korea |

11 Nov., Wednesday

19:00 **Welcoming Dinner** at Burgundy Room, Lesommet Buffet Restaurant, B1F, Riviera Hotel, hosted by Prof. Gyei-kark PARK, General Chair

12 Nov., Thursday

Venue: Torch Hall 1 Chairs: MS. Onue BAIK & J.H. PARK

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| 09:00-09:30 | Registration |  |
| 09:30-09:40 | Opening Address | Prof. G.K. PARK, General Chair |
| 09:40-10:10 | Key note Speech  Mr. Daniel Breton(CCG) | *Improving Canada's Marine Navigation System through e-Navigation* |
| 10:10-10:30 | Coffee Break |  |
| 10:30-12:30 | Plenary Session 1 - e-Navigation : Theory & Practice  Chair : Prof. G.K. PARK | |
| Dr. Kwang AN | *e-Navigation Services for Non-SOLAS Ship* |
| Prof. Michael BALDAUF &  Mr. Sun-Bae HONG | *Assessing the Potentials of e-Navigation and Challenges of Implementation* |
| Prof. Baoding LIU | *Why is Uncertainty Theory Useful in e-Navigation?* |
| Prof. Thomas PORATHE | *Human-machine interaction between unmanned, autonomous, ships and manned non-SOLAS vessels in confined and inshore waters: research needs* |
| 12:30-14:00 | Lunch at Lesommet Buffet Restaurant, B1F | |

e-Navigation Session I at Torch Hall 1, Ground Floor

Chairs : Prof. M.R. OTHMAN & Dr. Jun-hyuk JANG

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| 14:00-15:20 | Mr. Inchul KIM | *Comparative Analysis on Risk Assessment Models for Safe Navigation in Coastal Water* |
| Mr. Van-Suong NGUYEN & Prof. Namkyun IM | *A study on Automatic ship berthing Control for Multi Ports Based on Artificial Neutral Networks* |
| Prof. Mira YI &  Dr. Doyeon KIM | *Fuzzy-DEVS Approach for Predicting Ship Collision Risk* |
| Prof. Axel HAHN, Andre BOLLES,Martin RÄNZLE, Sibylle FRÖSCHLE, Jin PARK | *Requirements for e-Navigation Architectures* |
| 15:20-15:40 | Break | |

Ocean Economy Session I at Torch Hall 2, Ground Floor

Chair : Dr. Unggyu KIM

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| 14:00-15:20 | Mr. Cheong Hwan LEE, Gyei-Kark PARK, Hwa-Young KIM, Onue BAIK, Kyoung-Hoon CHOI | *The Study on the Korea shipping carrier's new ship order style and Improvement methods* |
| Prof. Hwa Young KIM, Gyei Kark PARK | *Development of Safety Management Evaluation System for Shipping Company and Application to e-Navigation* |
| Dr. Ki-Yeol SEO, YK KIM, MY SHIN, SH PARK, TH FANG | *Performance Assessment of Port PNT Integrity Monitoring System* |
| Prof. Xiaowei CHEN | *Uncertain Financial Theory* |
| 15:20-15:40 | Break | |

e-Navigation Session 2 at Torch Hall 1, Ground Floor

Chairs: Prof. Jung Sik JEONG

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| 15:40-17:00 | Mr. Jin-Wan PARK et al. | *A study on the analysis method of maritime accidents* |
| Prof. Thomas PORATHE | *Human Factors in e-Navigation: a study of Dynamic NoGo Area Visualization in Electronic Nautical Charts* |
| Dr. *Ju-Seop HAN*, *Yong-Su YU*, *Jong-Uk KIM* | *A Study on the performance of maritime Hybrid renewable energy system* |
| Dr. Eun-Chan KIM, Jeong-Hwan OH and Seung-Guk LEE | *Consideration on the Maximum Allowable Dosage of Active Substances Produced by Ballast Water Management System Using Electrolysis* |
| 17:00-17:20 | Break | |

Ocean Economy Session 2 at Torch Hall 2, Ground Floor

Chair : Dr. Ki-yeol SEO

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| 15:40-17:00 | Mr. Kyung-hoon CHOI, Gyei-Kark PARK, Hwa-Young KIM, Tae-Ho HONG, Onue BAIK, PHAM THI QUYNH MAI | *analysis of competition between traditional and arctic routes using game theory under uncertainty* |
| Prof. Kai YAO | *Uncertain differential equations and its applications* |
| Dr. Hyunsoo CHOI, SeWoong OH, Sunphill HWANG | *A Study of Suggestion and Evaluation on Customized MIOs* |
| Prof. Hua KE | *Uncertain Random Multilevel Programming* |
| 17:00-17:20 | Break | |

e-Navigation Session 3 at Torch Hall 1, Ground Floor

Chair: Dr. Michele FIORINI

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| 17:20-18:40 | Dr. Jaeyong OH, Sekil PARK, Sun Young KIM | *Research on Advanced Navigation Aids System Based on Augmented Reality* |
| Prof. Taeho HONG, Chun-Kwan PARK, Gyei-Kark PARK | *A Study on the Altitude Measurement System of Celestial Body* |
| Mr. Joo-sung KIM & Prof. Jung Sik JEONG | *Vessel Trajectory and Route Detection in Vessel Traffic Service Areas using Machine Learning Theories* |
| Mr. Ji-Min YEO, Yong-Su YU, Ju-Seop HAN, Suhyun PARK, Jong-Uk KIM | *A Study on the performance of maritime Hybrid renewable energy system for light Buoy* |
| 18:40-20:00 | Dinner at Peonny Hall, 14F | |

e-Navigation Session 4 at Torch Hall 2, Ground Floor

Chair: Prof. Michael BALDAUF

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| 17:20-18:40 | Mr. Dinh Gia HUY, Nam-kyun IM | *Estimating turning circle parameters for calculating ship domain and new algorithm in automatic collision avoidance* |
| Mr. Ki-jung KANG, Gyei­-Kark PARK, Hwa-Young KIM, Jungsik JEONG, Kyoung-Hoon CHOI, Du-Seon PARK | *A Study on the Structure Analysis of Safety Management System Influencing Accidents Rates in The Marine Industry* |
| Prof. Jian ZHOU | *Uncertain Random Multi-objective Programming* |
| Dr. Seung-bin OH, Jun-Hyuk JANG, Hongtae KIM et al. | *The comparison study on real ship-simulator for ship navigator’s workload Assessment* |
| 18:40-20:00 | Dinner at Peonny Hall, 14F | |

13 Nov., Friday

Plenary Session 2: Ocean Economy at Torch Hall 1, Ground Floor

Chair: Prof. S.June KIM

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| 09:00-10:30 | Prof. Chin-shan LU | *The impact of seafarers' perceptions of national culture and leadership on safety behavior in dry bulk shipping* |
| Prof. Mohamad Rosni OTHMAN, Jagan JEEVAN, Shamsul RIZAL | *the Malaysian Intermodal Terminal System : the Implication on the Malaysian Maritime Cluster* |
| Prof. Chaur-luh TSAI | *An empirical study of seafarer management in the shipping context* |
| 10:30-10:50 | Break | |

Ocean Economy Session 3 at Torch Hall 2, Ground Floor

Chair : Prof. Hua KE

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| 10:50-12:10 | Ms. Pham Thi Quynh MAI, Gyei-Kark PARK, Hwa-Young KIM, Onue BAIK, Kyoung-Hoon CHOI, Ji-Yun CHOI | *On the efficiency analysis of Vietnamese ports by Uncertainty theory based DEA* |
| Mr. Heewook KANG  DaeSeung YOO | *Remote Monitoring over the Horiszon* |
| Dr.J. JEEVAN, H. GHADERI, Y.M.BANDARA, A.H SAHARUDDIN and Mohamad Rosni OTHMAN | *Implication of the Growth of Port throughput on the Port Capacity : The Case of Malaysian Major Container Seaports* |
| Dr. Do-yeon KIM, Sang-jae LEE, Gyei-kark PARK and Jung-sik JEONG | *A Study on the Implementation of Situation Analysis System for Navigation Risk using Various Factor* |
| 12:10-13:30 | Lunch at Lesommet Buffet Restaurant, B1F | |

e-Navigation Session 5 at Torch Hall 1, Ground Floor

Chairs : Prof. Namgyun IM & & Dr. Jin Hyoung PARK

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| 10:50-12:00 | Dr. Kwang Il KIM, Jung Sik JEONG, Gyei-Kark PARK, Byung-Gil LEE | *A Study on the Assessment of Route Traffic in Port Area using Port Information System Data* |
| MS. Laura WALTHER, Anisa RIZVANOLLI, Mareike WENDEBOURG, Carlos JAHN | *Modeling and Optimization Algorithms in Ship Weather Routing* |
| Dr. Eun-Chan KIM, Hyuek-Jin CHOI and Seung-Guk LEE | *Development of the Program for Towing Simulation of a Disabled Ship in Case of Using Multiple Tugboats* |
| 12:00-13:30 | Lunch at Lesommet Buffet Restaurant, B1F | |

Ocean Economy Session 4 at Torch Hall 2, Ground Floor

Chairs : Prof . Axel HAHN & Prof. Suhyun PARK

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| 13:30-14:50 | Prof. Hwa Young KIM, Jungmo OH, Gyei Kark PARK | *A Study on Education Satisfaction of Ship Familiarization Program* |
| Mr. DucMinh NGUYEN, S. June KIM | *Hierarchical cluster analysis of container terminals in Northern Vietnam* |
| MS. Onue BAIK, Gyei-Kark PARK, Hwa-Young KIM, Kyoung-Hoon CHOI, Jung-sik JEONG, Shin-Young BAIK | *A Study on the Influence analysis of Safety Control to Management of Costal Shipping Company* |
| Prof. Ted T.C. LIRN, Min-Lang CHENG | *The impact of slow steaming on shippers' and forwarders' management strategy* |
| 14:50-15:10 | Break | |

e-Navigation Session 6 at Torch Hall 1, Ground Floor

Chairs : Prof. Baoding LIU & Prof. Chun Kwan PARK

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| 13:30-14:50 | Dr. Kwangil LEE, Gaeil AN, Jinhyung PARK, Hanjin LEE, Byungho CHUNG | *An Identification and Authentication scheme for Maritime Digital Communication Infrastructure* |
| Dr. SooJin HWANG, Namkyun IM | *A study of real time determination of an appropriate ship domain based on AIS data* |
| Dr. Michele FIORINI, Andrea CAPATA, Domenico D. BLOISI | *On the Maritime Spatial Planning to enhance safety and security at Sea* |
| 14:50-15:10 | Break |  |

e-Navigation Session 7 at Torch Hall 1, Ground Floor

Chairs : Prof. Ted T.C. LIRN & Prof. Hwayoung KIM

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| 15:10-16:10 | Prof. Suhyun PARK, Daewon PARK, Kwangil LEE | *Design of S-100-based Data Model for IEC 61162-1 Sentences* |
| Mr. Hyoseung KIM, Seojeong LEE | *A Survey on the status of Marine IT Industrial environment for e-Navigation SQA – focusing on Korean domestic companies* |
| Dr. Jun Hyuk JANG, Seoungbin OH, Hongtae KIM and Sun Young KIM | *Development of usability evaluation factors for AR-based navigation information system* |
| 16:30-16:50 | Break |  |

e-Navigation Session 8 at Torch Hall 2, Ground Floor

Chairs : Dr. Thomas PORATHE & Prof. Jian ZHOU

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| 15:10-16:10 | Mr. Gi-Jong JO, Byeong-Uk MOON | *On the Risk Analysis of a Sailing Fishing Boat Using 6-axis Sensor* |
|  | Mr. Zhizun XU, Gyei-Kark Park, Taek-Kun Nam | *A study on the control of ship's trajectory* |
|  | Kilyong KIM, Seung yul LEE, Seojeong LEE | *A Case Study on the Utilization of Automated Tools for Quality Improvement of Maritime Software* |
| 16:10-16:30 | Break | |

Special Contribution

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| Shanghai Maritime Univ. | Zhe ZIANG, Qinyou HU, Chaojian SHI, Chun YANG | *Method of establishing ship safety domains in restricted waters*  *with AIS data* |
| Shanghai Maritime Univ. | Qinyou HU, Chun YANG, Zhe ZIANG | *Some Techniques to Promote Maritime AIS Bigdata Applications* |
| Shanghai Maritime Univ. | Liang CHEN, Qin-you HU | *Research on time slot assignment in VHF data exchange* |
| Ocean University of China | Jian LI, Bao JIANG | *Functional Optimization of Shanghai International Shipping Center: From perspective of Free Trade Zone* |

Closing Ceremony

Venue: Torch Hall 1 Chair: Prof. S. June KIM

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| 16:30 | Awarding Ceremony | 1. The Best Papers 2. The Best presentation 3. The Award of Future Scientist 4. Appreciation Letter |
| 16:45 | Concluding Remarks | Prof. Jung Sik JEONG |
| 16:55 | Farewell Address | Dr. Hongtae KIM |
| 17:00 | Memorial Photo |  |
| 18:00 | Farewell Dinner | Grace Hall, 2F |

14 Nov., Saturday

Technical and Cultural Tour

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| * Guideline for Chairs * Official Language : English * Time Control(General Session only): 15 minutes for Presentation and 5 Minutes for Q&A (Considering the time of break, it might be extended.) * One of Co-chairs will chair one paper, and another of Co-chairs will chair one paper respectively. * Chairs of each session are highly expected to announce the time of next sessions at the end of their sessions. |

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| * Information * General Chair: G.K. Park, (MP) : 010-3207-2344 * Organizing Chair: Jung Sik JEONG, (MP) : 010-9214-8698 * Program Chair: S.June KIM, (MP) : 010-3427-8463 * Secretary: Onue BAIK, (MP) : 010-5240-7369 |

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