# Advanced Maritime Engineering Conference 2016 *of*
# Pan Asian Association of Maritime Engineering Societies (PAAMES)

## Green and Sustainable Development in Shipping and Engineering

**13 -14 October 2016**
**The Hong Kong Jockey Club, Happy Valley Racecourse, Sports Road, Hong Kong**

Tentative Programme Rundown

| DAY 1 - PM (13 October 2016) | |
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| **Keynote Session** | |
| Venue: 6/F Happy Valley Stand, Happy Valley Racecourse | |
| 1330 ~ 1340 | Welcome Speech<br>Dr David Koo, Hon. President of The Hong Kong Institute of Marine Technology and Chairman of 7th PAAMES |
| 1340 ~ 1400 | Opening Address by Guest of Honour<br>Professor Anthony Cheung Bing-leung, Secretary for Transport and Housing, The Government of the HKSAR |
| 1400 ~ 1410 | Souvenir Presentation |
| **Keynote Speeches** | |
| 1410 ~ 1430 | Professor Zhang Shengkun<br>President of Shanghai Society of Naval Architects and Ocean Engineers, China |
| 1430 ~ 1450 | Mr. Mok Wai-chuen, JP<br>Assistant Director (Air Policy), Environmental Protection Department, Hong Kong |
| *1450 ~ 1510* | *Coffee Break* |
| 1510 ~ 1530 | Dr Tomoji Takamasa<br>President of The Japan Institute of Marine Engineering, Japan |
| 1530 ~ 1550 | Professor Jae-Sung Choi<br>President of Korea Society of Marine Engineering, Korea |
| 1550 ~ 1610 | Dr Jane Smallman<br>President of The Institute of Marine Engineering, Science and Technology, United Kingdom |
| 1610 ~ 1620 | Souvenir Presentation |
| 1620 ~ 1645 | Group Photo for all Participants |
| 1800 ~ 2100 | Welcome Reception for PAAMES Representatives, Sponsors, Supporting Organisations and Invited Guests<br>Venue : Hong Kong Maritime Museum, Central Pier No. 8, Hong Kong |

| DAY 2 - AM (14 October 2016) | | | | |
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| 0800 ~ 0900 | **Registration**<br>Venue: 6/F Happy Valley Stand, Happy Valley Rececourse | | | |
| Parallel Session | | | | |
| **Session Theme** | Offshore Facilities and Energy from Ocean | Energy and Engine | Ship Design (Ship & Floating Platform; Material; Propulsion; Manoeuvring; Renewable Energy) | Port Management; Ship Operation; Safety and Environment |
| 0900 ~ 0920 | **Escape & Evacuation Time Evaluation with MINLP for Offshore Platform and Utilization of the Optimum Configuration**<br>*In-chul Jung, Chongmin Kim, Jaehoon Lee, Giltae Roh*<br>*Korean Register of Shipping, Korea* | **Study of Regulated and Unregulated Emissions of Marine Engines Fueled with Liquefied Natural Gas (LNG)**<br>*Meisam Ahmadi Ghadikolaei, Chun Shun Cheung, Ka-Fu Yung*<br>*Hong Kong Polytechnic University, Hong Kong* | **Automatic Design Optimization of Ship Hull Form Based on Parametric Hull Form**<br>*Lan Lin-qiang, Luo Wei-lin*<br>*School of Mechanical Engineering and Automation, Fuzhou University, China* | **Discussion on Shipping and Safety at Xiluodu Reservoir in the Lower Reaches of the Jinsha River**<br>*Ping NING*<br>*Shipping & Ship Engineering College, Chongqing Jiaotong University, China* |
| 0920 ~ 0940 | **Investigation of Lightweight Design for Novel Slewing Support of Large Floating Crane**<br>*Yaohai Sui·Zhenhua Wangxin Yanbing Wang·Wentao Shanghai Society of Naval Architects and Ocean Engineers, China* | **A Study on Combined Back Propagation with Self Organization Map for Marine Fuel Consumption Prediction Model**<br>*Chongmin Kim, In-chul Jung and Sang-ick Lee*<br>*Korean Register of Shipping, Korea* | **A Green and Environmental Friendly Ship**<br>*T.K. Cheung*<br>*KEE Marine Service & Consultant Ltd. Hong Kong* | **Build a Dream for Green bay**<br>*Gu Siyi*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* |

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| 0940 ~ 1000 | **A Numerical Study on a Floating Multi-Point-Absorber Wave Energy Converter including Power Take-off System**<br>*Sung-Jae Kim, Weoncheol Koo*<br>*Department of Naval Architecture and Ocean Engineering, Inha University, Incheon, Korea* | **Low-pressure Dual-Fuel Engines – Greener Shipping starts now**<br>*Daniel Strödecke*<br>*Winterthur Gas & Diesel Ltd., Hong Kong* | **The Application of Numerical Simulation on Selection of Different Hull Line Schemes in the Design Phase**<br>*Fan Yang, Guoxiang Dong, Hao Chen*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* | **Multi-dimensional Imagination of Quayside Green Engineering**<br>*Cheng Guangen*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* |
| 1000 ~ 1020 | **Analysis of Loads and Response of Fixed and Floating Structures in Fully Nonlinear Waves Based on Numerical Wave Tank**<br>*Xudong CHEN, Siqi GU, Renqing ZHU*<br>*Jiangsu Society of Naval Architects and Marine Engineers, China* | **Numerical Study of a Permanent Magnet Linear Generator for Ship Motion Energy Conversion**<br>*Faisal Mahmuddin*<br>*Marine Engineering Department, Engineering Faculty, Hasanuddin University Makassar, Indonesia* | **The Study of Anti-explosion Performance on the Structure of Cargo Hold for CNG Carrier**<br>*Yifeng Guan, Shichao Zhao*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* | **Safe Port Promise by Charterers: Rethinking Outstanding Complications**<br>*Choi Wai Bridget YIM*<br>*City University of Hong Kong, Hong Kong* |
| 1020 ~ 1040 | **Experimental Research on Motion Response and Mooring Characteristics of Heavy-load Floating Platform near a Reef Island**<br>*Zhidong Wang, Hongjie Ling, Jun Ding, Ziwei, Zhenqiu Yao*<br>*Jiangsu Society of Naval Architects and Marine Engineers, China* | **Economic Analysis of Exhaust Gas Heat Recovery System from Marine Diesel Engine**<br>*TBC*<br>*Japan Institute of Marine Engineering, Japan* | **Strength and Fatigue Assessment of VLGC with Direct Wave Load Analysis**<br>*CHEN Jianping, Gu Yunfei, Li Xiaoling*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* | **Case Representation for Computer Aided Calibration Process Planning**<br>*Dr. Francis Seung Yin Wong, Dr. Kong-Bieng Chuah, Prof. K. Venuvinod Patri,*<br>*City University of Hong Kong, Hong Kong* |
| *1040 ~ 1100* | *Coffee Break* | | | |
| 1100 ~ 1120 | **Research on Body Structural Lectotype of New-type Floating LiDAR Buoy**<br>*Yang-yang Xue,Pei-lin Dou,Gang Chen*<br>*Jiangsu Society of Naval Architects and Marine Engineers, China* | **DME Blended Fuel Combustion in Diesel Engine with variation of Sulfur Fraction in Fuel**<br>*Kiminobu Yoshimura, Takaaki Tanaka, Tomohisa Dan, Ichiro Asano*<br>*Japan Institute of Marine Engineering, Japan* | **Structural Response of Polar Class LEG Carrier Under Ice-breaking Induced Sloshing Load**<br>*Gu Jinlan, Qin Bin, Li Xiaoling, Chen Jianping, Zheng Fan*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* | **Emission Estimation of Air Pollutants from Ships in Japan Regions**<br>Takeshi YOKOI, Hideyuki SHIROTA<br>*Japan Institute of Marine Engineering, Japan* |
| 1120 ~ 1140 | **Research on Hydrodynamic Performance of Heavy-load Floating Platform near a Reef Island**<br>*Hongjie Ling, Zhidong Wang, Fang Wang*<br>*Jiangsu Society of Naval Architects and Marine Engineers, China* | **Combustion Analysis of Blend Fuel Consist of Jatropha Oil and Gas Oil in Diesel Engine**<br>*Hideki Tanaka, Wataru Hiraoka, Tomohisa Dan, Ichiro Asano*<br>*Japan Institute of Marine Engineering, Japan* | **Analysis on the Structure of Wooden Ships with Special Modeling**<br>*Yifeng Guan , Jie zhao*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* | **Improving safe working practices and work confidence of Marine Engineers**<br>*Takashi Miwa, Wu Yanbin, Gamini Lokuketagoda, Makoto Uchida*<br>*Japan Institute of Marine Engineering, Japan* |
| 1140 ~ 1200 | **Structural Analysis of Aluminum Helideck for Offshore**<br>*Chanuk Ryu, Joohyoung Choi, Jaesang Jo, Jeonghwan Kim, Jeongryul Kim*<br>*KOMERI, Korea* | **Combustion of Ethanol Mixed Gasolinein Outboard Spark Ignition Engine**<br>*Toru Hayakawa, Sho Nakai, Tomohisa Dan, Ichiro Asano*<br>*Japan Institute of Marine Engineering, Japan* | **Experimental Studies on Sloshing in a Type-B Tank**<br>*Zhimei Lu, Sujun Yang, Yongshun Wu, Dajian Wang*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* | **Investigation of Accident of Korean Ferry "Sewol"**<br>*Mariko Yamashita and Kazuhiko Hasegawa*<br>*JASNAOE, Japan* |
| 1200 ~ 1220 | **Study of Loads and Response on Flexible Riser in Numerical Tank Combined with Wave and Current**<br>*WU Zi-xin, ZHU Ren-qing*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* | **The Leading-edge and Unique Technology, Mitsubishi Low Pressure EGR**<br>*Naohiro Hiraoka, Kazuhisa Ito, Takashi Ueda*<br>*Japan Institute of Marine Engineering, Japan* | **Fracture Mechanics Analysis of VLEC's Type C Cargo Tank**<br>*Zheng Lei, Chen Xi, Qin Bin, Xiao Lei, Li Xiaoling*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* | **Experimental Study on the Wear Performance of the Mooring Chain**<br>*Koji Gotoh, Koji Murakami, Masataka Nakagawa and Tomoaki Utsunomiya*<br>*JASNAOE, Japan* |
| 1220 ~ 1240 | **Coupled Dynamic Analysis in Deep Water Catenary Model in Mooring Line in Floating Offshore Wind Turbine**<br>*Asgar Ahadpour Dodaran, Sang Kil Park, Sung Hoon Hong, Hong Bum Park*<br>*The Korea Society of Ocean Engineers, Korea* | **Combustion Character Mixed Radical in the Suction Air Using a Diesel Engine**<br>*Atsuyoshi TAKAYAMA, Chan Ka Keung, Yoshitaka SATO*<br>*Japan Institute of Marine Engineering, Japan* | **Frequency Domain Simulation of VLEC Dynamic Response Coupled with Tank Sloshing**<br>*ZHOU Qinghua， LI Xiaoling， CHEN Bin*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* | **Technical Development for Energy Saving at Container Terminal Operation**<br>*Takeshi Shinoda, Putu HANGGA, Muhammad Arif Budiyanto, Luo Tao*<br>*JASNAOE, Japan* |
| *1240 ~ 1345* | *Lunch* | | | |
| **DAY 2 - PM (14 October 2016)** | | | | |
| 1315 ~ 1345 | **Registration**<br>Venue: 6/F Happy Valley Stand, Happy Valley Racecourse | | | |
| Parallel Session | | | | |

| Session Theme | Offshore Facilities and Energy from Ocean | Energy and Engine / Offshore Facilities and Energy from Ocean | Ship Design (Ship & Floating Platform; Material; Propulsion; Manoeuvring; Renewable Energy) | Port Management; Ship Operation; Safety and Environment / Ship Design |
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| 1345 ~ 1405 | **Time Domain Motion Analysis of Single Point Moored Duct for Tidal Current Power**<br>*Chul H. Jo, Do Y. Kim, and Myeong J. Kim*<br>*The Korea Society of Ocean Engineers, Korea* | **Combustion Character by Air Particle Diameter into Fuel Mixed Air**<br>*Tadayuki TANAKA, Atsuyoshi TAKAYAMA*<br>*Japan Institute of Marine Engineering, Japan* | **Introduction of Triple E vessel and STS**<br>*Lu Huijie*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* | **Development of Automatic Collision Avoidance System for Ships Using Reinforcement Learning**<br>*Daichi Ota, Tatsuya Masuyama, Yoshitaka Furukawa, Hiroshi Ibaragi*<br>*JASNAOE, Japan* |
| 1405 ~ 1425 | **Development of Fatigue Damage Versus Current Index Diagram for Riser Considering VIV**<br>*Do Kyun Kim, Eileen Wee Chin Wong and Han Suk Choi*<br>*Ocean and Ship Technology (Department of Civil and Environmental Engineering), Universiti Teknologi PETRONAS, Malaysia* | **Feasibility Study on Recovery System of Ship Motion Energy by Linear Generator**<br>*Munehiko Minoura, Koki Watanabe, Hisafumi Yoshida, Hisao Tanaka*<br>*JASNAOE, Japan* | **Gas Leakage Risk Analysis on Loading and Unloading Process of CNG Carrier**<br>*Yifeng Guan , Tengfei Shi*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* | **Fundamental Study on Sterilization Effect of Underwater Shock Waves with Cavitation Bubbles on Marine Bacteria**<br>*Jingzhu Wang and Akihisa Abe*<br>*Japan Institute of Marine Engineering, Japan* |
| 1425 ~ 1445 | **The Numerical Simulation of Methane Hydrate Formation in Porous Media with Flow**<br>*Kentaro Kamada, Ayako Fukumoto, Honoka Torii, Toru Sato, Hiroyuki Oyama, Takero Yoshida*<br>*JASNAOE, Japan* | **A Study on Fuel Saving Effect in Hybrid Propulsion System for Tugboat**<br>*Takaaki Nishio, Hiroyasu Kifune*<br>*Japan Institute of Marine Engineering, Japan* | **Analysis of LNG-FSRU Regasification System and Rgasification Capacity**<br>*YAO shouguang, LIU hui*<br>*Jiangsu Society of Naval Architects and Marine Engineers, China* | **Preliminary Prediction of Dry-docking Time and Cost**<br>*Arun Kr Dev and Chan Kok Keong*<br>*SNAMES, Singapore* |
| 1445 ~ 1505 | **Configuration Design Method for FPSO to Maximize Life Cycle Value at the Initial Design Stage**<br>*Jeong Duseok, Oizumi, Kazuya, Aoyama, Kazuhiro*<br>*JASNAOE, Japan* | **Convective Boiling Heat Transfer Characteristics for Pressurized Water in a Small Tube**<br>*Makoto Shibahara, Katsuya Fukuda, Qiusheng Liu, Koichi Hata*<br>*Japan Institute of Marine Engineering, Japan* | **Ultimate Strength Analysis of a FPSB Hull Girder Based On Nonlinear Finite Element Method**<br>*Xiao-dong Li, Pei-lin Dou, Bao-jin Jing*<br>*Jiangsu Society of Naval Architects and Marine Engineers, China* | **Innovative Use of a Proven Gas Export System to Reduce LNG FSRU Project Implementation Time: A Case Study of the BW Singapore in Ain Sokhna, Egypt**<br>*Ashok Krishnan*<br>*SNAMES, Singapore* |
| 1505 ~ 1525 | **Temporal Change of Mud Erosion with Different Water Velocity in Methane Hydrate Bearing Layer**<br>*Takero Yoshida, Takuya Yamaguchi, Hiroyuki Oyama, Georgios Fytianos, Toru Sato*<br>*JASNAOE, Japan* | **Neural Networks Algorithm on Automatic Voltage Regulator of Brushless Synchronous Generator on Board Ship**<br>*Young-Chan Lee, Byung-Gun Jung, Yong-Sup Yun, Jong-Su Kim, Sang-Kyun Park, Sun-Tae Kim*<br>*KOSME, Korea* | **Research of Structure Design Under Ice Load for Container Vessel**<br>*Jiang Jiazhi, Si Zhao, Jiang Kejin, Lou Danping*<br>*Ship Research & Development Department Hudong-Zhonghua Shipbuilding (Group) Co. Ltd., China* | **Methodologies to Improve Equipment Maintainability and Reduce Ownership Costs**<br>*Julie Pray, Stergios Stamopoulos, Kevin McSweeney*<br>*ABS Hong Kong, Hong Kong* |
| *1525 ~ 1545* | *Coffee Break* | | | |
| 1545 ~ 1605 | **Development of Control Strategies for Large Wind Turbines**<br>*Mao-Hsiung Chiang, Ching-Sung Wang, Tsung-Chih Tung*<br>*Taiwan SNAME, Taiwan* | **IMO NOX Compliance for Scheme B (Engine with SCR)**<br>*Jeong-Gil Nam, Jae-Woo Lee, Jae-Sung Choi*<br>*KOSME, Korea* | **Computational Analysis of Tip Vortex Roll-up and Cavity Inception**<br>*Ji-Hye Kim, So-Won Jeong and Byoung-Kwon Ahn*<br>*Department of Naval architecture and Ocean Engineering, Chungnam National University, Korea* | **Multi-disciplinary Optimization of Trimaran Ship Considering Fluid, Structure and Control**<br>*Katsuyuki Suzuki, Atsushi Ogawara and Yukihisa Kuriyama*<br>*JASNAOE, Japan* |
| 1605 ~ 1625 | **Comparative Structural Assessment of Various Foundation Types for Offshore Wind Turbines under Extreme Loading Conditions**<br>*Tsung-Yueh Lin, Bryan Nelson, Yann Quéméner, Hsin-Haou Huang, Chi-Yu Chien*<br>*Taiwan SNAME, Taiwan* | **Evaluation of the Speed Loss in Seaway by Computational Methods**<br>*Ching-Yeh Hsin, Chun-Ta Lin, Shih-Yun Wang, Ling Lu and Chi-Chuan Chen*<br>*Taiwan SNAME, Taiwan* | **A Study on Performance of a Full Form Ship in Shallow Water**<br>*ZHOU Chuan-ming, GAO Yu-ling, DONG Guo-xiang*<br>*Shanghai Society of Naval Architects and Ocean Engineers, China* | **On the Dynamic Response Characteristics of FBG Pressure Sensor**<br>*T.Fukunaga, M.Wakahara and T.Fukasawa*<br>*JASNAOE, Japan* |
| 1625 ~ 1645 | **Numerical Analysis of Piling Process for Offshore Wind Turbine Installation**<br>*Zheng-Zhang Huang, Sih-Yin Chen, Arno Nederlof, Shean-Kwang Chou, Cheng-Hsien Chung* | **Effects of Fuel Physical Properties Using FIR Fuel Treatment Device**<br>*Fong Yuan MA* | **Research on Automatic Design Optimization of Ship Hull Form Based on Parametric Hull Form**<br>*Luo Wei-lin, Lan Lin-qiang* | **Development of Hull Form Design Assist System Integrating Tank Test Database, CFD Database and Knowledge Base**<br>*Shinnosuke Wanaka, Taiga Mitsuyuki, Kazuo Hiekata, Hiroyuki Yamato* |

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| 1645 ~ 1705 | **Experimental Study on the Performance of the Floating Kuroshio Current Turbine**<br>*Jing-Fa Tsai, Yi-Xuan Zeng, Forng-Chen Chiu, Ya-Jung Lee*<br>*Taiwan SNAME, Taiwan* | **Comparative Analysis on Mooring of SPAR Platforms**<br>*Arun Kr Dev and Tan Tai Dou Nigel*<br>*SNAMES, Singapore* | **A Comparative Study of Existing Ultimate Compressive Strength Formulations for Steel Plate Elements with Initial Deflection**<br>*Do Kyun Kim, Bee Yee Poh, Jia Rong Lee, Kyu-Sik Park and Jeom Kee Paik*<br>*Ocean and Ship Technology (Department of Civil and Environmental Engineering), Universiti Teknologi PETRONAS, Malaysia* | **The Effect of Micro-Event in Plastic Region in the Vicinity of Tip of Running Crack on Brittle Crack Propagation Behavior in Steels**<br>*Fumiaki Tonsho, Tomoya Kawabata and Shuji Aihara*<br>*JASNAOE, Japan* |
| 1705 ~ 1725 | **Study of Aerodynamic Loads Acting on Wind Turbines under the Typhoon Conditions in Taiwan**<br>*Chun-Yu Yang, Jen-Shiang Kouh*<br>*Taiwan SNAME, Taiwan* | **Stress Concentration Factors of Double Skin Grouted X-joints Subjected to Brace Tension**<br>*Dr. Wei SHEN, Prof. Yoo Sang Choo*<br>*SNAMES, Singapore* | **Application of Common Structural Rules on AFRAMAX Oil Tanker**<br>*Zhang Zhikang*<br>*MARIC,Shanghai, China* | **Manoeuvring Mathematical Model of Catamaran Wave Adaptive Modular Vessel (WAM-V) Using the System Identification Technique**<br>*Jyotsna PANDEY and Kazuhiko HASEGAWA*<br>*JASNAOE, Japan* |
| 1725 ~ 1800 | 1) Closing Ceremony and Remarks<br>2) Meeting of Best Paper Selection Committee | | | |
| | **DAY 2 - Evening (14 October 2016)** | | | |
| 1800 ~ 2030 | Conference Banquet<br>Venue: Owners Box, 6/F Members Stand 1, Happy Valley Racecourse | | | |

*Subject to change without prior notice.*