

The Twenty-eighth (2018) International
**Ocean and Polar
Engineering Conference**
(Offshore and Polar Engineering Conference)

Including *additional ISOPE symposia*:

1st Environment-Assisted Cracking
3rd Underwater Technology
7th Tsunami & Safety
8th Asset Integrity
9th Arctic Science & Technology
8th Arctic & Cryogenic Materials
9th Renewable Energy & Environment
10th Sloshing Dynamics & Design
LNG Membrane, Processing, Bunkering
13th Ocean Mining & Gas Hydrates Symposium
16th High-Performance Materials

ISOPE-2018

Sapporo, Japan, June 10-15

(June 01)

*Updated
Technical Program*

Peer-reviewed papers from 50+ countries in 151 technical sessions. **3** Plenary and **5** keynote and multiple focus sessions

Full Program with General Information, Advance Registration and Venue Hotel. Paper List, Reservations, and Updates on

<http://www.isopec.org/conferences/conferences.htm>

ISOPE-2018 Conference proceedings

ISBN 978-1-880653-87-6; ISSN 1098-6189

All ISOPE Publications:

<http://www.isopec.org/publications/publications.htm>

Organized by:

Technical Program Committee, ISOPE

Sponsored by:

International Society of Offshore and Polar Engineers (ISOPE)
With cooperating organizations (listed inside)



ISOPE, P.O. Box 189

Cupertino, CA 95015-0189, USA

Fax: +1-650-254-2038

meetings@isopec.org; www.isopec.org

TECHNICAL PROGRAM

Paper List and Chair List as of June 01, 2018

The Twenty-eighth (2018) International Ocean and Polar Engineering Conference Sapporo, Japan, June 10–15, 2018



This 28th annual conference features **151** technical and opening general sessions, **8** plenary presentation and keynote presentations from top experts from industry, academia and government. After peer review of the manuscripts selected from 1,440+ abstracts, **747** peer-reviewed-papers will be presented and discussed by researchers, engineers and managers from more than **50+** countries.

The ISOPE-2018 Conference Proceedings with peer-reviewed papers in PDF files will be available in a set of 4 volumes on CD-ROM (**5,094** pp.) — paginated — during the conference and later for worldwide post-conference order from ISOPE: ISBN 978-1-880653-87-6; ISSN 1098-6189.

The number at end of the session title indicates the tentative number of the proceedings volume. Only the changes in titles or authors the Technical Program Committee received in writing before **April 26, 2018** are reflected in this program. Final corrections will be updated in the Conference Proceedings of peer-reviewed papers and the Final Program.

All ISOPE publications are indexed by Engineering Index , EI Compendex, Google scholar, Scopus, Thomson Scientific and Technical Proceedings (ISTP), web of science and others.

FULL CONFERENCE PROGRAM WITH SESSION / PAPER LIST: Updated at
<http://www.isope.org/conferences/conferences.htm>
<http://www.isope.org/publications/publications.htm>

2018 Jin S Chung Award Lecture
Tuesday 13:15

3 Plenary and 5 keynote Presentations
Monday, Tuesday, Wednesday

SUNDAY, June 10

Conference Reception

17:00

Royton Hall AB

MONDAY 08:30

1. Opening General Session:
OCEAN AND ENERGY INDUSTRY REVIEW—2011 (V. 1)

Monday June 11 08:30 Royton Hall

Chair: Hiromitsu Kitagawa, Ocean Policy Research Inst, Japan
Co-Chair: Jin S Chung, ISOPE, USA

Welcome to Sapporo

Naoto Ebuchi, Local Committee Chair, Hokkaido Univ, Japan

Global Energy Outlook and Its Implications [Oral presentation]
Jeffrey M. Grenda, ExxonMobil Research & Engineering, USA

Floatover Installation Technology in South China Sea [Oral presentation]
Xiaojian Jin, President, COOEC Offshore Oil Engineering, China

MONDAY 10:30

2. HYDRODYNAMICS I: Comparative Study (V. 3)
Monday June 11 10:30 Royton D

Chair: Kyong-Hwan Kim, Korea Research Inst of Ships & Ocean Eng., Korea
Co-Chair: Sa Young Hong, Korea Research Inst of Ships & Ocean Eng. (KRISO), Korea

Numerical Study of Wave Impact Loads on Circular Cylinder by Breaking Waves
Yoon-Jin Ha, Bo Woo Nam, Kyong-Hwan Kim, SaYoung Hong, Korea Research Inst of Ships & Ocean Eng, Korea

Experimental Study of Wave Impact Loads on Circular Cylinder by Breaking Waves
Yoon-Jin Ha, Kyong-Hwan Kim, Bo-Woo Nam, SaYoung Hong, Korea Research Inst of Ships & Ocean Eng, Korea

Numerical Study of Focusing Wave Impact on a Fixed Cylinder
Seon Oh Yoo, Hyun Joe Kim, Taeyoung Kim, DongYeon Lee, Booki Kim, Samsung Heavy Industries, Korea

Numerical Study on Run-up and Wave Impacts between Breaking Wave and a Circular Cylinder
Zhenghao Liu, Decheng Wan, Gang Chen, Shanghai Jiao Tong Univ, China

Comparative Study of SST-SAS and SST-DDES in Predicting Massively Separated Flow
Di Wu, Weiwen Zhao, Decheng Wan, Shanghai Jiao Tong Univ, China

Comparative Study of Wave Impact Loads on Circular Cylinder by Breaking Waves
Sa Young Hong, Kyong-Hwan Kim, Yoon-Jin Ha, Bo Woo Nam, Korea Research Inst of Ships and Ocean Eng, Korea

3. SLOSHING I: Physics (V. 3)
Monday June 11 10:30 Empress, 2F

Chair: Sebastian Schreier, Delft Univ of Technology, Netherlands

2D Simulations of Breaking Wave Impacts on a Flat Rigid Wall – Part 2: Influence of Scale
P-M Guilcher, ENSTA-Bretagne; Y Jus, HydrOcean; L Brosset, Gaztransport & Technigaz, France

Numerical Study of the Influence of Weber and Reynolds Numbers on the Development of Kelvin- Helmholtz Instability
S Fortin, S Etienne, C Béguin, D. Pelletier, Ecole Polytechnique de Montreal, Canada; L Brosset, Gaztransport & Technigaz, France

Experimental Study of Surface Tension Influence on Sloshing Impact Loads [Oral presentation]

M Frihat, L Brosset, Gaztransport & Technigaz; J-M Ghidaglia, ENS Paris-Saclay, France

Phenomenological Study of the Initial Stages of Liquid Impacts Through a Simplified Liquid Impact Scenario [Oral presentation]

N Couty, Y Jus, HydrOcean; P-M Guilcher, NextFlow Software; L Brosset, Gaztransport & Technigaz, France

An Investigation on and Determination of Damping of Sloshing in a Tank around Resonance Frequency

Yusong Cao, Fuwei Chang, C-Z Marine Technology, USA; Jingzhe Jin, SINTEF Ocean, Norway

Two-Phase Particle Simulation of Violent Sloshing Flows with Large Density Ratios

Sang-Moon Yun, Jong-Chun Park, Pusan National Univ, Korea; Abbas Khayyer, Kyoto Univ, Japan; Se-Min Jeong, Chosun Univ, Korea

4. RENEWABLE ENERGY I: Support Structures (V. 1)

Monday June 11 10:30 Regent, 2F

Chair: Renata Archetti, Univ of Bologna, Bologna, Italy

Uncertainty Modeling and Fatigue Reliability Assessment of Concrete Gravity Based Foundation for Offshore Wind Turbines

Joey Velarde, Claus Kramhøft, COWI A/S, Denmark; John Dalsgaard Sørensen, Aalborg Univ, Denmark

A New Model for Fatigue Load Sequence Effects in Offshore Wind Turbine Substructures and its Implications for Design Life

R.C. Dragt, S.T. Hengeveld, J. Maljaars, Netherlands Inst for Applied Scientific Research (TNO), Netherlands

Fatigue Damage on Offshore Wind Turbines by a Cell Mapping Method

Odd Eiken, Michael Muskulus, NTNU, Norway

Sampling Methods for Simplified Offshore Wind Turbine Support Structures Load Case Assessment

Lars Einar S Stieng, Michael Muskulus, NTNU, Norway

Markov Approach to Estimate Fatigue Damage for Monopile-based Offshore Wind Turbines

Christina Capdevila Choy, Polytechnic University of Catalonia, Spain; Sebastian Schafhirt, Michael Muskulus, NTNU, Norway

Numerical Fatigue Analysis for Jacket-type Substructure of Offshore Wind Turbines under Local Environmental Conditions in Taiwan

Ting-Yu Fan, Chin-Yu Lin, Chin-Cheng Huang, Tung-Liang Chu, Inst of Nuclear Energy Research, Taiwan China

Study on Fragility Curves for Support Structures of Wind Turbines under Earthquake in Taiwan

Hsien-Chou Lin, Chin-Cheng Huang, Hsiung-Wei Chou, Inst of Nuclear Energy Research, Taiwan China

Modeling Uncertainty in Extrapolated Extreme Loads for Offshore Wind Turbine Support Structures [Proceedings only]

Lars Einar S. Stieng, Michael Muskulus, NTNU, Norway

5. VORTEX-INDUCED VIBRATIONS I (V. 3)
Monday June 11 10:30 Highness, 2F

Chair: Jin S Chung, ISOPE, USA

Co-Chair: Decheng Wan, Shanghai Jiao Tong Univ, China

Development of Prediction Model for Vortex-Induced Motion of Multi-Column Floating Structure

Seiya Shiiba, Shinichiro Hirabayashi, Hideyuki Suzuki, Rodolfo Trentin Gonçalves, Univ of Tokyo, Japan

Vortex Shedding and its Impacts on the Motions of a Paired-Column Semi-Submersible

Weiwen Zhao, Decheng Wan, Gang Chen, Shanghai Jiao Tong Univ, China

Experimental Study about Vibration Interference of Dual Pipe Systems

Yaowei Xuan, Shiqiang Li, Hanping Li, Hai Zheng, Dahong Fu, Guozhi Chen, Zhejiang Electric Power; Zhen Liu, Xiaoxia Zhang, Ying Zhang, Ocean Univ of China, China

Vortex-Induced Vibrations of Two Flexible Cylinders in Tandem Arrangement with Discrete Vortex Method

Ke Lin, Jiasong Wang, Jianliang Zhou, Liangbin Xu, Leixiang Sheng, Shanghai Jiao Tong Univ, China

Experimental Study on Flow-Induced Motion of an Array of Three Cylinders with Circular, Square and Diamond Sections

Rodolfo Trentin Gonçalves, Univ of Tokyo, Japan; Maria Eduarda Felipe Chame, Univ of Sao Paulo; Nicole Hepp Hannes, Federal Univ of Santa Catarina; Pedro Paludetto Silva de Paula Lopes, Univ of Sao Paulo, Brazil; Shinichiro Hirabayashi, Hideyuki Suzuki, Univ of Tokyo, Japan

**6. ASSET INTEGRITY I:
Fracture, Fatigue Management (V. 4)**
Monday June 11 10:30 Crystal A, 2F

Chair: Robert E Melchers, Univ of Newcastle, Australia

Co-Chair: Ali Reza, Exponent, USA

Risk-based Approach for Fatigue Integrity Assessment of Offshore Piping in the Arctic Environment

Arvind Keprate, DNV GL; R.M. Chandima Ratnayake, Univ of Stavanger, Norway

Asset Integrity and Site Investigation for Water Ingress to Flexible Elastomeric Foam (FEF) Thermal Insulation

Abe Nezamian, Armin Pilehforousha, Suraj Kishnani, Asset Management Advisory, Aurecon, Australia

The Research and Application of Numerical Simulation Evaluation Technology for Cathodic Protection System of the Subsea Pipeline in a Gas Field of South China Sea

Jing Hou, CNOOC Research Inst; Yuan Gao, Shenzhen COOEC Subsea Tech; Weirong Wei, CNOOC-Shenzhen, China

AC Corrosion Tests on Materials for Electrically Heated Flowlines

Kristian Thinn Solheim, Martin Hoeyer-Hansen, SINTEF Energy Research; Magnus Hurlen Larsen, Øyvind Iversen, Nexans Norway AS, Norway

Artificial Neural Network Model for Risk-Based Inspection Screening Assessment of Oil and Gas Production System

Andika Rachman, RM Chandima Ratnayake, Univ of Stavanger, Norway

Considerations in Developing an Inspection Plan for Equipment in Wet H₂S and Carbon Dioxide Service

Brian A Ott, Ali Reza, Peter S Veloo, Exponent, Failure Analysis Associates, Inc., USA

7. ENVIRONMENT I: Environ Monitoring, Red Tide (V. 1)

Monday **June 11** **10:30** Crystal B, 2F

Chair: Jonggeun Choe, Seoul National Univ, Korea

Environmental Impact Assessment for Offshore Oil and Gas Developments

Mizuki Kitagawa, Shigeru Nakajima, Japan NUS Co; Masaru Nasu, Engineering Advancement Association of Japan, Japan

A Particle-based Study on the Sewage Dispersion in Radial Sand Ridges in the Southern Yellow Sea, China

Huan Gong, Jianfeng Tao, Fan Xu, Hohai Univ, China

Tropical Cyclone Activity Analysis Using MRI-AGCM and d4PDF Data

Md Abdul Al Mohit, Masaru Yamashiro, Yoshihiko Ide, Mitsuyoshi Kodama, Noriaki Hashimoto, Kyushu Univ, Japan

Study on Solute Migration in Heterogeneous Vadose Zone under Heavy Rainfall in the Coastal Cities of China Using One-dimensional Soil Column

Yiru Zheng, Shuguang Liu, Chaomeng Dai, Xueji You, Tongji Univ, China

Adaptation of Directional Wave Measurement in 3D Physical Model to Eliminate the Reflection Component in Uni-Directional Waves

D P L Ranasinghe, I G I K Kumara, H P G M Caldera, N L Engiliyage, Lanka Hydraulic Inst, Sri Lanka

Application of Particle Tracking Method in Rapid Forecasting of Migration and Diffusion of Red Tide in the East China Sea [Proceedings only]

Liangyu Chen, East Sea Info Center, SOA China; Xiaodan Mao, National Engineering Research Center of Dredging Tech & Equipment; Jingxia Gao, East Sea Info Center, SOA China, China

8. OCEAN TECH I: Floatover Installation 1 (V 1)

Monday **June 11** **10:30** Crystal C, 2F

Chair: Hong Gun Sung, KRISO, Korea

Numerical Simulation of Float-over Installation under the Influence of Fender with Dynamically Positioned Barge

Fan Yi, Tianfeng Liu, Lei Wang, Shanghai Jiao Tong Univ, China

Study on the Marine Transportation Plan of Semisubmersible Production Platform [Oral Presentation]

Wei Zhang, Gang Chen, Hongtao Yuan, Yuhan Wang, Shanghai Waigaoqiao Shipbuilding, China

Lifting Design for Ships and Offshore Structures Using Non-Interpenetration Constraints and Flexible Multibody System Dynamics

Seung-Ho Ham, Myung-Il Roh, Hye-Won Lee, Seoul National Univ, Korea

A Parametric Study of Floatover Installation with a T-Shaped Barge in Shallow Water

Licheng Qin, Offshore Oil Engineering; Yisheng Wang, Peking Univ; Alan M Wang, Wentai Yu, Chen He, Offshore Oil Engineering, China

Application of Dynamic Positioning Float-over Technology to HZ25-8 DPP Topside Installation

Nan Xu, Licheng Qin, Offshore Oil Engineering; Yisheng Wang, Peking Univ, China

9. MECHANICS, IMPACT, SAFETY I: Mechanics 1 (V. 4)

Monday June 11 10:30 Emerald A, 3F

Chair: Hidekazu Murakawa, Osaka Univ, Japan

Uncertainties in the Stress Analysis of Ship Hull Structure Using Hold Model through a Comparison with Whole Ship Analysis

Teppei Shiraishi, Sanoyas Shipbuilding Corp; Masahiko Fujikubo, Osaka Univ, Japan

Hydroelastic Mathematical Modelling of Fluctuations for Complex Shells Considering Damping on Basis of the Module-Element Method

Nikolai A Taranukha, Irina N Zhurbina, Evgenii L Selivanov, Komsomolsk-na-Amure State Technical Univ, Russia; Jun Guo, Harbin Engineering Univ, China

Preloading of Stainless Steel Bolting Assemblies

Dominik Jungbluth, Natalie Stranghöner, Christoph Abraham, Nariman Afzali, Univ of Duisburg-Essen, Germany

Hydroelasto-buckling Ship Model Test in Regular Waves by Changing Wave Height

Song-bo Wang, Yu Huang, Weiqin Liu, Xue-min Song, Wuhan Univ of Tech, China

Interface Damage Detection for Steel Plate-Concrete Composite Slabs Based on Piezoceramics

Shi Yan, Siqi Li, Bowen Zhang, Jiaoyun Lin, Shenyang Jianzhu Univ, China

Experiment of the Vibration and Sound Radiation from Cylindrical Shell under Force and Sound Excitation

Yueming Fang, Xianzhong Wang, Chenban Jiang, Zhe Chen, Wuhan Univ of Tech, China

A Semi-analytical Solution for Free Vibration of Thick Orthotropic Annular Sector Plates with General Boundary Conditions, Internal Radial Line and Circumferential Arc Supports

Xianzhong Wang, Enhui Xu, Di Chen, Zhe Chen, Wuhan Univ of Tech, China

Strength Analysis of a Nuclear Reactor-Contained Compartment under Design Loading Conditions

Yi Yuan, Wen Dong, Zhengyi Zhang, Jianglong Sun, Jingxi Liu, De Xie, Huazhong Univ of Sci & Tech, China

10. GEOTECH I: Suction Piles (V. 2)

Monday June 11 10:30 Emerald B, 3F

Chair: Chun Fai Leung, National Univ of Singapore, Singapore

Geotechnical Design Challenges for Suction Anchors with Small Aspect Ratio in Gulf of Guinea

Lorenzo Zuccarino, Claudio Piatti, Omar Zanolli, Rina Consulting, Italy; Baidrul Ishak, Bruno Solinas, Bumi Armada Berhad, Malaysia

A Soil-Bucket Dynamic Interaction Model Test in Sand

Rui He, Bo Ma, Tao Zhu, Hohai Univ, China

Holding Capacity of Suction Anchor According to Loading Position Using p-y Method

Insuk Han, Osoon Kwon, Myounghak Oh, In Sung Jang, Korea Inst of Ocean Sci & Tech; Duhee Park, Hanyang Univ; Jin-kwon Yoo, Korea Water Resources Corporation, Korea

11. UNDERWATER TECH I: Sensors, Observation (V. 2)

Monday June 11 10:30 Emerald C, 3F

Chair: Shojiro Ishibashi, JAMSTEC, Japan

Study of Underwater Vehicle's Wake in Seawater of Linearly Gradient Temperature and Density

Wei Gu, Jin-Lan Zhang, Qing-Jie Meng, Liang Peng, Zhi-Ben Shen, Hai-Hua Deng, Wuhan Second Ship Design & Research Inst, China

Design of 300-Meter Saturation Diving Electrical Simulation Training System

Jin Zeng, Jian Zhang, Guohua Xu, GuoQiang Yuan, Biao Cai, Huazhong Univ of Sci & Tech, China

Navigation and Maneuvering Investigation System Based on Infrared Camera

Siwakorn Sukprasertchai, Sarinya Sanitwong na Ayutthaya, Salisa Wangthong, Phansak Iamraksa, Kasetsart Univ, Thailand

Research on Autonomous Path Planning of Unmanned Surface Vessel in Ocean Environment

Mengjia Liu, Hui Feng, Haixiang Xu, Wenzhao Yu, Wuhan Univ of Tech, China

Adaptive Bit Allocation OFDM System for Sea Shortwave Ground Wave Channel

Sen Fang, Lei Yang, Zhe Wang, Lu Gan, Wuhan Polytechnic Univ, China; Kaiyu Huang, Wright State Univ, USA; Lening Wang, Wuhan Univ of Tech, China

Assessment of Two Different Non-contact Scanning Methods to Survey Shape Modification of Submerged Organisms [Proceedings only]

R Napolitano, Marche Polytechnic Univ; M Guarneri, ENEA; M C Gambi, Anton Dohrn Zoological Station; E P Tomasini, Marche Polytechnic Univ, Italy

The Detection and Analysis of Buried Wellhead in Bohai Bay Oil Field Based on Magnetic Method [Proceedings only]

Chun Li, Xiaodi Yang, Wenran Cao, CNPC Eng Tech Resesarch, China

MONDAY 13:10

Keynote

Sea Ice Research: Recent Findings and Outstanding Issues in Relation to Arctic Development

Emerald C, 3F

Ed Ross, David B Fissel, ASL Environmental Sciences, Inc, Canada
Introduction by D Matskevich, ExxonMobil, USA

Keynote

Status & Outlook for Offshore Bottom Fixed Wind Turbine Support Structures [Oral presentation]

Regent, 2F

Laurent-Baudoin Kramer, OWEC Tower AS, Norway
Introduction by M. F. Vorpahl, Senvion GmbH, Osnabrück, Germany

Keynote

Hydrogen Trapping Sites and Hydrogen Embrittlement of Iron and Steels {Oral presentation} [moved from Wednesday]

Crystal A, 2F

Kenichi Takai, Sophia Univ, Japan
Introduction by Takuya Hara, Taishi Fujishiro, Nippon Steel & Sumitomo Metal, Japan

MONDAY 14:00

12. HYDRODYNAMICS II: Impact, Hydroelasticity 1 (V. 3)
Monday June 11 14:00 Royton D

Chair: Yong Won Lee, Lloyd's Register, UK
Co-Chair: Zana Sulaiman, GustoMSC B.V., Netherlands

Numerical Study of Solitary Wave Slamming on a 3-D Flexible Plate by MPS-FEM CoupledMmethod

Guanyu Zhang, Chengping Rao, Decheng Wan, Shanghai Jiao Tong Univ, China

Dynamic Analysis on Module Type Floating Structure Consisting of Highly Numerous Buoys and Connection Beams

Hyun-Sung Kim, Byoung Wan Kim, Sa Young Hong, Kangsu Lee, Korea Research Inst of Ships & Ocean Eng, Korea

Hydroelastic Analysis of an Annular Flexible Floating Plate

Eva Loukogeorgaki, Aristotle Univ of Thessaloniki, Greece; Masashi Kashiwagi, Osaka Univ, Japan

Numerical Investigation of Second-order Hydroelastic Response for the Flexible Floating Body

Kyeonguk Heo, Masashi Kashiwagi, Osaka Univ, Japan

Experimental Investigation of Floating Debris Impact Loading on Structures During Extreme Waves Like Tsunami

Harish, S., Sriram, V., Sundar, V. Sannasiraj, S. A., IIT Madras, India; Didenkulova, I., Nizhny Novgorod State Tech Univ, Russia

13. SLOSHING II: Experiments (V. 3)

Monday **June 11** **14:00** Empress, 2F

Chair: Laurent Brosset, Gaztransport & Technigaz, France

Co-Chair: Chong Ma, National Maritime Research Institute, Japan

SLING Research Programme: Exploring the Last Frontiers of Sloshing Physics [Oral presentation]

Hannes Bogaert, MARIN, Netherlands; Laurent Brosset, GTT, France; Mirek Kaminski, TU-Delft; Barry Koren, Eindhoven Univ of Tech; Devaraj van der Meer, Univ of Twente; Christian Poelma, TU-Delft; Benjamin Sanderse, CWI; Arthur Veldman, Univ of Groningenn; Jerry Westerweel, TU-Delft, Netherlands

Multiphase Wave Lab Developed by SLING Programme [Oral presentation]

Hannes Bogaert, MARIN; Vladimir Novakovic, TU-Delft; Ashwin Fernandes, MARIN, Netherlands

A New Generation of Sloshing Pressure Sensors

Sebastian Schreier, Christian Poelma, Delft Univ of Technology, Netherlands

Experimental Study on Heating Process for Cargo Oil in Sloshing Tank

Jinshu Lu, Xiang Zhu, Jiajia Deng, Wenfeng Wu, Jianwei Zhang, Zhejiang Ocean Univ, China

Validation of a Non-linear Sloshing Model

Eelco Frickel, Joris van den Berg, MARIN; Finlay McPhail, Shell Global Solutions International, Netherlands

14. RENEWABLE ENERGY II: Foundations (V. 1)

Monday **June 11** **14:00** Regent, 2F

Chair: Stefan Herion, KoRoH GmbH, Germany

Bearing Capacity Model Test of Shallow Buried Bucket Foundation under Cyclic Loading

Pengcheng Ma, Run Liu, Tianjin Univ, China

Comparison of Laboratory and in-situ Small Strain Soil Stiffness for Modelling Lateral Bearing Capacities of XL Monopiles

Taisiya Pein, Aligi Foglia, Fraunhofer IWES, Germany; Robert Kayen, Univ of California at Berkely, USA; Tobias Moerz, Univ of Bremen, Germany;

Explicit Method to Account for Cyclic Degradation of Offshore Wind Turbine Foundations Using Cyclic Interaction Diagrams

Gianluca Zorzi, Thomas Richter, Fabian Kirsch, GuD Geotechnik und Dynamik Consult GmbH, Germany; Anders Hust Augustesen, Martin Underlin Østergaard, Søren Peder Hyldal Sørensen, COWI A/S, Denmark

Comparison of Time-frequency Analysis Methods for an Offshore Wind Turbine
Fushun Liu, Gaojie Cui, Shujian Gao, Ocean Univ of China; Bin Wang, Jinning Shen, Hu Zhou, Powerchina Huadong Engineering, China

Numerical Study on the Deformation Response of the Monopod Bucket Foundation under Lateral Loads

Yu Shu Kuo, Ting Ting Wang, Yu Hsiu Tseng, National Cheng Kung Univ, Taiwan China

15. VORTEX-INDUCED VIBRATIONS II (V. 3)
Monday June 11 14:00 Highness, 2F

Chair: Yoshiki Nishi, Yokohama National Univ, Japan
Co-Chair: Ersegun D Gedikli, NTNU, Norway

Numerical Study of Vortex Induced Motions of Spar and Semi-submersible Platforms at High Reynolds Numbers

L Sun, Y F Ding, Dalian Univ of Tech; J T Zheng, Wuhan No.2 Ship Design Inst; Z Zong, Dalian Univ of Tech; C F Liu, Dalian Ocean Univ, China

Concomitant Wave and Current Effects on Vortex-Induced Motion (VIM) of a Large-volume Semi-submersible Platform

Rodolfo Trentin Gonçalves, University of São Paulo; Leandro Assis Pinto, Petrobras; André Luís Condino Fujarra, University of São Paulo, Brazil

Experimental study on Vortex-induced Motions of a Floating Cylinder Considering the Impact of Helical Strakes

Hongyuan Sun, Suya Xiao, Shandong Jiao Tong Univ; Weiping Huang, Shuang Chang, Ocean Univ of China, China

Vortex-induced Vibration of a Circular Cylinder with Fairings

Shengping Liang, Jiasong Wang, Zhongming Hu, Shanghai Jiao Tong Univ, China

16. ASSET INTEGRITY II; Corrosion Management (V. 4)
Monday June 11 14:00 Crystal A, 2F

Chair: Eric J Wright, ExxonMobil Production Co., TX, USA
Co-Chair: Abe Nezamian, Aurecon Group, Australia

Failure Prediction of Mild-Steel Welds due to Climate Change Influenced Marine Corrosion

Igor A Chaves, Robert E Melchers, Univ of Newcastle, Australia

Maximum Pit Depth Variability in Water Injection Pipelines

Robert E Melchers, Mukshed Ahammed, Univ of Newcastle, Australia

Ultimate Strength Assessment of Stiffened Plates with Grooving Corrosion Damage under Uniaxial Compression

Yan Zhang, Yufan Zhu, Chengxin Wang, Harbin Inst of Tech, Weihai, China

Experimental Study on Bond Behavior of Rebar Embedded in SFRC Subjected to Chloride Corrosion

Lijun Hou, Bingxuan Zhou, Ting Huang, Ruifeng Yang, Da Chen, Hohai Univ, China

A Machine Learning-based Approach to Predict Corrosion Allowance for Ships

Abhishek Chauhan, Yogesh Kumar, Siddartha Mashetty, Anirban Bhattacharyya, Om Prakash Sha, IIT Kharagpur, India

Composite Polymer Containing Coatings Formed on the PEO Pretreated Magnesium Alloy as Protection Against Corrosion and Wear

Sergey V Gnednikov, Sergey L Sinebryukhov, Dmitry V Mashtalyar, Konstantine V Nadaraia, Inst of Chemistry, FEB RAS; Dmitry P Kiryukhin, Inst of Problems of Chemical Physics, RAS, Russia

Protective Coatings on the 1579 Aluminium Alloy with Welded Joint for the Offshore Constructions

Valentin I Sergienko, Russian Academy of Sciences; Andrei S Gnednikov, Dmitry V Mashtalyar, Inst of Chemistry, FEB RAS, Russia

Study on Assessment Approach of Antimicrobial and Antifouling Performances for Marine Antifouling Coating

Xiuqin Bai, Jiangfan Chang, Xiaoyan He, Chengqing Yuan, Wuhan Univ of Tech, China

Residual Ultimate Strength of Simply Supported Corroded Plates with Initial Geometrical Imperfections under Uniaxial Compression

Ruoxuan Li, Daisuke Yanagihara, Takao Yoshikawa. Kyushu Univ, Japan

Continue at Session 26.

17. ENVIRONMENT II: CO₂ Emission, Water Quality (V. 1)

Monday June 11 14:00 Crystal B, 2F

Chair: Jonggeun Choe, Seoul National Univ, Korea

Clarification of Hazardous Areas Applied to Newly Developed Liquefied Hydrogen Carrier

Shuntaro Unno, Tomoaki Umemura, Hioaki Kagaya, Yukichi Takaoka, Kawasaki Heavy Industries, Japan

Saline Aquifer Characterization for Geological Carbon Sequestration using EnKF

Jonghyeon Jeon, Junhee Kang, Namhoon Kim, Seoul National Univ; Yi-Kyun Kwon, Kongju National Univ; Jonggeun Choe, Seoul National Univ, Korea

Design and Realization of Real Time Distributed Computing Platform of Ship Area Exhaust Emissions

Tiantain Yang, Yuanqiao Wen, Liang Huang, Changshi Xiao, Wenqiang Zhan, Wuhan Univ of Tech, China

Experimental Study on a Buoyant Jet in Wavy Crossflow

Zhenshan Xu, Yongping Chen, Dongbo Jiang, Hohai Univ, China

Analysis of River Velocity Measuring Methods for Low Velocity Considering the Characteristics of Rivers in Korea

Hyun Dong Kim, Jinhyu Choi, Mirae Ocean Corp; Kisu Kwank, Pusan National Univ, Korea

18. OCEAN TECH II: Floatover Installation 2(V 1)

Monday June 11 14:00 Crystal C, 2F

Chair: Jim Wang, COTEC Offshore Engineering Solutions, USA
Co-Chair: Sunho Park, Korea Maritime and Ocean Univ, Korea

Experimental Study on the Coupled Motions of Mooring Crane Vessel LANJING and the Topside Module during Lifting Operations in Following Waves

Shaohua Zhu, COOEC; Hanbing Luo, Hongye Ji, Tianjin Univ; Deming Cao, COOEC; Peng Xie, Tianjin Univ, China

Rapid Load Transfer Technology for Floatover Installations

Wentai Yiu, Alan M Wang, Shaohua Zhu, Jingkuo Xu, China Offshore Oil Eng; Andy Wang, DNV GL Oil & Gas China; Hanbing Luo, Tianjin Univ, China

Mating Analysis for Float-over Installation of a Large Topside in Various Load Transfer Stages

S J Jung, H U Kwak, S H Oh, Y J Kwon, B W Nam, N W Kim, Kangsu Lee, H G Sung, Korea Research Inst of Ships & Ocean Eng, Korea

Design of Leg Mating Unit for Float-over Installation

Kangsu Lee, Byoungjae Park, Hyun-Seok Kim, Doyoub Kim, Hong Gun Sung, Korea Research Inst of Ships & Ocean Eng, Korea

Assessment of Docking Operation during Float-over Installation on Jacket Structure

H U Kwak, S J Jung, Y J Kwon, B W Nam, N W Kim, K Lee, H G Sung, Korea Research Inst of Ships & Ocean Eng, Korea

A Model Test Study for DP Floatover Installation of Large Integrated Topsides [Oral presentation]

Mingxing Yu, Nan Xu, Hongxin Tian, Alan M Wang, Biao Wang, China Offshore Oil Eng; Lei Wang, Shanghai Jiao Tong Univ, China

19. MECHANICS, IMPACT, SAFETY II: Mechanics 2 (V. 4)

Monday June 11 14:00 Emerald A, 3F

Chair: Hyun Jo Jun, ExxonMobil Research & Engineering, USA

Co-Chair: Nikolai A Taranukha, KnASTU, Russia

Fatigue Crack Growth Simulation Using Characteristic Tensor

Hidekazu Murakawa, Osaka Univ, Japan

Coupled Thermo-elastic Analysis of Functionally Graded Doubly Curved Shells with Temperature-dependent Material Properties

Chih-Ping Wu, Yu-Wen He, National Cheng Kung Univ, Taiwan China

A Modified Degradation Model for Two-Dimensional Orthogonal Fabric Structures

Mengzhen Li, Renjun Yan, Hongmei Zhang, Diyi Chen, Wei Shen, Wuhan Univ of Tech, China

An Isogeometric Analysis Approach for Hull Structural Mechanical Analysis

Yanyun Yu, Yunlong Wang, Kai Li, Yan Lin, Dalian Univ of Tech, China

Dynamic Responses of Long-Span Cable-stayed Bridge with the Action of Both Running Vehicles and Wind Loads

Shaoqin Wang, Fan Yang, Zhun Yang, Beijing Univ of Civil Eng & Architecture; Qin Ma, CCCC Highway Consultants, China

An Internal Load Calculation Method Based on DEM for VLOC [Proceedings only]

Xiqing Song, Shaoxiong Zhang, Wuhan Univ of Tech; Fengliang Hu, China Classification Society, China

20. GEOTECH II: Foundation 1 (V. 2)

Monday June 11 14:00 Emerald B, 3F

Chair: Yun Sup Shin, Norwegian Geotechnical Institute, Norway

Co-Chair: Takaharu Shogaki, National Defense Academy, Japan

The Effect of Wave Action on the Lateral Pile-Soil Interaction for Monopiles in Sandy Seabed

Ting Huang, Shunya Bai, Lijun Hou, Zhongyuan Guo, Hohai Univ, China

Validation of Modifications to Lateral Support Functions for Offshore-Monopiles

Bert Schaedlich, Fabian Kirsch, Thomas Richter, Simon Wiesener, GuD Geotechnik und Dynamik Consult, Germany

Visual Observation of the Pull-out Failure Mode of Belled Type Pile in Sandy Soil and its Evaluation

Jung-goo Kang, Kyushu Univ; Aramaki Shinji, Research and Development Kotobuki Sangyo; Yasufuku Noriyuki, Kyushu Univ, Japan

Numerical Study on Static Behavior of Guardrail Supporting Piles Subjected to Horizontal Load

Jong Seok Yun, Ki-Jang Han, Hyoil Ahn, Sen Sven Falcon, Kee-Dong Kim, Yun Wook Choo, Kongju National Univ, Korea

A Construction Management Method of the Bored Pile Foundation

Hikaru Yoshida, Shohei Ishida, Daiken Sekkei, Inc; Masao Okuda, Okuda Construction; Youji Nakane, Showa Concrete Industries; Yukihiko Kani, Eiton Co, Japan

Hybrid Subsea Foundation for Deepwater Developments

Jean M. E. Audibert, Independent Geotechnical Consultant; Jeong-Yun Won, Barr Engineering, USA

Research on Failure Mode and Bearing Mechanism of the Single Pile Foundation [Oral presentation]

Bin Li, Tianjin Port Eng. Institute Ltd. of CCCC, China

21. UNDERWATER TECH II: Acoustics, Communication (V.

Monday June 11 14:00 Emerald C, 3F

Chair: Shuo Wang, CAS Inst of Automation, China

A Broadband Bayesian Sparsity Covariance Matrix Array Signal Processing Method

Daqian He, Dahai Zhang, Junhua Xing, China Ship Development & Design Center, China

The Application of Hermite Fractional Delay Filter in Sonar Beamforming
Lening Wang, Min Yu, Wuhan Univ of Tech, China

Acoustic Scattering from a Two-dimensional Underwater Vortical Flow over an Airfoil

Hao Du, Yongou Zhang, Aokui Xiong, Wuhan Univ of Tech; Zhixiang Wang, Naval Univ of Engineering; Haixiang Xu, System Engineering Research Institute of CSSC, China

Development of Prototype High-Speed Communication Equipment for Underwater Re-Charging System

Makoto Sugawara, Hiroshi Yoshida, Shojiro Ishibashi, Kiyotaka Tanaka, JAMSTEC, Japan

Application of Acoustic Metamaterials in Underwater Airfoil Structure

Xiaoliang Zhang, System Engineering Research Inst of CSSC, Jiaying Zhou, Yongou Zhang, Wuhan Univ of Tech; Tao Yan, System Engineering Research Inst of CSSC, China

MONDAY 16:20

22. HYDRODYNAMICS III: Impact, Hydroelasticity 2 (V. 3)
Monday June 11 16:20 Royton D

Chair: Yonghwan Kim, Seoul National University, Korea,

Air-cushion and Impact Force Coefficient with the Water Entry of a Flat Rigid Body

Zhaobing Jiang, Jun Yang, Mingming Zong, Yufen Xu, Sanjiang Univ, China

Numerical Study of the Effects of Grid Scale on Bow Wave Breaking

Zhen Ren, Jianhua Wang, Decheng Wan, Shanghai Jiao Tong Univ, China

Using CFD to Predict the Breaking Wave Forces on Cylindrical Jack-up Legs near a Steeply Declining Seabed

Zana Sulaiman, GustoMSC B.V., Netherlands

Prediction of Deck Slamming Occurrence of Offshore Platforms by Nonlinear Stochastic Approach

Dong-Hyun Lim, Hyun-Seung Nam, Yonghwan Kim, Seoul National Univ, Korea

A Full 3D Time-domain Numerical Model for the Wave-induced Motion of a Floating Body in Shallow Water

Jun-sheng Zhang, Bin Teng, Dalian Univ of Tech, China

23. SLOSHING III: Sloshing-Structure Interactions (V. 3)
Monday June 11 16:20 Empress, 2F

Chair: Zana Sulaiman, GustoMSC B.V., Netherlands

Comparing 2D and 3D Linear Response of a Simplified LNG Membrane Cargo Containment System

R W Bos, M L Kaminski, Delft Univ of Technology, Netherlands

An Enhanced Comparative Methodology for the Structural Safety Assessment of Membrane Type CCS under Sloshing Loads

Cheon-Jin Park, Yong-Tai Kim, Ki-Sup Noh, Hoon-Kyu Oh, Byung-Ki Choi, Kwang-Min Lee, Hyundai Heavy Industries, Korea

Damage Growth Analysis in Composite Structures Exposed to Sloshing

André Baeten, Augsburg Univ of Applied Sciences, Germany

Three-dimensional Numerical Simulations of Flow Past a Rotating Circular Cylinder at a Reynolds Number of 500

Adnan Munir, Ming Zhao, Helen Wu, Western Sydney Univ, Australia

24. RENEWABLE ENERGY III: Floating: Substructures (V. 1)

Monday June 11 16:20 Regent, 2F

Chair: Wojciech Popko, Fraunhofer IWES, Germany

Spar-type Wind Turbine Behavior: Modeling and Comparison with Experimental Data

He Yang, John M Niedzwecki, Texas A&M Univ, USA; Zhiqiang Hu, Newcastle Univ, UK

Study on Typical Design Load Cases of Semi-submersible FOWTs

Xun Meng, Meng Liu, Weiping Huang, Ocean Univ of China; Qiang Fu, Yantai CIMC Offshore Engineering Inst Company, China

Numerical Study on Influence of Turbulent and Steady Winds on Coupled Dynamic Response of 6-MW Spar-type FOWT

Long Meng, Yan-ping He, Ya-dong Liu, Yong-sheng Zhao, Long Yu, Shanghai Jiao Tong Univ, China

Study on Hydrodynamic Response of Semi-Submersible Wind Turbine Platform with Different Types of Mooring System

Chaohe Chen, Xinkuan Yan, Fuyong Liu, Guoliang Pang, Xiaochen Li, Tianhui Fan, South China Univ of Tech, China

Hydrodynamic Performance of a Novel Floating Foundation for Offshore Wind Turbine

Yichen Jiang, Guanqing Hu, Guoqing Jin, Zhendong Sun, Dalian Univ of Tech; Jiawen Li, Dalian Maritime Univ; Zhi Zong, Dalian Univ of Tech, China

Investigation on the Development of Spar-type Floating Wind Turbine and Potential Application in South China Sea

Jin Wang, Shanghai Jiao Tong Univ; Fei Duan, Changjiang Inst of Survey, Planning, Design & Research; Haining Lv, Shanghai Jiao Tong Univ, China

25. VORTEX-INDUCED VIBRATIONS III (V. 3)

Monday June 11 16:20 Highness, 2F

Chair: Jin S Chung, ISOPE, USA

Modal Analysis of a Top-Tensioned Riser Experiencing Vortex-Induced Vibration and Varying Axial Tensions

Zhe Wang, Di Deng, Decheng Wan, Shanghai Jiao Tong Univ, China

Dynamic Response of a Top-tensioned Riser under Vessel Motion

Decao Yin, Elizabeth Passano, Halvor Lie, SINTEF Ocean; Guttorm Grytøyr, Kristoffer Aronsen, Statoil, Norway; Michael Tognarelli, BP, USA; Elizbar Buba Kebabze, BP Exploration Operating, UK

Numerical Simulations of Vortex Shedding of a Circular Cylinder Experiencing Oscillatory Flow at Low Keulegan-Carpenter Numbers

Di Zheng, Zhe Wang, Decheng Wan, Shanghai Jiao Tong Univ, China; Zhiqiang Hu, Newcastle Univ, UK

Estimation of Flow Speed around Submerged Rigid Circular Cylinder Based on Its Vortex-induced Vibration and Nonlinear Filtering Theory

Yoshiki Nishi, Yosuke Toyoda, Yoshihiro Moriya, Yokohama National Univ, Japan

Power Generation Using Non-Linear Vortex-Excited Vibration of a Horizontal Circular Cylinder in Unidirectional Flow

Kenjirou Hayashi, Tuyosi Tada, Yosinori Shigihara, National Defense Academy, Japan; John R Chaplin, Univ of Southampton, UK

Experimental Force Database from Controlled Inline and Cross Flow Cylinder Motion

Erdem Aktosun, Jason M Dahl, Univ of Rhode Island, USA

26. HPM I: Advanced Materials 1 (V. 4)

Monday **June 11** **16:20** Crystal A, 2F

Chair: Andrea Fonzo, Centro Sviluppo Materiali, Italy

Co-Chair: RM Chandima Ratnayake, Univ of Stavanger, Norway

Residual Stresses Measurement on a Repaired Stainless Steel Welded Cylinder, Using a Combination of Techniques

Rémi Romac, Xavier P Ficquet, VEQTER, UK

Weldable Seamless Heavy Wall Line Pipes

A. Paggi, A. Bellani, E. Paravicini Bagliani, Ph. Darcis, Tenaris Pipeline Technology, Dalmine S.p.A., Italy

Microstructural Influence on Low-Cycle Fatigue Resistance of Coiled Tubing Steel [Oral presentation]

Kyung-Min Noh, Chong Soo Lee, POSTECH, Korea

Effect of V and Mo Micro-alloying on Hot Deformation Behavior and Recrystallization Kinetics of High Mn TWIP Steel [Oral presentation]

Sung-Joon Kim, Dong Bae Park, Hojun Gwon, POSTECH, Korea

27. COASTAL I: Wave Mechanics 1 (V. 3)

Monday **June 11** **16:20** Crystal B, 2F

Chair: Hiroyasu Kawai, National Inst. of Maritime, Port & Aviation Tech., Japan

Co-Chair: Kazuhiko Honda, National Inst for Land & Infrastructure Management, Japan

Ocean Wave Statistics Estimated from One-decade-long Observation on NOWPHAS GPS-mounted Buoy Network

Hiroyasu Kawai, Koji Kawaguchi, Fumikazu Suehiro, National Inst of Maritime, Port & Aviation Tech, Japan

An Analysis Solution for Wave Propagating through a Poroelastic Medium

Yuan-Jyh Lan, National Taiwan Ocean Univ, Taiwan China

A Regression Analysis of Progressing Periodic Water Waves on Irrotational Flow over a Horizontal Bed

JangRyong Shin, Daewoo Shipbuilding & Marine Eng, Korea

28. OCEAN Tech III: Floatover Installation 3 (V. 1)

Monday June 11 16:20 Crystal C, 2F

Chair: Alan M. Wang, Offshore Oil Engineering Co., China

Floatover Installation Technology with a DP2 Class Dynamic-Positioning Semisubmersible Vessel

Xiaojin Jin, Alan M Wang, Huailiang Li, Wentai Yu, Min He, China Offshore Oil Eng; Andy Wang, DNV GL Oil & Gas China, China

A Low-Deck Floatover Installation Technology with Strand Jack Lifting Scheme

Alan M Wang, Xiaojian Jin, Offshore Oil Eng; Yiyong Liu, China National Offshore Oil; Fuwen Tao, Chen He, Min He, Offshore Oil Eng; , China

Development of Mooring Tension Monitoring System for Wire with Various Diameter for on the Floating Crane [Oral presentation]

Hae-Young Lee, Chul-Soo Ahn, Mi-Hee Nam, Jae-Chang Lee, Dae-Kyung Kim, Samsung Heavy Industries; Hong-Gun Sung, Korea Research Inst of Ships & Ocean Eng, Korea

Dynamic Analysis of Moored Multi-Body System

Namkug Ku, Jea-Hwa Kim, Dong-Eui Univ; Hong-Gun Sung, Korea Research Inst of Ships & Ocean Eng, Korea

Comparison of Jacket Launch Simulation and Field Measurement

Min He, Alan M Wang, Litao Li, Offshore Oil Eng; Yining Chen, DNV GL Oil & Gas China; Xin Li, Lei Wang, Shanghai Jiao Tong Univ, China

Integrated Simulation Framework for Offshore Installation Operations considering Various Ocean Environments

Jun-Hyeok Bae, Ju-Hwan Cha, Sol Ha, Kwon-Ok Kim, Ha-Cheol Song, Chun-Sik Shim, Sang-Chan Lee, Kyung Seok Byun, Mokpo National Univ; Bo-Woo Nam, Hong-gun Sung, Korea Research Inst of Ships & Ocean Eng, Korea

29. MECHANICS, IMPACT, SAFETY III: Explosion (V. 4)

Monday June 11 16:20 Emerald A, 3F

Chair: Helena Polezhayeva, Surrey, UK

Studying on Response of Square Core Sandwich Plate with Hyperelastic under Explosive Loading inside Closed Cabin

Pan Chen, Qiang Wei, Zhizhong Liu, China Ship Development & Design Center, China

Thermomechanical Analysis of Composites Under Shock Load Using Peridynamics

Yan Gao, Selda Oterkus, Univ of Strathclyde, UK

Numerical Study on the Performance of New Type Multi-Layer Protective Structures Subjected to Contact Underwater Explosion

Zhe Li, Ganchao Chen, Manxia Liu, Jun Liu, Yuansheng Cheng, Pan Zhang, Huazhong Univ of Sci & Tech, China

The Influence Analysis of Flat Steel on Explosive Loading inside Closed Cabin

Pan Chen, Qiang Wei, Zhizhong Liu, China Ship Development & Design Center, China

Numerical Simulation of the Ship Response Subjected to Blast Load with Runge-Kutta Discontinuous Galerkin Method

Yu Fulin, Ji Lingling, Song Lei, Shandong Jiaotong Univ; Wang Hui, Shandong Huaihe River Basin Water Resource Planning and Design Inst; Wu Shengbo, PLA Rocket Force NCO College; Ren Shaofei, Harbin Engineering Univ, China

30. GEOTECH III: Foundation 2 (V. 2)

Monday **June 11** **16:20** Emerald B, 3F

Chair: Julie Q. Shang, Univ of Western Ontario, Canada

Geotechnical Interpretation of the Mietsu Dry Dock World Heritage Site

Takaharu Shogaki, Daishi Okuda, National Defense Academy; Naofumi Suzuki, Kowa Co, Japan

Capacity of Strip Foundations on Sand Overlying Clay Soils under Planar Combined Loading

Saeed Abyaneh, Justin Kennedy, Alasdair Maconochie, John Oliphant, TechnipFMC, UK

Structures of the Subgrade of the Old Nagasaki Highway and Abutment of the East Gate Bridge of Saga Castle

Takaharu Shogaki, Daishi Okuda, National Defense Academy, Japan

Study on the Calculation of Limit Loads for Non-Homogeneous Soil Foundations

Aimin Liu, Tianjin Port Eng Inst of CCCC; Weiwei Xu, Hebei Univ of Eng; Bin Li, Tianjin Port Eng Inst of CCCC, China

Numerical Simulation and Model Test of Scour on the Foundation of the Subsea Production System

Fei Wu, Jing Zhang, Hongsheng Ci, CNOOC Research Inst, China

Offshore Cofferdam Construction Technology with Bagged Soil Solidification

Jinfang Hou, Aimin Liu, Wenbin Liu, CCCC Tianjin Port Eng Inst, China

31. UNDERWATER TECH III: ROV (V. 2)

Monday **June 11** **16:20** Emerald C, 3F

Chair: Hiroyoshi Suzuki, Osaka Univ, Japan

Numerical Motion Analysis of ROV Applying ANCF to Tether Cable Considering its Mechanical Property

Hiroyoshi Suzuki, Hiroto Tomobe, Asako Kuwano, Thant Zin Htun, Osaka Univ;
Tomoya Inoue, JAMSTEC, Japan

An Experiment of Multicopter and Small ROV Combined Monitoring System for Coastal Area Environment

Keisuke Watanabe, Kazuho Mitsumura, Koshi Utsunomiya, Kazumasa Harada, Tokai Univ, Japan

Design and Performance Study of Additive Manufactured Thrusters for Remotely Operated Underwater Vehicle

Karsten Kopperstad, Hirpa G Lemu, Univ of Stavanger, Norway

TUESDAY 08:00

32. HYDRODYNAMICS IV: Ship Added Resistance (V. 3)
Tuesday June 12 08:00 Royton D

Chair: Decheng Wan,, Shanghai Jiao Tong Univ, China
Co-Chair: Tingqiu Li, Wuhan Univ of Tech, China

Short Waves and the Wave Drag of a Ship

Jiayi He, Sheming Fan, Jinbao Wang, Francis Noblesse, Chen-Jun Yang, Wei Li,
Shanghai Jiao Tong Univ, China

Resistance Reduction of High Speed Ship by New Bow Appendage

Zhihua Liu, Shuo Zhai, Naval Univ of Engineering, China

Computation of the Speed Loss in Seaway by Different Approaches

Ling Lu, Yao-Tang Mao, Ching-Yeh Hsin, National Taiwan Ocean Univ, Taiwan China

Influence of Surface Roughness Changes Caused by Fouling on Ship Resistance Based on CFD Analysis

Chengqing Yuan, Xuelei Yao, Xiuqin Bai, Wuhan Univ of Tech, China

Comparison of Added Resistance in Oblique Seas by Numerical Analysis and Experimental Measurement

Dong-Min Park, Jae-Hoon Lee, Yoo-Won Jung, Jaehoon Lee, Yonghwan Kim, Seoul National Univ, Korea

Effects of the Diffraction in Regular Head Waves on Added Resistance and Wake Using CFD

Cheol-Min Lee, Jin-Won Yu, Jung-Eun Choi, Inwon Lee, Pusan National Univ, Korea

33. SLOSHING IV: Assessment (V. 3)
Tuesday June 12 08:00 Empress, 2F

Chair: Yusong Cao, C-Z Marine Technology, TX, USA

Study on Treatment of Outliers in Peak Pressure Statistics

Sang-Yeob Kim, Yonghwan Kim, Seoul National Univ, Korea

Experimental Comparison of Sloshing Loads on Weather Side and Lee Side

Yangjun Ahn, Sang-Yeob Kim, Jieung Kim, Jeoungkyu Lee, Yonghwan Kim, Seoul National Univ, Korea

Numerical Simulation for Sloshing Behavior of Moss-Type LNG Tank Based on Improved SPH Model

Chong Ma, Takahiro Ando, Masayoshi Oka, National Maritime Research Inst, Japan

Experimental & Numerical Study of Anti-Roll Tanks

Louis Diebold, Bureau Veritas, France; Joong Soo Moon, Hyundai Heavy Industries; Yun-Suk Chung, Bureau Veritas, Korea

Multiphase MPS Method for Two-Layer-Liquid Sloshing Flows in Oil-Water Separators

Xiao Wen, Decheng Wan, Gang Chen, Shanghai Jiao Tong Univ, China

34. RENEWABLE ENERGY IV: Aerodynamics (V. 1)
Tuesday June 12 08:00 Regent, 2F

Chair: Fabian Vorpahl, Senvion GmbH, Germany

Analysis of the Tower Influence on Floating Offshore Wind Turbine Aerodynamic Performance Based on CFD Method

Chun-Ling Zou, Qiang Wang, Kang-Ping Liao, Harbin Engineering Univ, China; Qingwei Ma, City Univ London, UK

Actuator Line Method for Simulating NREL 5-MW Turbine Wakes

Zi-Ying Yu, Xing Zheng, Harbin Engineering Univ, China; Qingwei Ma, City Univ London, UK; Hong-Bin Hao, Harbin Engineering Univ, China

The Optimization Design Method of Multiple Aerofoils Model Blades

Zhe Chen, Yanping He, Yadong Liu, Yongsheng Zhao, Shanghai Jiao Tong Univ; Chong He, Tongji Univ, China

Numerical Simulations of Flows around Floating Offshore Wind Turbine

Ping Cheng, Decheng Wan, Shanghai Jiao Tong Univ, China; Changhong Hu, Kyushu Univ, Japan

35. VORTEX-INDUCED VIBRATIONS IV (V. 3)
Tuesday June 12 08:00 Highness, 2F

Chair: Jin S Chung, ISOPE, USA

Co-Chair: Brad Stappenbelt, Univ of Wollongong, Australia

Bending Dominated Flexible Cylinder Experiments Reveal Insights into Modal Interactions for Flexible Body Vortex-induced Vibrations

Ersegun Deniz Gedikli, NTNU, Norway; David Chelidze, Jason M Dahl, Univ of Rhode Island, USA

PIV Measurement Study on Flow around Circular Cylinders with Low Aspect Ratio Piercing the Free Surface

Keigo Sakata, Univ of Tokyo, Japan; Murilo M Cicolin, Univ of São Paulo, Brazil; Rodolfo T Gonçalves, Shinichiro Hirabayashi, Univ of Tokyo, Japan; Gustavo RS Assi, Univ of São Paulo, Brazil; Hideyuki Suzuki, Univ of Tokyo, Japan

Wake-induced Vibration of a Flexible Plate Located in the Wake of a Circular Cylinder

Huakun Wang, Tianjiao Pan, Yitong Chen, Qiu Zhai, Hohai Univ, China

Wake Transition in the Flow around a Circular Cylinder with Dual Parallel Splitter Plates Attached

Rui Wang, Yan Bao, Dai Zhou, Zhaolong Han, Huan Ping, Shanghai Jiao Tong Univ, China

36. HPM II: Advanced Materials 2 (V. 4)

Tuesday June 12 08:00 Crystal A, 2F

Chair: HyunWoo Jin, ExxonMobil Research & Engineering, USA

Co-Chair: Nobuyuki Ishikawa, JFE Steel Corporation, Japan

Slit Induced Self Magnetic Flux Leakage in a Square Steel Plate

Menno Patrick van der Horst, Mirosław Lech Kaminski, Delft Univ of Technology, Netherlands

Technical Review on the Application Technology of High Manganese Steels [Oral presentation]

Keiji Ueda, Dai Izumi, Koichi Nakashima, Satoshi Igi, JFE Steel, Japan

High Temperature Torsion Behavior of Austenitic High Manganese Steels [Oral presentation]

Sung-Joon Kim, Woojun Kim, Youn Ha Kim, POSTECH, Korea

37. COASTAL II: Wave Mechanics 2 (V. 3)

Tuesday June 12 08:00 Crystal B, 2F

Chair: Abbas Khayyer, Kyoto Univ, Japan

Co-Chair: Bob You, Ludong Univ, China

Wave and Circulation Numerical Modeling for Breakwater Rehabilitation Project at Tinian Harbor, Northern Marianna Islands

Lihwa Lin, Zeki Demirebilek, US Army Engineer Research and Development Center; Jessica H. Podoski, Thomas D. Smith, US Army Corps of Engineers, USA

On the Steady-state General Resonant Quartets in Water of Finite Depth

Xiaoyan Yang, Shijun Liao, Shanghai Jiao Tong Univ, China

Overtopping of Random Waves along a Truncated Plane Beach

M. Shazril I Ibrahim, Univ of Malaya, Malaysia; T E Baldock, Univ of Queensland, Australia

A Research of Breaker Impulse

Wen-Jer Tseng, Cheng Shiu Univ, Taiwan China

Laboratory Measurement and Analysis of the Force Exerted by Internal Solitary Wave over Ridge on Submerged Slender Body

Gang Wei, Hui Du, Yongchui Zhang, Junnan Xu, National Univ of Defense Technology, China

Numerical Investigation on Wave Transmission Characteristics over a Submerged Breakwater

Yanxu Wang, Zegao Yin, Yong Liu, Ocean Univ of China, China

Analysis of Linear Shear Instability of Longshore Currents for Mild Slope

Shen Liangduo, HuHui, WangJinbao, Linfeil Chenwei, Zhejiang Ocean Univ, China

38. OCEAN TECH IV: Subsea Systems (V. 1)

Tuesday **June 12** **08:00** Crystal C, 2F

Chair: Alan M. Wang, Offshore Oil Engineering Co., China

Influence of Production Parameters on the Optimum Position of Submarine Manifolds

Juliana Souza Baioco, Philip Stape, Luiza de Mesquita Ortiz, Breno P Jacob, Federal Univ of Rio de Janeiro, Brazil

Quantitative Study on the Location Selection of a Subsea Isolation Valve of Deep Water Riser

Qin Sun, CNOOC Research Inst, China

Seismic Design of Large-Scale Integrated Subsea Facilities

Majid Hesar, Tzi Piau Cheong, Qingjing Meng, Leonardo Gitahy, Carlos Charnaux, Subsea 7, UK

On the Stability of Subsea Wellhead in Deep-water Drilling: Based on the Bearing Capacity of Conductor

Yanbin Wang, Deli Gao, Jun Fang, Jing Zeng, Chenyu Meng, China Univ of Petroleum - Beijing, China

Stability Analysis of Drilling Pipe and Subsea Wellhead for Riserless Drilling in Deepwater

Yuhan Liu, Honghai Fan, Deqiang Tian, Zixiang Wen, Wenlong Jiang, Yuguang Ye, Longteng Yu, China Univ of Petroleum - Beijing, China

A Systems Engineering Framework for Delivering Reliable Subsea Equipment

Sirous F Yasseri, Hamid Bahai, Brunel Univ London; Ramin F Yasseri, Aker Solutions, UK

Subsea Power Distribution of Lingshui 17-2 Gas Field in South China Sea [Proceedings only]

Che Wei, CNOOC Research Inst, China

Design Implementation of Subsea Isolation System for Central Platform in South China Sea [Proceedings only]

Xuanze Ju, Peilin Liu, Ying Jiang, Jinlong Qi, Offshore Oil Eng; Chunna Song, Shenzhen Offshore Oil Engineering Subsea Tech; Wei Fang, Offshore Oil Eng; Shusheng Liu, Shenzhen Offshore Oil Engineering Subsea Tech, China

39. MECHANICS, IMPACT, SAFETY IV: Safety (V. 4)

Tuesday **June 12** **08:00** Emerald A, 3F

Chair: Guang Zou, Lloyd's Register, UK

A Probabilistic Approach for Joint Optimization of Fatigue Design, Inspection and Maintenance

Guang Zou, Kian Banisoleiman, Lloyd's Register, UK; Arturo Gonzalez, University College Dublin, Ireland; Michael Havbro Faber, Aalborg Univ, Denmark

Development of Evaluation System for Safety Management Efficiency of Shipping Company by Empirical Data

Hwayoung Kim, Mokpo National Maritime Univ, Korea

Damage Assessment of a Building via a Bayesian Probabilistic Approach with Earthquake Responses

C S Huang, J W Lin, National Chiao Tung Univ; W C Su, National Center for High Performance Computing, Taiwan China

Research on the Three-dimensional Domain for VLCC Based on DUKC

Yunlei Zhang, Yanmin Xu, Chunming Zou, Junchao Zhao, Jianyu Wang, Wuhan Univ of Tech, China

40. GEOTECH IV: Spudcan, Pipeline (V. 2)

Tuesday June 12 08:00 Emerald B, 3F

Chair: Yun Wook Choo, Kongju National Univ, Korea

Physical and Numerical Modelling of Novel Spudcan to Ease Spudcan-Footprint Interactions

M J Jun, Y H Kim, M S Hossain, M J Cassidy, Y Hu, Univ of Western Australia; , Australia; S G Park, Daewoo Shipbuilding & Marine Eng, Korea

Model Tests on Effects of Spudcan Penetration and Extraction on Adjacent Piles

Jianhua Wang, Yifei Fan, Weijie Gao, Zhaofeng Tian, Tianjin Univ, China

Mechanism and Prediction of Spudcan Extraction Resistance Due to Base Suction

Pan Gao, Shanghai Maritime Univ; Menglan Duan, China Univ of Petroleum-Beijing; Ji Zeng, Shanghai Maritime Univ; Jianbo Li, China Oilfield Services, China

Spudcan Penetration Behaviour on a Sloping Seabed by Numerical Analysis and Centrifuge Modeling

Yunsup Shin, Huynh Dat Vu Khoa, Jung Chan Choi, Norwegian Geotechnical Inst, Norway; Heon-Joon Park, Jae-Hyun Kim, Dong-Soo Kim, Korea Advanced Inst of Sci & Tech; Jintae Han, Seongwon Lee, Korea Inst of Building Construction and Tech; Jungin Choi, Samsung Heavy Industries, Korea

Interaction of Pipeline and Elasto-Plastic Sandy Seabed under Dynamic Loadings

Xiaowen Wang, Jian-Min Zhang, Tsinghua Univ, China

Model Experiments on Influence of the Bending Angles on Lateral Resistance Acting on Buried Pipe Bends

Yoko Ohta, Yutaka Sawada, Kobe Univ; Kohei Ono, Ehime Univ, Japan; Hoe I. Ling, Columbia Univ, USA; Toshinori Kawabata, Kobe Univ, Japan

41. UNDERWATER TECH IV: AUV Design (V. 2)

Tuesday June 12 08:00 Emerald C, 3F

Chair: Satoru Yamaguchi, Kyushu Univ, Japan

Conceptual Design of an Underwater Benthic Vehicle

Pengfei Xu, Ming Zhao, Lei Wan, Guohua Xu, Hongxia Cheng, Hohai Univ, China

Conceptual Design of Underwater Recharging Unit Applied to the Long-term AUV Operation System

Shojiro Ishibashi, JAMSTEC, Japan; Song K Choi, Univ of Hawaii at Manoa, USA

The Development Status of an Underwater Recharging Station

Kiyotaka Tanaka, Hiroshi Yoshida, Shojiro Ishibashi, Makoto Sugawara, JAMSTEC, Japan

Gliding Performance of an Underwater Glider for Ocean Floor Resources Exploration

Satoru Yamaguchi, Kyushu Univ; Hirofumi Sumoto, Kagoshima Univ; Ryota Sakamoto, Ryo Nogami, Kyushu Univ, Japan

Improved Particle Filter in Full-Depth Autonomous Underwater Vehicle Integrated Navigation

Zonglin Liu, Nailong Wu, Chao Wu, Rui Miao, Tong Ge, Shanghai Jiao Tong Univ, China

TUESDAY 10:30

42. HYDRODYNAMICS V: Ship Drag Reduction (V. 3)

Tuesday June 12 10:30 Royton D

Chair: Guang Hua He, Harbin Inst Tech, China

Lattice Boltzmann Simulation on Drag Reduction by Adhesion-regulated Superhydrophobic Surfaces

Liuming Yang, Guoxiang Hou, Yang Yu, Kai Wang, Huazhong Univ of Sci & Tech, China

Computation and Measurement of Wake Field of Fin Installed in Boundary Layer

Rikizo Yamashita, Sumitomo Heavy Industries Marine & Eng; Yasuyuki Toda, Osaka Univ, Japan

A Hydrodynamic Design Method of Ship Applying the Air Lubrication System

Chiharu Kawakita, National Maritime Research Inst, Japan

Experimental Investigation of Surface Pressure Distribution of the Duct-Type Energy Saving Device for Ships Both in Calm Water and in Wave Conditions

Kenichi Kume, Ryohei Fukasawa, National Maritime Research Inst, Japan

Improvement of Rudder-Bulb-Fin System in Ship and Propeller Wake Field of KVLCC2 Tanker in Calm Water

Tho-Quang Truong, Ping-Chen Wu, Junichiro Kishi, Yasuyuki Toda, Osaka Univ, Japan

Experimental Investigation of the Hydrodynamic Force Acting on Ship Hull and Rudder in Various Wave Directions

Van Minh Nguyen, Tien Thua Nguyen, Juwon Seo, Hyeon Kyu Yoon, Changwon National Univ; Yeon Gyu Kim, KRISO, Korea

The Analysis of Optimal Oscillation Angle of Fin in Propulsion Device of Wave Glider Based on Quasisteady Hydrodynamic Method

Zhongqiang Zheng, Zhenjiang Yu, Zongyu Chang, Xiujun Sun, Zhanxia Feng, Jiakun Zhang, Haoran Zhao, Ocean Univ of China, China

43. SLOSHING V: Sloshing Mitigation (V. 3)

Tuesday **June 12** **10:30** Empress, 2F

Chair: Andre Baeten, Augsburg Univ of Applied Sciences, Germany

Co-Chair: Mirek Kaminski, Delft Univ of Technology, Netherlands

Slosh Mitigation of LNG: New Challenges

Erik Jeroen Eenkhoorn, Hengelo (O), Netherlands

Slosh Mitigation Applications in LNG Containment Systems

Erik Jeroen Eenkhoorn, Hengelo (O), Netherlands

Effects of Internal Cylinders on Natural Sloshing Frequencies of a 3D Rectangular Tank

Chongwei Zhang, Peng Su, Dezhi Ning, Dalian Univ of Tech, China

Active and Passive Sloshing Mitigation in Tanks

Philipp Behruzi, Francesco De Rose, ArianeGroup GmbH, Germany

Numerical Simulation of Liquid Sloshing with Multiple Flexible Baffles Using a Coupled SPH with Smoothed Point Interpolation Method

Shuangqiang Wang, Guiyong Zhang, Boqian Yan, Dalian Univ of Tech, China; Zhiqian Zhang, Inst of High Performance Computing, Singapore; Zhi Zong, Dalian Univ of Tech, China

Incompressible SPH for Simulating Violent Sloshing in Tank with Different Baffles

Yi You, Xing Zheng, Harbin Engineering Univ, China; Qingwei Ma, City Univ London, UK; Gang Ma, Harbin Engineering Univ, China

44. RENEWABLE ENERGY V: Offshore Wind Simulations (V. 1)

Tuesday **June 12** **10:30** Regent, 2F

Chair: Decheng Wan, Shanghai Jiao Tong Univ, China

Study of Free Vortex Wave Method with Curved Filament Correction

Yi Lin, Lei Duan, Ye Li, Shanghai Jiao Tong Univ, China

3D Fully Nonlinear Beam Dynamics of Offshore Wind Turbines

Carsten Corte, Baustatik – Baudynamik – Numerische Modellierung, Germany

Comparison of Integrated and Sequential Design Approaches for Fatigue Analysis of a Jacket Offshore Wind Turbine Structure

Ana Glisic, Leibniz Univ Hannover; Ngoc-Do Nguyen, DNV-GL; Peter Schaumann, Leibniz Univ Hannover, Germany

Simulation of Topographical Change in an Offshore Wind Farm

Hsing-Yu Wang, Hui-Ming Fang, Sung-Shan Hsiao, National Taiwan Ocean Univ; Yun-Chih Chiang, Tzu Chi Univ; Jung-Chang Su, Chun-Sen Lu, Sinotech Engineering Consultants, Taiwan China

Application of a New OpenFOAM Tool to Design a Pilot Floating Wind Farm Offshore Mazara del Vallo (Italy)

Agnese Paci, Renata Archetti, Univ of Bologna, Italy

A Regression Analysis for Fatigue Damage Estimation on Offshore Wind Turbine Using Artificial Neural Network

Hyeon-Jin Kim, Beom-Seon Jang, Seoul National Univ, Korea

Dynamic Loading Comparison between Fully Coupled and Simplified Model on Offshore Wind Turbines with Jacket Support Structures under Seismic Condition

Wen-Jeng Lai, Wei-Nian Su, Chin-Cheng Huang, Inst of Nuclear Energy Research; Yi-Mei Huang, National Central Univ, Taiwan China

**45. SUBSEA, PIPELINES, RISERS I:
Flexibles, Umbilicals (V. 2)**

Tuesday June 12 10:30 Highness, 2F

Chair: Yijun Shen, Rose Group, UK

Burst Tests of Pipeline Containing Colonies of Metal Loss Defects with Different Sizes

Chenliang Su, Dalian Univ of Tech; Ying Li, Zhejiang Univ of Sciene & Tech; Xin Li, Dalian Univ of Tech, China

An Overall and Safe Design Method for Subsea Production System

Jing Ma, Xiaohan Yan, Yongtu Liang, Haoran Zhang, Bohong Wang, China Univ of Petroleum-Beijing; Zhongliang Huang, CNPC Offshore Engineering, China

Analysis on Nonlinear Hysteresis Characteristic of Unbonded Flexible Pipes

Wei Wang, Hexiao wang, Liping Sun, Harbin Engineering Univ, China

Numerical Simulation of Nonlinear Vibration of Flexible Riser Conveying Fluid

Jianjie Niu, Jiangsu Univ of Sci & Tech; Xiaomin Li, Ocean Univ of China; Jiajia Shen, Li Zhou, Jiangsu Univ of Sci & Tech, China

Study of Mechanical Performance of New-type Non-metallic Composite Flexible Riser Offshore Environment

Lin Zhao, Yanju Yin, Ocean Univ of China, China

Global Analysis of Flexible Riser with Internal and External Pressure Load Effects

Jeong Du Kim, Beom-Seon Jang, Lan Hee Yoon, Seoul National Univ, Korea

Influence of Gap Span Creep Behaviour of Polymer Barrier Layer on Service Life in the HPHT Deepwater Unbonded Flexible Risers

Yijun Shen, Andrew Burton, Paul Birkinshaw, Roland Palmer-Jones, ROSEN Group, UK

A Procedure for Assessment of Umbilical Fatigue Damage [Proceedings only]

Yusong Cao, Fuwei Zhang, C-Z Marine Technology, USA

46. HPM III: Composite Materials (V. 4)
Tuesday June 12 10:30 Crystal A, 2F

Chair: Harovel G Wheat, Univ of Texas at Austin, USA

Buckling Failure Load Analysis of Laminated Composite Beam Based on DTTM

Yu Fulin, Ji Lingling, Ding Yeli, Zhang Shaojun, Li Xiao, Shandong Jiaotong Univ; Guo Jun, Harbin Engineering Univ, China

Effect of Water-Cement Ratio of Ductile-Fiber-Reinforced Cementitious Composite Using Recycled Fine Aggregate on Shear Fracture Behavior of RC Beam

Ken Watanabe, Tokai Univ; Naoto Ohtsu, Sugatec Co, Japan

Neutralization of Concrete by Acidic Hydrocarbon Products

Ni Zhen, National Univ of Singapore, Singapore; Harald Justnes, SINTEF Building & Infrastructure, Norway; Xudong Qian, Khim Chye Gary Ong, National Univ of Singapore, Singapore; Tor Arne Martius-Hammer, SINTEF, Norway; Kiang Hwee Tan, National Univ of Singapore, Singapore

Durability of Lightweight Aggregate Concrete in Marine Structures

Ni Zhen, Xudong Qian, National Univ of Singapore, Singapore; Harald Justnes, Tor A M Hammer, SINTEF Building & Infrastructure, Norway; Kiang Hwee Tan, Khim Chye Gary Ong, National Univ of Singapore, Singapore; Serina Ng, SINTEF Building & Infrastructure, Norway

Suitability of Amphoteric Ion Polymer as Retarder for Calcium Aluminate Phosphate Cement

Huajie Liu, Yuhuan Bu, Leiju Tian, China Univ of Petroleum-Qingdao, China; Chang Lu, Univ of Alberta, Canada

47. COASTAL III: Storm Surge (V. 3)
Tuesday June 12 10:30 Crystal B, 2F

Chair: Katsuya Hirayama, Port and Airport Research Inst., Japan

Integrated Model for Astronomic Tide and Storm Surge Induced by Typhoon for Ningbo Coast

Tianyi Zhou, Ya Tan, Ao Chu, Changkuan Zhang, Hohai Univ, China

Inundation Risk due to Storm Surge for Ports in Three Major Bays of Japan

Kazuhiko Honda, Kazunori Sameshima, National Inst for Land & Infrastructure Mgmt, Japan

Long-lead-time Prediction of Storm Surge Using Effective Controlling Parameters and Artificial Neural Networks

Wei-Ting Chao, Tzu-Wei Wang, Chih-Chieh Young, National Taiwan Ocean Univ, Taiwan China

48. OCEAN TECH V: LNG Process, Bunkering 1(V. 1)

Tuesday June 12 10:30 Crystal C, 2F

Chair: Hong Gun Sung, Korea Research Inst of Ships & Ocean Engineering, Korea

Sloshing Load Assessments for 2-row Arrangement LNG Tank for Floating Offshore LNG Bunkering Terminal

Seong Min Woo, Chang Seop Kwon, Hyun Joe Kim, Dong Yeon Lee, Samsung Heavy Industries, Korea

Development of LNG Bunkering Process Simulator to Achieve More Reliable Design Conditions Propulsion System for LNG Carrier [Oral presentation]

Sung-Yoon Choi, Ye-Rim Hwang, Ho-byung Yoon, Jae-Woong Choi, Samsung Heavy Industries, Korea

LNG Ageing Prediction Model

Jonas Thiaucourt, Jean-François Hetet, Ecole Centrale Nantes; Etienne Delaire, Pascal Robert, French Maritime Academy, France

Technology Development and Application of Deep-draft Semi-Submersible Production Platform with Condensate Storage [Proceedings only]

Xu Jia, Da Li, Cong Yi, Haishan Zhu, Xueping Bai, CNOOC Research Inst, China

Design Impact of Frequent Loading Variations to Global Performance of Deepdraft SEMI Platform with Storage [Proceedings only]

Cong Yi, Da Li, Wenzhou Liang, Jingrui Zhao, CNOOC Research Inst, China; Xiaoqiang Bian, SBM Offshore USA, USA; Jiaguo Feng, CNOOC Research Inst, China; Peimin Cao, SBM Offshore USA, USA

49. MECHANICS, IMPACT, SAFETY V: Impact 1 (V. 4)

Tuesday June 12 10:30 Emerald A, 3F

Chair: Hema Wadhwa, INTECSEA Pty Ltd; Australia

Experimental and Numerical Analysis of Single Side Ship Structure Laterally Punched by Different Indenters

Weiguang Liu, Jingxi Liu, Min Zhang, Huazhong Univ of Sci & Tech, China

Experimental Study on Crashworthiness of Corrugated Core Sandwich Structures

Jin Pan, Wei Gao, Wuhan Univ of Tech; Chu Yang Zhou, Faurecia (China) Holding; Ming Cai Xu, Huazhong Univ of Sci & Tech, China

Numerical Simulation Research on Ship Grounding of Double Bottom Tankers

Kai Jin, Guoqing Feng, Ying Tang, Yuhang Sun, Pengcheng Liu, Harbin Engineering Univ, China

Sensitivity Analysis of Impact Loads by CFD Solvers for Structural FEM Computation on Ship Structures

Stefano Gaggero, Tomaso Gaggero, Marco Gaiotti, Stefano Ghelardi, Giuliano Vernengo, Diego Villa, Univ of Genova, Italy

Low-velocity Impact Response and Residual Flexural Behavior of Composite Sandwich Structures with Corrugated Core

Wentao He, Shuqing Wang, Ocean Univ of China; Jingxi Liu, De Xie, Huazong Univ of Sci & Tech; Zhe Tian, Ocean Univ of China, China

Collision Risk Prediction and Quantification Method for Multi-ship Encountered Situation with Multi-factors in Inland Water

Yanfeng Wang, Liwen Huang, Xilong Xiong, Wuhan Univ of Tech; Mengzi Wang, Wuhan Technical College of Communications; Haiwen Yuan, Lili Wang,;Wuhan Univ of Tech, China

50. GEOTECH V: Computational Modeling (V. 2)

Tuesday June 12 10:30 Emerald B, 3F

Chair: Saeed Dehghanpoor Abyaneh, TechnipFMC, UK

Prediction of Maximum Penetration Depth for Free Fall Penetrometers in Clay

Abhishek Ghosh Dastider, Divya S K Mana, Santiram Chatterjee, Prasenjit Basu, IIT Bombay, India

Numerical Modeling on the Drainage Problem for a Landfill Site on a Hillslope

Chia-Cheng Fan, Ching-Feng Wu, Kaohsiung Univ of Sci & Tech, Taiwan China

Numerical Studies for Wave-Induced Pore Pressures around a Group of Piled Foundations

LL Duan, D-S Jeng, Southwest Jiaotong Univ, China

Numerical Solution of Two-Dimensional Unsaturated Flow Problems Using the Meshless Method

Chih-Yu Liu, Cheng-Yu Ku, National Taiwan Ocean Univ; Chien-Chung Ke, Sinotech Eng Consultants Taiwan; Yan Su, Fuzhou Univ, China

On Solving Subsurface Flow Problems in Heterogeneous Soil Using a Novel Meshless Method

Jing-En Xiao, Cheng-Yu Ku, Lien-Kwei Chien, Wei-Po Huang, National Taiwan Ocean Univ, Taiwan China

51. UNDERWATER TECH V: AUV Control (V. 2)

Tuesday June 12 10:30 Emerald C, 3F

Chair: Masahiko Nakamura, Kyushu Univ, Japan

Co-Chair: Shuo Wang, Institute of Automation, CAS, China

Numerical Study on Estimation of Hydrodynamic Performance for Open-frame Underwater Vehicle Using CFD

Hiroyoshi Suzuki, Yoshiki Nagai, Yosuke Okuda, Osaka Univ; Yutaka Ohta, Yoshitaka Watanabe, JAMSTEC; Toshio Iseki, Tokyo Univ of Marine Science & Tech, Japan

3D Space Obstacle Avoidance System of a Large Scale Autonomous Underwater Vehicle

Ben Li, Guanxue Wang, Guohua Xu, Xin Zhang, Huazhong Univ of Sci & Tech, China; Han Xu, Univ of Southern California, USA

Robust MRAC with Anti-windup Compensator for the Depth Channel of an Autonomous Underwater Vehicle

Nai-Long Wu, Zong-Lin Liu, Chao Wu, Tong Ge, De-Qing Yang, Shanghai Jiao Tong Univ, China

TUESDAY 13:10

2018 Prof. Jin S Chung Award Lecture Royton Hall D

Technological Challenges Related to Sustainable Use of the Arctic Seas [Oral presentation to be published in Intl Journal of Offshore and Polar Engineering]
Ove T Gudmestad, Univ of Stavanger, Norway

Introduction: Jin S Chung, ISOPE

TUESDAY 14:00

52. HYDRODYNAMICS VI: Ship Seakeeping (V. 3)
Tuesday June 12 14:00 Royton D

Chair: Sa Young Hong, Korea Research Inst. of Ships & Ocean Eng, Korea

A Validation Study of CFD Simulations of a Tanker in Ballast Condition Advancing in Waves

Hideo Orihara, Hisafumi Yoshida, Japan Marine United Corp, Japan

Study on the Method of the Design Loads for Ultra Large Container Ship

Siyu Wang, Hui Li, Kaihong Zhang, Hexing Song, Zheng Yang, Harbin Engineering Univ, China

Time Domain Ship Motions Based on 3DTGF Method and Simulating for Parametric Rolling

Wenjun Zhou, Renchuan Zhu, Xiaojia Wang, Xi Chen, Shanghai Jiao Tong Univ, China

Forces, Ship Motions and Velocity Wake Field for KRISO Container Ship Model in Regular Head Waves

Md Alfaz Hossain, Ping-Chen Wu, Yusuke Shibano, Yasuyuki Toda, Osaka Univ, Japan

A Numerical Study of a Freely Floating Lifeboat in Regular Waves

Hao Chen, Ling Qian, Zhihua Ma, Derek Causon, Clive Mingham, Manchester Metropolitan Univ, UK

53. ARCTIC I: Ice Cover Mechanics (V. 1)
Tuesday June 12 14:00 Empress, 2F

Chair: Dmitri Matskevich, ExxonMobil Upstream Research, USA

Accelerating and Decelerating Moving of Submarine under Ice Cover

Aleksandra V Pogorelova, Sholom-Aleichem Priamursky State Univ; Victor M Kozin, Inst of Machining & Metallurgy; Vitaliy L Zemlyak, Sholom-Aleichem Priamursky State Univ, Russia

Laboratory Study of Ice Floes Collisions under Wave Action

Hongtao Li, Raed Lubbad, NTNU, Norway

The Research of the Ice-Breaking Capacity of Flexural Gravity Waves Caused By Motion of Submarine Vessel under Conditions of Varying Bottom Contour

Vitaliy L Zemlyak, Sholom-Aleichem Priamursky State Univ; Victor M Kozin, Inst of Machine Sci & Metallurgy, Russia; Nikita O Baurin, Sholom-Aleichem Priamursky State Univ, Russia

The Research of the Stressed Strain State of Ice Beams Reinforced by Surface Reinforcement [Proceedings only]

Victor M Kozin, Inst of Machine Science & Metallurgy; Vitaliy L Zemlyak, Alexey S Vasiliev, Konstantin I Ipatov, Sholom-Aleichem Priamursky State Univ. Russia

54. RENEWABLE ENERGY VI: Wind Turbine 1 (V. 1)
Tuesday June 12 14:00 Regent, 2F

Chair: Anand Natarajan, Technical Univ of Denmark, Denmark

Co-Chair: Matti N Scheu, Ramboll, Germany

Ice Load Design Portal for Sub-Structures in Offshore Wind Turbines in Ice-Covered Sea Areas

Jaakko Heinonen, Maria Tikanmäki, Juha Kurkela, Paul Klinge, Toni Hekkala, VTT Technical Research Centre of Finland; Jussi Koskela, Semantum Oy; Anni Montonen, Patrick B Eriksson, Finnish Meteorological Inst, , Finland

Investigation of Ice Loads for Offshore Wind Turbine in Varying Ice Condition

Wei Shi, Dalian Univ of Tech, China; Xiang Tan, Nanyang Technological Univ, Singapore; Li Zhou, Jiangsu Univ of Sci & Tech; Dezhi Ning, Dalian Univ of Tech, China; Madjid Karimirad, Queen's Univ of Belfast, UK

Fatigue Damage Analysis for Offshore Wind Turbine Considering Coupled Loads Effects

Min Zhang, Qihao Wu, Yanjian Wu, Junfeng Du, Yu Xu, Ocean Univ of China; Xiaolong Xu, Siemens Corporate Technology, China

Spectral-based Fatigue Life Analysis of Offshore Wind Turbine in Ice Region

Guojun Wang, Dayong Zhang, Shuaifei Wang, Qianjin Yue, Dalian Univ of Tech - Panjin, China

Integrated Assessment of Pile Driving Noise for Offshore Wind Farm in Western Taiwan

Tai-Hua Liu, Wei-Chun Hu, Chi-Fang Chen, Wei-Shien Hwang, Chih-Hao Wu, National Taiwan Univ, Taiwan China

Fully Coupled Analysis of a Bottom Fixed Offshore Wind Turbine under Earthquake, Wind and Wave Loads

Wenhua Wang, Dalian Univ of Tech; Bin Wang, Jie Zhang, Powerchina Huadong Engineering; Xin Li, Dalian Univ of Tech, China

55. SUBSEA, PIPELINES, RISERS II: Riser Design 1 (V. 2)
Tuesday June 12 14:00 Highness, 2F

Chair: Frank K. Lim, 2H Offshore Engineering, UK.

Nonlinear Dynamic Analysis of Offshore Structures with Corotational Beam Elements

Anastasia Tsolaridou, Demos C Angelides, Aristotle Univ of Thessaloniki, Greece

Large Amplitude Motions of Deepwater Marine Riser Transporting Fluid

Karun Klaycham, Chainarong Athisakul, Somchai Chucheeepsakul, King Mongkut's Univ of Tech Thonburi, Thailand

The Application of Large Diameter Steel Catenary Riser (SCR) for Deep-Draft Semi in South China Sea [Proceedings only]

Yi Liu, Lusheng Jia, Xu Jia, Jun Huang, Da Li, Hong Lu, CNOOC Research Inst, China

56. HPM IV: Fatigue, Fracture (V. 4)
Tuesday June 12 14:00 Crystal A, 2F

Chair: Hidekazu Murakawa, Osaka Univ, Japan

Ductile Fracture Behavior of Bainite-MA Dual-Phase Steels

Junji Shimamura, Shusaku Ota, Kyono Yasuda, Nobuyuki Ishikawa, Tomoyuki Yokota, Satoshi Igi, JFE Steel, Japan

Fracture Toughness Behaviour of High-strength Structural Bolting Assemblies of Large Diameters

Christoph Lorenz, Natalie Stranghöner, Univ of Duisburg-Essen; Sandro Citarelli, Markus Feldmann, Sebastian Münstermann, Victoria Brinell, RWTH Aachen Univ, Germany

Study on Hot Spot S-N curve for Welded Aluminum Joints with Various Plate Thicknesses

Toru Shiratsuchi, Naruyoshi Izumi, Tatsuya Imai, Satoru Nishimoto, Yuta Hasegawa, Kawasaki Heavy Industries; Naoki Osawa, Osaka Univ, Japan

Influence of Tensile and Compressive Residual Stresses on the Crack Opening Strain: An in situ Neutron Diffraction Study [Oral presentation]

Wanchuck Woo, Dong-Kyu Kim, Korea Atomic Energy Research Inst; Gyu Baek An, Chosun Univ, Korea

Influence of Mean Strain on Low Cycle Fatigue Life of Pipeline with Root Crack in Circumferential Welded Joint

Hiroshi Shimanuki, Nippon Steel & Sumitomo Metal; Rie Ikeda, Nippon Steel & Sumikin Pipeline & Engineering, Japan

Study on Fatigue Strength Evaluation of Casting Alloy and Its Welded Joints for Offshore Structures

Yoon-duck Seo, Chan-hoe Kang, Chang-hyun Lee, Chang-hwan Jang, Sung-gun Park, Daewoo Shipbuilding & Marine Eng, Korea

57. COASTAL IV: Structures 1 (V. 3)
Tuesday June 12 14:00 Crystal B, 2F

Chair: Eva Loukogeorgaki, Aristotle Univ of Thessaloniki, Greece

Co-Chair: Demos.C. Angelides, Aristotle Univ of Thessaloniki, Greece

Numerical Simulation of a Floating Liquid Tank under Wave Action

Han Yu, Guoyu Wang, Yongxue Wang, Cong Ge, Dalian Univ of Tech, China

Development of Numerical Model of Mooring Chain to Simulate Dynamic Wave Response of Floating Body

Naoki Yoshifuji, Norimi Mizutani, Tomoaki Nakamura, Nagoya Univ, Japan

Numerical Simulation of Mooring System of Floating Breakwater in Shallow Water

Weiqiang Lu, Tingqiu Li, Xiaosa Zhao, William Geraint Price, Pandeli Temarel, Dominic A Hudson, Wuhan Univ of Tech, China

Experimental Study on Hydrodynamic Characteristics of a New Comb-type Floating Breakwater

Guoxu Niu, Yongchun Yang, Xiuyi Nie, Shuangchen Liu, Xingquan Wang, Ocean Univ of China, China, Ocean Univ of China, China

Effect of Vertical Degree of Freedom on Hydrodynamic Resonance from Narrow Gap between Twin Floating Bodies

Jingwen Zhang, Guanghua He, Limin Chen, Jian Wang, Harbin Inst of Tech, Weihai, China

An Analysis of Perforated Plate Breakwaters

Alireza Valizadeh, Monash Univ; Ashkan Rafiee, Carnegie Clean Energy; Vivek Francis, Murray Rudman, Monash Univ, Australia; Balaji Ramakrishnan, IITB, India

58. OCEAN TECH VI: LNG Process, Bunkering 2(V. 1)

Tuesday **June 12** **14:00** Crystal C, 2F

Chair: Youngsub Lim, Seoul National University, Korea

Application of Simplified Thermal Transfer Analysis in FLNG Tank Optimization

Xiaosong Zhu, Xuliang Han, Bin Xie, Junrong Wang, Xichong Yu, CNOOC Research Inst, China

Comparison of Liquefaction Processes for FLNG

Donghoi Kim, Truls Gundersen, NTNU, Norway

Design and Optimization of an Integrated LNG/NGL Coproduction Process for Offshore Liquefaction Units

Chunhe Jin, Youngsub Lim, Seoul National Univ, Korea

Optimal Process Design of BOG Re-liquefaction System for LNG Carrier

Chulmin Hwang, Youngsub Lim, Taejong Yu, Seoul National Univ, Korea

Application of a Simplified Method of Dynamic Modeling for Cold Box in FLNG Liquefaction Process [Proceedings only]

Yan Li, Xichong Yu, Chunsheng Wang, Qing Wang, CNOOC Research Inst, China

59. MECHANICS, IMPACT, SAFETY VI: Impact 2(V. 4)

Tuesday **June 12** **14:00** Emerald A, 3F

Chair: Marco Gaiotti, Univ of Genova, Italy

Collapse Simulations of an Accidentally Dropped Drill Riser

Brad Skinner, INPEX Australia, Hema Wadhwa, INTECSEA Pty Ltd., Australia; Arya Majed, INTECSEA, USA

Numerical Simulation of Ship Collision on RC Cap with Anti-Collision Steel Box Barrier of Over-sea Bridge

Chaoyi Xia, Beijing Jiaotong Univ; Qin Ma, CCCC Highway Consultants; Zhigang Liao, He Xia, Beijing Jiaotong Univ, China

Impact Scenario Models of Ship-bridge Collision Based on AIS Data

Jin Pan, Yong Wang, Wuhan Univ of Tech; Mingcai Xu, Huazhong Univ of Sci & Tech, China

Causes Analysis of Ship Collision Accidents: Using Fault Tree and Bayesian Network

Yubo Jia, Yuan Zhuang, Feixiang Wang, Pengfei Lyu, Wuhan Univ of Tech, China

60. GEOTECH VI: Geohazards, Liquefaction (V. 2)

Tuesday June 12 14:00 Emerald B, 3F

Chair: Sangchul Bang, South Dakota School of Mines, USA

Liquefaction Potential of the Liquefied Site After Dynamic Compaction Improvement

Chih-Sheng Ku, Guan-Lin Huang, Shun-Jie Huang, Wei-Hsin Chen, I-SHOU Univ, Taiwan
China

The Study of Risk Assessment of Soil Liquefaction on Land Development and Utilization in Taiwan

Jing-Ping Wu, Lien-Kwei Chien, National Taiwan Ocean Univ; Wen-Chien Tseng, National Applied Research Labs; Chen-Yang Fang, National Taiwan Ocean Univ, Taiwan
China

Prediction Model of Shallow Geological Hazards in Lingshui 17-2 Deepwater Based on Laboratory Experiment and a Hybrid Computational Approach

Bailing Zhang, Jin Yang, China Univ of Petroleum-Beijing; Yingming He, CNOOC Research Inst; Xudong Wu, Ye Tian, CNOOC; Ting Sun, Huanhuan Wang, Pengtian Feng, China Univ of Petroleum-Beijing, China

Study on Seismic Performance Evaluation of Road Embankment along the Coast

Kentarō Kuribayashi, Eight-Japan Engineering Consultants; Tadashi Hara, Kochi Univ; Shuichi Kuroda, Eight-Japan Engineering Consultants, Japan

Characterization of Rainfall-Induced Shallow Landslides in Taiwan

Cheng-Yu Ku, Chih-Yu Liu, Jing-En Xiao, National Taiwan Ocean Univ, Taiwan
China

61. UNDERWATER TECH VI: Robotics, Propulsion (V. 2)

Tuesday June 12 14:00 Emerald C, 3F

Chair: Guohua Xu, Huazhong Univ of Science & Tech.,
China

Co-Chair: Norimitsu Sakagami, Tokai University, Japan

Study of Influence of Vertical Tail Wing of Disk-Type Underwater Glider on Motion Control

Masahiko Nakamura, Yoshiro Noda, Hiroyuki Kajiwara, Yusei Shinkai, Kyushu Univ, Japan

Research and Experiments on Submergence for Self-propelled Model with Positive Buoyancy

Wenjin Wang, Yu Zheng, Guohua Xu, Huazhong Univ of Sci & Tech; Wang Li, Wuhan Second Ship Design & Research Inst; Xiaolong Ma, Huazhong Univ of Sci & Tech, China

Rigid-Flexible Coupling Model and Control of Underwater Manipulator

Daomin Huang, Guoyuan Tang, Guohua Xu, Huazhong Univ of Sci & Tech; , Zhi Liu, Second Ship Design and Research Inst of Wuhan China

Negative Pressure Effect Plate for Maintaining Position and Orientation of Underwater Robot

Takahiro Takebayashi, Yosuke Yumoto, Mingzhu Zhu, Sadao Kawamura, Ritsumeikan Univ; Norimitsu Sakagami, Tokai Univ, Japan

TUESDAY 16:20

62. HYDRODYNAMICS VII: Loads, Responses 1 (V. 3)

Tuesday June 12 16:20 Royton D

Chair: Hamn-Ching Chen, Texas A&M Univ, USA

Experimental Study on Hydrodynamic Forces of Net Panel

Ming-Fu Tang, Tiao-Jian Xu, Guo-Hai Dong, Yun-Peng Zhao, Dalian Univ of Tech, China

Assessment of the Hydrodynamic Forces for Equivalent Modelling of the Jack-up Legs

Arman Ghezelbashan, Cedric D'Mello, City University of London, UK

Experimental Study of Wave-current Load on the Leg of Jack-up Offshore Platform

Yingchun Xie, Xiangkun Li, Bingchen Liang, Xiaojie Tian, Pengfei Chen, Guijie Liu, Zepeng Zheng, Ocean Univ of China, China

Numerical Simulation of 2D Wave-Structure Interaction Using IMLPG_R

Rijas A S, Sriram V, IIT Madras, India; Shiqiang Yan, City Univ London, UK

Motion Response Analysis of Truss Spar Platform with Small-scale Cylinders under Bichromatic Waves

Ruijia Jin, Yan Xiong, Yina Wang, Tianjin Resch Inst of Water Transp Eng, China

Dynamic Responses of a Moored Submerged Floating Tunnel under Moving Loads and Wave Excitations

Chungkuk Jin, Moohyun Kim, Texas A&M Univ, USA

Indirect Wave Load Estimates Using Operational Modal Analysis - Preliminary Findings

Michael Vigsø, Julie C Kristoffersen, Aarhus Univ; Rune Brincker, Technical Univ of Denmark; Christos T Georgakis, Aarhus Univ, Denmark

63. TSUNAMI I (V. 3)

Tuesday June 12 16:20 Empress, 2F

Chair: Hiroyasu Kawai, National Institute for Maritime, Port and Aviation Technology (MPAT), Japan

A Numerical Study on Tsunami Waveforms and Inundation along Vietnam Coast in the South China Sea

Zhisong Li, Chao An, Xi Zhao, Hua Liu, Shanghai Jiao Tong Univ, China

Effects of Front Slope of a Breakwater on Tsunami Jet Flow Characteristics

Akio Nagayama, Tomotaka Tanaka, Toshiyuki Asano, Kagoshima Univ, Japan

Numerical Simulation of Tsunami Run-up around Coastal Structures on Quadtree Grids

Takuya Ueno, Masatoshi Yuhi, Shinya Umeda, Takehisa Saitoh, Kanazawa Univ, Japan

A Numerical Study on the Influence of Variation of Underwater Landslide Shape on Tsunami Generation

Masanobu Koba, Akinori Yamamoto, Takuya Ueno, Masatoshi Yuhi, Kanazawa Univ, Japan

Morphological Changes at the Mouth of the Shirakawa River after Kumamoto Earthquake

Ryota Yamaguchi, Gozo Tsujimoto, Takaomi Hokamura, Kumamoto Univ; Sota Nakajyo, Osaka City Univ, Japan; Nguyen Ngoc Thanh, Southern Inst of Water Resources Research, Vietnam

64. RENEWABLE ENERGY VII: Wind Turbine 2 (V. 1)

Tuesday June 12 16:20 Regent, 2F

Chair: Michael Muskulus, NTNU, Norway

Numerical Simulations of Wake Flows of Wind Farm with Fourteen Wind Turbines

Xinze Duan, Ping Cheng, Decheng Wan, Shanghai Jiao Tong Univ, China; Changhong Hu, Kyushu Univ, Japan

Remaining Life Assessment of Offshore Wind Turbines Subject to Curtailment

Anand Natarajan, Troels F Pedersen, Technical Univ of Denmark, Denmark

Workability on Offshore Wind Turbines - a Comparative Study of Fxed-bottom and Floating Applications

Matti Niclas Scheu, Daniel Kaufer, Marie-Antoinette Schwarzkopf, Ramboll Energy, Germany; Athanasios J Kolios, Cranfield Univ, UK

Numerical Study of Wake Interactions between Two Floating Offshore Wind Turbines

Yang Huang, Decheng Wan, Shanghai Jiao Tong Univ, China; Changhong Hu, Kyushu Univ, Japan

Analytical Study on Multi-Hazard Risk of Offshore Wind Turbine Subjected to Hydrodynamic and Aerodynamic Loads

Junwon Seo, Jharna Pokhrel, South Dakota State Univ, USA

Effect of Stationary Vanes for Drag-force Type Multi-blade Vertical Axis Wind Turbine

Kazuhisa Naoi, Kentaro Tsuji, Mitsuhiro Shiono, Nihon Univ, Japan

Comparison of Time-frequency Analysis Methods for an Offshore Wind Turbine

Fushun Liu, Gaojie Cui, Shujian Gao, Ocean Univ of China; Bin Wang, Jinning Shen, Hu Zhou, Powerchina Huadong Engineering, China

65. SUBSEA, PIPELINES, RISERS III: Riser Design 2 (V.2)

Tuesday June 12 16:20 Highness, 2F

Chair: Hongbin Wang, ExxonMobil Production, USA

The Influence of Internal Solitary Waves on Steel Catenary Riser and Steel Lazy Wave Risers

Ove T Gudmestad, Airindy Felicita, Daniel Karunakaran, Univ of Stavanger, Norway

Dynamic Response Analysis and Model Test on the Touchdown Zone of Risers

Yunyun Dai, Jing Zhou, Tong Zhu, Xin Feng, Dalian Univ of Tech, China

Experimental Study of the Pipe with Buoyancy Modules

Jingyun Cheng, Peimin Cao, SBM Offshore, USA; Haojie Ren, Mengmeng Zhang, Shixiao Fu, Shanghai Jiao Tong Univ, China

Assessment of Fatigue Damage Initiation in FPSO's Oil Offloading Line in West Africa

Caihong Yang, Zhuang Kang, Harbin Engineering Univ, China

The Characteristic Analysis of Internal Solitons in the Liuhua Area of the South China Sea [Proceedings only]

Bo-Tao Xie, Jia-gang Li, Xu-he Ren, Fang-hui Lei, CNOOC Research Inst, China

66. HPM V: Shipbuilding Steels (V. 4)

Tuesday June 12 16:20 Crystal A, 2F

Chair: Odd. M. Akselsen, SINTEF, Norway

Co-Chair: Tomoya Kawabata, Univ of Tokyo, Japan

Investigation of Isothermal Crack Arrest Test Procedure Consistent with Kca - Development of isothermal Crack Arrest Test Procedure -2

Tetsuya Tagawa, JFE Steel; Takehiro Inoue, Nippon Steel & Sumitomo Metal; Hisakazu Tajika, JFE Steel; Teppei Okawa, Nippon Steel & Sumitomo Metal; Hiroki Imamura, Kobe Steel; Tomoya Kawabata, Kazuki Shibamura, Shuji Aihara, Univ of Tokyo, Japan

Brittle Crack Arrest Toughness for Extremely Thick Steel Plates - Required Kca Value of Steel Plates with Thickness of 100mm Used in Ultra-Large Container Ships

Kazuyuki Matsumoto, Tsutomu Fukui, Shota Nanno, Nippon Kaiji Kyokai; Shuji Aihara, Tomoya Kawabata, Kazuki Shibamura, Univ of Tokyo; Takehiro Inoue, Nippon Steel & Sumikin Tech; Teppei Okawa, Nippon Steel & Sumitomo Metal; Tetsuya Tagawa, Hisakazu Tajika, JFE Steel; Hiroki Imamura, Kobe Steel, Japan

Effects of Test Parameters on Crack Arrest Temperature in Isothermal Brittle Crack Arrest Test - Development of Isothermal Crack Arrest Test Procedure - 1

Takehiro Inoue, Nippon Steel & Sumikin Tech; Tetsuya Tagawa, JFE Steel; Teppei Okawa, Nippon Steel & Sumitomo Metal; Hisakazu Tajika, JFE Steel; Hiroki Imamura,

Kobe Steel; Kazuyuki Matsumoto, Tsutomu Fukui, Shota Nanno, Nippon Kaiji Kyokai; Tomoya Kawabata, Kazuki, Shibamura, Shuji Aihara, Univ of Tokyo, Japan

Numerical Simulation of Brittle Crack Propagation in NRL Drop-Weight Test by Finite Element Analysis

Teppey Okawa, Nippon Steel & Sumitomo Metal; Tomoya Kawabata, Univ of Tokyo, Japan

Experimental Evaluation of Grain Size Effects on Crack Arrestability in Ferrite-Pearlite Steels [Oral Presentation]

Fuminori Yanagimoto, Takuhiro Henmi, Kazuki Shibamura, Katsuyuki Suzuki, Shuji Aihara, Hiroyuki Shirahata, Univ of Tokyo, Japan

CAT (Crack Arrest Temperature) Test Method Using Local Temperature Gradient System for Estimate of Fracture Toughness with Shipbuilding Steel

Gyubaek An, Chosun Univ; Hong-Yeol Bae, Boyoune Jeong, Youngho An, Hongchell Jeong, POSCO, Korea

Evaluation of Brittle Fracture Toughness by Influence of Residual Stress

Gyubaek An, Chosun Univ; Hong-Yeol Bae, POSCO; Wan Chuck Woo, Korea Atomic Energy Research Inst; Jeongung Park, Chosun Univ, Korea

Effect of Microstructure on Brittle Crack Arrest Behavior of a Heavy-gauge Steel Plate [Oral presentation]

Oh Jae Lee, Suk Gyu Lee, Bo Hee Lee, POSTECH; H Y Bae, POSCO; S H Lee, N J Kim, POSTECH, Korea

67. COASTAL V: Structures 2 (V. 3)

Tuesday June 12 16:20 Crystal B, 2F

Chair: Luca Martinelli, Univ of Padova, Italy

Design and Construction of Wave Splash Barrier for a Coastal Road of Route 231 at Hamamasu District of Ishikari City

Takao Nakoshi, Hokkaido Road Management Engineering Center; Katsutoshi Kimura, Muroran Inst of Tech; Katsumi Kamikubo, Civil Engineering Research Inst of Cold Region; Masashi Ochi, Nippon Data Service, Japan

Effect of Wave Height Reduction and Coastal Erosion Prevention by Constructing Ductile Structure on the Seabed [Oral presentation]

Sunghoon Hong, Gwuibong Kim, Taeyoon Kim, Pusan National Univ; Gwangsoo Lee, Sujie Lee, Han Ocean Corp; Soonchul Kwon, Pusan National Univ, Korea

Experimental Study on the Wave Loading of a Twin-Plates Breakwater

Qian Gu, Ningchuan Zhang, Guoxing Huang, Yichao Sun, Dalian Univ of Tech, China

The Diffraction of Water Waves by the Gap between Asymmetrical Breakwaters

Xiaozhou Ma, Xiaolei Li, Guohai Dong, Yuxiang Ma, Dalian Univ of Tech, China

Development of Effective Technique on Rubble Mound Seawall in Artificial Island under Construction

Keitaro Fukumizu, Osaka Univ; Daiki Sakai, Tsuyoshi Kanazawa, Toyo Construction; Susumu Araki, Osaka Univ, Japan

Non-Hydrostatic Model for Solitary Wave interacting with a Submerged Horizontal Plate

Congfang Ai, Yuxiang Ma, Dalian Univ of Tech, China

Iterative Analytical Solution for Wave Scattering by Multiple Partially Immersed Slotted Barriers

Yang Zhao, Yong Liu, Huajun Li, Ocean Univ of China, China

Experimental Study on the Energy Dissipation Characteristics of Stepped Embankments

Ruey-Syan Shih, Tungnan Univ; Wen-Kai Weng, Chi-Yu Li, National Taiwan Ocean Univ, Taiwan China

68. OCEAN TECH VII: VLFS, TLP, TRUSS

Tuesday June 12 (V. 1) 16:20 Crystal C, 2F

Chair: Hong Gun Sung, Korea Research Inst of Ships & Ocean Eng, Korea

A Primary Concept Design of a Novel Positioning Facility for VLFS Deployed in Shallow Water

Chuanpeng Ji, Xuefeng Wang, Shengwen Xu, Xiaolei Liu, Aibing Ding, Shanghai Jiao Tong Univ, China

Global Structural Strength Assessment of a Single Module of VLFS

Xiaolei Liu, Xuefeng Wang, Shengwen Xu, Aibing Ding, Yufeng Kou, Shanghai Jiao Tong Univ, China

Hydrodynamic Interactions of a Multi-modular Semi-submersible Type Very Large Floating Structure

Yiting Wang, Xuefeng Wang, Shengwen Xu, Lei Wang, Jun Li, Shanghai Jiao Tong Univ, China

Effects of Connector Stiffness and Damping on Motion Response of a Multi-Module VLFS

Yongheng Wang, Shengwen Xu, Xuefeng Wang, Lei Wang, Lijun Yang, Shanghai Jiao Tong Univ, China

On the Application of Simplified CFD Model in Assisting FPSO Green Water Assessment at Bow

Shuo Wang, Xin Wang, Wai Lok Woo, Newcastle Univ, UK

Dynamic Behaviour of a TLP in Waves: CFD versus Model Tests

Nagi Abdussamie, Roberto Ojeda, Yuri Drobyshevski, Univ of Tasmania, Australia; Giles Thomas, University College London, UK; Walid Amin, Univ of Tasmania, Australia

69. ADVANCED SHIP TECH I: Ultimate Strength (V. 4)

Tuesday June 12 16:20 Emerald A, 3F

Chair: Naoki Osawa, Osaka Univ, Japan

Research on Structural Strength of Different Car Ro-Ro Ships by Comparison between Flexible and Rigid Deck Designs in Upright Condition

Diyi Chen, Renjun Yan, Mengzhen Li, Xin Lu, Wuhan Univ of Tech, China

The Ultimate Hull Girder Strength Analysis Considering Section Modulus under Longitudinal Bending

Muhammad Zubair Muis Alie, Samuel Izaak Latumahina, Hasanuddin Univ, Indonesia

A Maximum Space Distance-based Adaptive Sampling Surrogate Model for Prediction of Strength of a Ship Grillage

Enen Yu, Jun Liu, Dawei Zhan, Jiachang Qian, Pan Zhang, Yuansheng Cheng, Huazhong Univ of Sci & Tech, China

Study on the Ultimate Strength of River-to-sea Ships

W Wang, Y H Xie, B Y Geng, G Q Li, Zhejiang Ocean Univ, China

Numerical Analysis on Ultimate Strength of Stiffened Plates with Inclined Stiffener Under Lateral Load

Ling Zhu, Hanwei Zhou, Mingshen Chen, Wuhan Univ of Tech, China; Das Purnendu Kumar, ASRANet, UK

Study on the Influence of Temperature on the Collapse Behaviour of Stiffened Panels of Ship

Ming Cai Xu, Yong Qing Zuo, Zhao Jun Song, Huazhong Univ of Sci & Tech; Jin Pan, Wuhan Univ of Tech, China

Application on Wide Band Spectrum of Large Container Ship's Fatigue Analysis

Beom-il Kim, Sun-kee Seo, Korean Register, Korea

A Methodology for Wave Load Prediction of Damaged Ship Based on Kriging Model

Menghao Li, Pan Zhang, Jun Liu, Yuansheng Cheng, Huazhong Univ of Sci & Tech, China

70. GEOTECH VII: Soil Property, Mechanics 1 (V. 2)

Tuesday June 12 16:20 Emerald B, 3F

Chair: Haydar Arslan, ExxonMobil Production Co., USA

Co-Chair: Shazzad Hossain, University of Western Australia, Australia

Centrifuge Model Tests and Analytical Validation on Pullout Capacity of Suction Piles in Clay under Eccentric Vertical Loads [Oral Presentation]

Sangchul Bang, South Dakota School of Mines & Tech; Kasey Jones, DOWL HKM, USA; You-Seok Kim, Yeong-Ki Cho, Daewoo Engineering & Construction, Korea

Evaluation of Geotechnical Properties and Chemical Weathering Indices of Highly Weathered Granite Rock

Seung-Hwan Lee, Byeong Soo Yoo, Taek-Kyu Chung, Choong-Ki Chung, Seoul National Univ, Korea

Effect of Confining Pressure on Deformation Behavior around Soils Caused by Sampling Tube and Cone Penetrations

Takaharu Shogaki, Daishi Okuda, National Defense Academy, Japan

Development of a New Resistivity Presentation Method for HEM Data to Detect Ground Characteristics of Expressway Slopes

Nobukazu Makiura, Keiji Sakuradani, West-Nippon Expressway Eng Kansai; Sadayuki Kamide, The Calamity Science Inst; Kazuhiro Oda, Osaka Univ; Tamorsu Matsui, Geotech Office MATSUI, Japan

Experimental Investigation of Frost Heave Characteristics using Temperature-Controllable Cell

Hyunwoo Jin, Korea Univ of Sci & Tech; Janguen Lee, Byunghyun Ryu, Korea Inst of Civil Eng & Building Tech, Korea

Fine-scale Monitoring for Seafloor Vertical Deformation Based on MEMS Accelerometer Array

Chunying Xu, Jiawang Chen, Huangchao Zhu, Houhong Liu, Lin Yuan, Zhejiang Univ, China

71. ARCTIC I: Arctic Ship Design (V. 1)

Tuesday June 12 16:20 Emerald C, 3F

Chair: Hiromitsu Kitagawa, Ocean Policy Research Inst, Japan

Co-Chair: Takatoshi Matsuzawa, National Maritime Research Inst, Japan

Proposal of an Icebreaking Research Vessel with Multi-missions for International Cooperation

Hiromitsu Kitagawa, Eiji Sakai, Kenjiro Miki, Ocean Policy Research Inst, Japan

Modern Icebreaking Research Vessel - Essential Factors in the Process from Requirements to Successful Design

Anders Mård, Arto Uuskallio, Aker Arctic Technology Inc., Finland

Numerical Investigation of Propeller-Ice Interaction Effects

Aaqib G Khan, Univ of Rostock; Quentin Hissette, Heinrich Streckwall, Hamburg Ship Model Basin, Germany

Historical Developments in the Design and Construction of Ice Strengthened Vessels

Desmond Upcraft, Cold Climate Specialist, UK; Robert Bridges. TOTAL, France

Performance Comparison of Different Propulsion Schemes for a Polar Carrier

Shaopeng Ji, Zhailiu Hao, Yukui Tian, Zhipeng Wang, Yinghui Wang, China Ship Scientific Research Center, China

Development and Microstructure Analysis of High Strength Steel Plate Used for Polar Icebreaker and Polar Transport Ships

Peng Zhang, Xiaoshu Wang, Jie Long, Wenzhong Zhao, Wuyang Iron and Steel Co; Zhongzhu Liu, CITIC Metal Co, China

An Investigation on the Feature of Seawater Spray Impinging on the R/V Mirai

Toshihiro Ozeki, Hokkaido Univ of Education; Shin Toda, Hajime Yamaguchi, Univ of Tokyo, Japan

Numerical Investigation on Heat-flow Coupling Mechanism in Cargo Oil Heating Process for an Arctic Tanker

Xiang Zhu, Jinshu Lu, Jijia Deng, Wenfeng Wu, Jianwei Zhang, Zhejiang Ocean Univ, China

WEDNESDAY 08:00

72. HYDRODYNAMICS VIII: Loads, Responses 2 (V. 3)

Wednesday June 13 08:00 Royton D

Chair: Wataru Koterayama, Kyushu University, Japan

Preliminary Numerical Study on the Influence of a Wind Field on Wave-induced Load on a Circular Cylinder

Julie Carøe Kristoffersen, Aarhus Univ; Henrik Bredmose, Technical Univ of Denmark; Christos Thomas Georgakis, Aarhus Univ, Denmark

Research on Fishtailing Oscillations of a Single Point Moored Vessel in Shallow Waters

Ping Huo, Dongjiao Wang, Kun Liu, South China Univ of Tech, China

Non-Linear Hydrodynamics of Bluff Bodies Oscillating Near Free-Surface

Ashkan Rafiee, Alireza Valizadeh, Carnegie Clean Energy, Australia

Numerical Simulation of Interaction between Internal Solitary Wave and Submerged Structure

Weiye Ding, Congfang Ai, Sheng Jin, Nan Zhang, Dalian Univ of Tech, China

Numerical Investigation of Hydrodynamic Behavior of a Deformable Trimaran in Head Waves [Proceedings only]

Zhijun Li, Xiaopeng Gao, Cong Huo, Naval Univ of Engineering, China

73. TSUNAMI II (V. 3)

Wednesday June 13 08:00 Empress, 2F

Chair: Philippe Guyenne, Univ of Delaware, USA

Co-Chair: Tatsuya Asai, Nagoya Univ, Japan

Model Testing of Countermeasures for Caisson Type Breakwater under Tsunami-induced Seepage Flow and Overflow

Paren Mitra, Kiyonobu Kasama, Yasuyuki Nakagawa, Kouki Zen, Kyushu Univ, Japan

A Hydraulic Model Experiments for the Stability of Armor Blocks at Tsunami and Seepage Flow Action

Syuhei Takeshita, Kiyonobu Kasama, Yasuyuki Nakagawa, Koki Zen, Zentaro Furukawa, Yuichi Yahiro, Kyushu Univ, Japan

Tsunami Resilient Designs of Vertical Evacuation Buildings in Japan and the USA

Tatsuya Asai, Nagoya Univ, Japan; Gary K Chock, Martin & Chock Inc, USA; Yoshiaki Nakano, Univ of Tokyo, Japan; Ian N Robertson, Univ of Hawaii at Manoa, USA

Tsunami Inundation Forecasting System based on Database: A Case Study in Owase City, Japan

Ardiansyah Fauzi, Norimi Mizutani, Nagoya Univ, Japan

Examination to Some Problems on the Prevention and Mitigation of Tsunami Disaster

Sayed Masihullah Ahmadi, Yoshimichi Yamamoto, Tokai Univ; Ditto Ryo Miyake, Penta Ocean Construction, Japan

Mass, Momentum and Energy Paradigm of idealized Tsunami: On Steep Sloped Bathymetry

Dae-Hong Kim, Univ of Seoul; Sangyoung Son, Korea Univ, Korea

74. RENEWABLE ENERGY VIII: Wind Installations(V. 1)
Wednesday June 13 08:00 Regent, 2F

Chair: Junwon Seo, South Dakota State Univ, USA

Positioning Capability Analysis of Wind Turbine Installation Vessel

Yihua Chen, Xinquan Chen, Qi Yang, Jinhong Ding, Shanghai Jiao Tong Univ, China

A Simulation Study of Feeder-based Installation Concepts for Offshore Wind Farms

Stephan Oelker, Abderrahim Ait Alla, Michael Lütjen, Marco Lewandowski, Michael Freitag, Klaus-Dieter Thoben, Univ of Bremen, Germany

Mating Control of a Wind Turbine Tower-Nacelle-Rotor Assembly for a Catamaran Installation Vessel

Zhiyu Jiang, Zhengru Ren, Zhen Gao, Peter Christian Sandvik, Karl Henning Halse, Roger Skjetne, NTNU, Norway

Single Blade Installation Using Active Control of Three Tugger Lines

Zhengru Ren, Zhiyu Jiang, Roger Skjetne, Zhen Gao, NTNU, Norway

75. SUBSEA, PIPELINES, RISERS IV: Flow Assurance (V. 2)
Wednesday June 13 08:00 Highness, 2F

Chair: Jens K Lervik, SINTEF Energy Research, Norway

Optimizing Electrical Heating System of Subsea Oil Production Pipelines

Jens Kristian Lervik, SINTEF Energy Research; Øyvind Iversen, Nexans Norway AS; Kristian Thinn Solheim, SINTEF Energy Research, Norway

Investigation of Severe Slugging Characteristics under Various Gas-Liquid Ratio in Two-Phase Flowloop

Ki Heum Park, Seoul National Univ; Jakyung Kim, KAIST; Wonjin Jang, Yutaek Seo, Seoul National Univ, Korea

Research on Prevention and Elimination of Hydrate after Subsea Wet-Gas Pipeline Shut-down

Xiaying Du, Yufei Wan, Chunyu Liu, Xin Qian, Wenguang Wang, CNOOC, China

Bohai Oilfield Heavy Oil Processing and Transportation Technology Research

Hong Lu, CNOOC Research Inst, China

Experimental Investigation of Wave-induced Pore Pressure Response around Twin Pipelines in Seabed

Jialin Zhao, Jisheng Zhang, Dongying Dai, Xinglin Wei, Hohai Univ, China

76. HPM VI: Offshore Structures (V. 4)

Wednesday June 13 08:00 Crystal A, 2F

Chair: Stefan Herion, KoRoH GmbH, Germany

Research on the Fatigue Assessment of Offshore Wind Turbine Multi-Planar Tubular Joint under Torque Loading

Shiliu Bao, Dalian Univ of Tech; Shengxiao Zhao, Powerchina Huadong Engineering; Ying Li, Zhejiang Univ of Sci & Tech; Xin Li, Dalian Univ of Tech, China

Remediation of Cracks Formed in Grouted Connections of Offshore Energy Structures under Static Loads

Md Shamsuddoha, Götz Hüsken, Stephan Pirskawetz, Matthias Baeßler, Hans-Carsten Kühne, Marc Thiele, Federal Inst for Materials Research and Testing (BAM), Germany

High Strength Steels for Jack-up Rigs

Stefan Herion, KoRoH GmbH, Germany

Flexural Behavior of Steel Pipe with Residual Stress

Kyu Won Kim, Moon Kyum Kim, Yonsei Univ; Woo Yeon Cho, POSCO; Tae Beom Kim, Yonsei Univ, Korea

77. COASTAL VI: Structures 3 (V. 3)

Wednesday June 13 08:00 Crystal B, 2F

Chair: Susumu Araki, Osaka Univ, Japan

Co-Chair: Yuxiang Ma, Dalian Univ of Technology, China

Numerical Study on the Fluid Structure Interaction of Finite-Length Flexible Structures in Tsunami Flow by Strongly Coupled Approach

Thaw Tar, Hiroyoshi Suzuki, Naomi Kato, Osaka Univ, Japan

Numerical Modeling of Tsunami-Induced Loading on Coastal Structures with a Mitigation Wall Using Smoothed Particle Hydrodynamics Method

Xuesen Wei, Dai Zhou, Yan Bao, Zhaolong Han, Shanghai Jiao Tong Univ, China

Experimental Study on Passive Soil Resistance of Flap-Gate Breakwater to Tsunami

Kunie Miyamoto, Hitachi Zosen Corp; Seiji Mizutani, Toyo Construction; Toru Yamashita, Penta-Ocean Construction; Osamu Kiyomiya, Waseda Univ; Tetsuya Hiraishi, Hajime Mase, Kyoto Univ, Japan

Experimental Study of Wave-Dissipating Block Shape's Effects on Flow Characteristics around the Block

Kouhei Oguma, Hiroshi Matsushita, Nikken Kogaku Co; Ryoukei Azuma, Osaka Inst of Tech; Takashi Nakanishi, Nikken Kogaku Co; Hajime Mase, Tetsuya Hiraishi, Kyoto Univ, Japan

Innovative Vertical Slotted Wave Barriers for Reducing Wave Reflection of Relatively Long Gravity Waves

S. Neelamani, Altaf Taqi, K. Al-Salem, Kuwait Inst for Scientific Research, Kuwait

A New Type of the Porous Concentric Cylinder System with Cosine-type Cross Section

Ching-Yun Yueh, Ching-Yi Tu, Chih-Ting Chang, National Taiwan Ocean Univ; Shih-Hsuan Chuang, National Cheng Kung Univ, Taiwan China

Analysis on Pile Layout of Wharf with Arched Longitudinal Beams under Impact Force

Qiu Zhai, Jie Hou, Huakun Wang, Yuanshu Jiang, Kaixiao Chen, Hohai Univ, China

78. OCEAN TECH VIII: Floating Dynamics (V. 1)
Wednesday June 13 08:00 Crystal C, 2F

Chair: Masashi Kashiwagi, Osaka Univ, Japan

Whole Body Vibration on Offshore Structures: An Evaluation of Existing Guidelines for Assessing Low Frequency Motions

Marie-Antoinette Schwarzkopf, Matti Niclas Scheu, Ramboll Energy; Okyay Altay, RWTH Aachen Univ, Germany; Athanasios Kolios, Cranfield Univ, UK

Current Status of Wind Load Calculations with CFD

Patrick Schrijvers, Wei Xu, Arjen Koop, MARIN, Netherlands; Daniel Yoo Pusan National Univ, Korea

Irregular Seas Model Experiments of Side-by-Side Barges

Kie Hian Chua, Lloyd's Register Asia, Singapore; Pedro de Mello, Univ of São Paulo; Edgard Malta, Daniel Vieira, Technomar; Rafael Watai, Felipe Ruggeri, Argonautica, Brazil; Rodney W Eatock Taylor, Univ of Oxford, UK; Kazuo Nishimoto, Univ of São Paulo, Brazil; Yoo Sang Choo, National Univ of Singapore, Singapore

Experimental Study on the Motion of the Coupled Tunnel-Pontoons System during Ballasting

Yue Song, Ningchuan Zhang, Guoxing Huang, Zhenxiang Sun, Dalian Univ of Tech, China

Investigation on Motion of a Flexible Floating Anti-collision System with Connected Horizontal Buoys

Zhenxiang Sun, Yue Song, Guoxing Huang, Ningchuan Zhang, Qian Gu, Dalian Univ of Tech, China

Vibration Mitigation of Offshore Platform Utilizing a Magnetorheological Elastomer Isolator

Dingxin Leng, Kai Xu, Guijie Liu, Yingchun Xie, Xiaojie Tian, Ocean Univ of China, China

Analysis of Coupling Characteristics of the Offloading Buoy System in West Africa Seas

Ning He, COOEC; Cheng Zhang, Zhuang Kang, Harbin Engineering Univ, China

A Variable Static-dynamic Polyester Stiffness Method for SEMI Mooring System Design and Global Sensitivity Parameters Analysis

Wenzhou Liang, Jinrui Zhao, Da Li, Cong Yi, Xueping Bai, CNOOC Research Inst, China; Xiaoqiang Bian, Peimin Cao, SBM Offshore, USA

CFD Modeling on Gap Flows of Two Ships with Side-by-Side Configuration in Waves [Proceedings only]

Yuan Zhuang, Decheng Wan, Shanghai Jiao Tong Univ, China

Continue at Session 88

79. ADVANCED SHIP TECH II: Hull Optimization (V. 4)
Wednesday June 13 08:00 Emerald A, 3F

Chair: Michael Muskulus, NTNU, Norway

Hull Form Optimization Design of KCS at Full Speed Range Based on Resistance Performance in Calm Water

Xinwang Liu, Jinkai Wang, Decheng Wan, Shanghai Jiao Tong Univ, China

Ship Hull Form Optimization Design for KCS Considering Uncertainty of Ship Speed

Taiwen Chen, Aiqin Miao, Decheng Wan, Shanghai Jiao Tong Univ, China

Multi-objective Optimization Design of KCS Based on Seakeeping Performance

Aiqin Miao, Taiwen Chen, Xiaozhou Qi, Decheng Wan, Shanghai Jiao Tong Univ, China

Multi-disciplinary Optimization Design of Sail for Underwater Vehicle Model

Liang Dong, Jinlan Zhang, Jianwei Wu, Liang Peng, Haihua Deng, Wuhan Second Ship Design & Research Inst, China

Structural Optimization Method for Deck Grillage of Large Oil Tankers

Qi Chang, Guo-qing Feng, Chen-feng Li, Hui-long Ren, Xiao-xi Shen, Harbin Engineering Univ, China

Structural Analysis and Optimization of Lashing Bridge of 21000TEU Ultra Large Container Ship

Bo Yuan, Ji Zeng, Ruijia Zhou, Yiting Zhan, Songyan Mai, Jianwei Zhang, Shanghai Maritime Univ, China

A Multi-Objective Optimization Method for Hybrid Electric Propulsion System

Jianyuan Zhu, Li Chen, Bin Wang, Qiang Liu, Shanghai Jiao Tong Univ, China

80. IOR, Energy Storage (V. 1)
Wednesday June 13 08:00 Emerald B, 3F

Chair: Raghavan Ayer, SK Innovation, Korea

Co-Chair: Jonggeun Choe, Seoul National Univ, Korea

An Intelligent Method for Deep-Water Injection-Production Well Pattern Design

Jing Ma, Pengwei Di, Yun Shen, Yongtu Liang, Haoran Zhang, China Univ of Petroleum-Beijing; Anqi Huang, CMOE Key Laboratory of Petroleum Eng; Zhongliang Huang, CNPC Offshore Engineering, China

Modified Choke Models to Predict Natural Gas Well Flow Rate

Bingyuan Hong, Shangfei Song, Haihao Wu, Xiaoping Li, China Univ of Petroleum-Beijing; Zhi Wang, Xi'an Changqing Sci & Tech Eng; Jingjing Gao, Jing Gong, China Univ of Petroleum-Beijing, China

Reservoir Characterization Using Ensemble Smoother with Selected Measurement Data for Each Well

Gvan Dek Kim, Jaeho Choi, Seoul National Univ; Kyungbook Lee, Korea Inst of Geoscience & Mineral Resources; Hyundon Shin, Inha Univ; Jonggeun Choe, Seoul National Univ, Korea

Passive Hybrid Storage Systems: Investigation of Lithium Ion Battery and Lithium Ion Capacitor Connections

Thorsten Grün, Anna Smith, Karlsruhe Inst of Tech, Germany

LI-ion Batteries for Medium- and Large-scale Energy Storage in Marine Engineering

Sergey L Sinebryukhov, Denis P Opra, Sergey V Gnedenkov, Valery G Kuryavyi, Alexander A Sokolov, Inst of Chemistry, FEB RAS, Russia

Study on Dynamic Simulation for Produced Oil-gas-water Mixtures Treatment Process in Offshore Heavy Oil Thermal Recovery [Proceedings only]

Xiaying Du, Jihai Liu, Chunyu Liu, CNOOC, China

Experimental Feasibility Study of a Novel Organic-Inorganic Hybrid Material for Offshore Oil Well Cementation [Proceedings only]

Jiawei Du, Yuhuan Bu, Huajie Liu, Zhonghou Shen, China Univ of Petroleum, China

81. ARCTIC III: Navigation in Ice (V. 1)

Wednesday June 13 08:00 Emerald C, 3F

Chair: E. Ross, ASL Environmental Sciences, Canada.

Ice Resistance Test of a Ship Using Synthetic Ice in Small Pack Ice Floes and Wave Interactions

Junji Sawamura, Kensuke Imaki, Takaya Shiraishi, Hidetaka Senga, Osaka Univ, Japan

Analytical Investigation of Navigation Channel Evolution in Severe Ice Conditions

Evgeny B Karulin, Marina M Karulina, Oleg V Tarovik, Krylov State Research Centre, Russia

A Practical Approach to Ductile Material Failure during Raking Collisions

Floriaan W. Bijleveld, Martijn G. Hoogeland, Carey L. Walters, TNO; Jan W van Bergen, Ministry of Defense, Netherlands

Statistical Estimation of Uncertainties Associated with Ship Operations in Fresh Water Ice

Harsha Cheemakurthy, Meng Zhang, Karl Garme. Magnus Burman, Royal Inst of Tech, Sweden; Sören Ehlers, R.U. Franz von Bock und Polach, Hamburg Univ of Tech, Germany

Prediction of Attainable Ship Speed in Brash Ice Using Empirical Formula

Hyun Soo Kim, Inha Technical College; Donghwa Han, Bumsu. Go, Inha Univ; Seong-Yeob Jeong, Korea Research Inst of Ships & Ocean Eng, Korea

WEDNESDAY 10:30

82. HYDRODYNAMICS IX: Rolling, Multi Body (V. 3)

Wednesday June 13 10:30 Royton D

Chair: Xuemei Zhu, WAMIT Inc., USA

Study on Estimation Methods of Roll Damping Coefficients Using Designed Excitation Device for Harmonic Roll Motion

Byeongwon Park, Jaesang Jung, Dong Woo Jung, Inbo Park, Seok-Kyu Cho, Hong Gun Sung, Korea Research Inst of Ships & Ocean Eng, Korea

Energy Analysis of Wave Resonance in a Gap through an SPH Model

Domenico Davide Meringolo, Yong Liu, Ocean Univ of China; Lin Lu, Dalian Univ of Tech, China

Application of Hyper-singular Integral Equations for a Simplified Model of Viscous Dissipation

C.-H. Lee, X. Zhu, WAMIT Inc., USA

Application of Genetic Algorithm (GA) in Reduction of Wave Drift Forces on the Four-Column Structure

Zhigang Zhang, Guanghua He, Zhengke Wang, Jian Wang, Harbin Inst of Tech, Weihai, China

Analysis on the Hydrodynamic Resonance of Fixed Rectangular Boxes with Narrow Gaps by a Constrained Interpolation Profile Method

Limin Chen, Guanghua He, Jingwen Zhang, Jian Wang, Harbin Inst of Tech, China

83. TSUNAMI III (V3)

Wednesday June 13 10:30 Empress, 2F

Chair: [Tatsuya Asai, Nagoya Univ, Japan](#)

Cloud-based Pipelined Nested Tsunami Modeling

Kensaku Hayashi, Alexander Vazhenin, Univ of Aizu, Japan; Andrey Marchuk, ICMMG SB RAS, Russia

Experimental Study of Solitary Wave Interaction with Vertical Structures

Lei Li, Univ of Strathclyde, UK; Jingxin Zhang, Shanghai Jiao Tong Univ, China; Jack M. Chen, Xuanyu Zhao, Univ of Cambridge, UK

Verification of Tsunami Simulation by Using Elliptical Particles of the MPS Method

Daisuke Yamada, Seiichi Koshizuka, Kazuya Shibata, Univ of Tokyo, Japan

Proposal for Validation Method for Drift Simulation Based on Ships Displaced by the 2011 Tohoku Tsunami

Ryuji Nikaido, Yusuke Igarashi, CTI Engineering, Japan

84. RENEWABLE ENERGY IX: Wave Energy 1 (V. 1)

Wednesday June 13 10:30 Regent, 2F

Chair: Seok-Won Hong, Korea Research Inst. of Ships & Ocean Eng, Korea

Numerical Simulation of Attenuator Wave Energy Converter Using One-fluid Formulation

Liang Yang, Zehao Lyu, Pan Yang, Dimitrios Pavlidis, Fangxin Fang, Jiansheng Xiang, John-Paul Latham, Christopher Pain, Imperial College London, UK

Study of a Pelamis-like Wave Energy Converter in Regular Waves

Yulin Zhao, Yufei Ai, Stevens Inst of Tech, USA; Yao Liu, Wuchang Inst of Tech, China

Experimental Study on the Hydrodynamic Performance of a Shoreline Wave Energy Converter Coupled with Breakwater

Wei Peng, Rui He, Jisheng Zhang, Yaning Fan, Hohai Univ, China

Experimental Verification of an Oscillating-Body Wave Energy Converter with a Variable Tuned Inertial Mass Mechanism

Ryoko Sawada, Ruriko Haraguchi, Takehiko Asai, Univ of Tsukuba; Yoshikazu Araki, Kyoto Univ, Japan

85. SUBSEA, PIPELINES, RISERS V:

Pipeline 1 (V. 2)

Wednesday June 13 10:30 Highness, 2F

Chair: Brian D Newbury, ExxonMobil Production, USA

A Primary-Secondary Pipeline System Used for Offshore Marginal Oilfields

Yufei Wan, Xin Qian, Wenguang Wang, Ming Hao, Ningyi Tang, Yan Huang, CNOOC, China

Study on Corrosion Resistant Alloy Lined Pipe Delamination

Antoine Jardin, Shulong Liu, Diego Pavone, Vincent Cocault-Duverger, SAIPEM SA, France

Prediction of Pipeline Rotation During the Installation of Residual Curvature Sections by Reel-lay

Nicholas James Vaughn, IKM Ocean Design; Anders Rødstøl, Statoil ASA; Pål Foss, Per R Nystrom, IKM Ocean Design, Norway

Carbon Diffusion across the Bimetallic Interface of Welded Clad Pipes

Dag Lindholm, Inst for Energy Tech, Norway

Walking Behaviour and Mitigation Strategies of the Deepwater Tullow TEN Project Swaged Pipe-in-Pipe Flowlines

Leonardo Gitahy, Majid Hesar, Tzi Piau Cheong, Carlos Charnaux, Guilherme Carvalho Subsea 7; Mehrdad Mansour, Tullow Oil, UK

Nonlinear Mechanical Analysis of Reinforced Thermoplastic Pipe under Combined Bending and Pressure Based on a Solid Element Model

Lu Yao, Shuqing Wang, Wentao He, Ocean Univ of China, China

86. HPM VII: Advances in Welding (V. 4)

Wednesday June 13 10:30 Crystal A, 2F

Chair: Hyun Woo Jin, ExxonMobil Research & Engineering, USA

Co-Chair: Paul Kah, Lappeenranta Univ of Tech, Finland

Development of Rutile Cored Wire with High-fluoride Content for Underwater Welding

Paul Kah, Lappeenranta Univ of Tech, Finland; Sergey Parshin, Peter the Great St. Petersburg Polytechnic Univ, Russia; Alexey Maystro, Lappeenranta Univ of Tech, Finland; Pavel Layus, Eric Mvola Belinga, Peter the Great St. Petersburg Polytechnic Univ, Russia

Study of Welding Wire Nanocoated with Lanthanum Boride for S960 High-Strength Steel Welding

Pavel Layus, Paul Kah, Lappeenranta Univ of Tech, Finland; Sergey Parshin, Vitaly Dmitriev, Peter the Great St-Petersburg Polytechnic Univ, Russia; Eric Mvola Belinga, Lappeenranta Univ of Tech, Finland

Weldability of High Toughness X100 Seamless Pipes with a New Low Carbon Alloying Concept for Arctic Offshore Structural Applications

Stephan Scherf, Silke Harksen, Ralf Hojda, Daniel Strötgen, Vallourec Deutschland GmbH, Germany

Improvement of Toughness of Weld Metal after PWHT for TS90ksi Class Steels with Rutile Type Flux-Cored Wire

Satoru Kano, Yoshihiko Kitagawa, Shuji Sasakura, Masahiro Inomoto, Hidenori Nako, Yoshitomi Okazaki, Kobe Steel, Japan

Dissimilar Welding of Cu and Al Alloys by Friction Stir Welding and Impulse Friction Stir Welding

Anton A Naumov, Fedor Y Isupov, Oleg V. Panchenko, Evgenii N. Rylkov, Peter the Great St-Petersburg Polytechnic Univ, Russia

Local Mechanical Properties Estimation of Friction Stir Welded Al-Mg-Si Joints

Oleg V Panchenko, Sergey Yu Ivanov, Anton A Naumov, Fedor Yu Isupov, Anatoly A Popovich, Peter the Great St-Petersburg Polytechnic Univ, Russia

Characterization of Weld Consumables for High-Strength Steel Plate

Tom H McGaughy, EWI; Murali Manohar, ArcelorMittal Global R&D, USA

87. COASTAL VII: Sediment Transport, Erosion 1 (V. 3)

Wednesday June 13 10:30 Crystal B, 2F

Chair: Wei-Po Huang, National Taiwan Ocean Univ, Taiwan China

Calculation of Wave Inputs Required when Predicting Shoreline Erosion Caused by Vessels Operating in Inland Waterways

A E. Jenkins, K. Garne, KTH Royal Inst of Tech, Sweden

Experimental Investigation of Spatiotemporal Change in Gravel Beach Profile

Shinwoong Kim, Tomoaki Hakamura, Soraka Nehashi, Ryoya Nakayama, Yonghwan Cho, Norimi Mizutani, Nagoya Univ, Japan

Transportation of Gravel on the Upper Part of a Sandy Beach

Muhajjir, Hiroki Suga, Shin-Ichi Aoki, Osaka Univ, Japan

Extract Wave Run Up Beach in Niigata prefecture, Japan

Naoyuki Inukai, Nagaoka Univ of Tech; Masaya Shinohara, Penta-Ocean Construction; Hiroshi Yamamoto, Nagaoka Univ of Tech, Japan

Field Measurements of Dynamic Beach Profiles to Assess Coastal Erosion Hazard on the Coast of Yantai, China

Zai-Jin You, Hongyuan Shi, Bing Li, Yongqi Li, Ludong Univ, China

An Experimental Study on the Evolution of Beach Profile with a Submerged Berm

Shuo Yin, Yi Pan, Yongping Chen, Yubao Yang, Hohai Univ, China

A Study on Characteristics of Current and Sediment Transport around Permeability Artificial Reefs

Kyu-Han Kim, Kyu-Tae Shim, Catholic Kwandong Univ, Korea

88. OCEAN TECH IX: Mooring Dynamics (V. 1)

Wednesday June 13 10:30 Crystal C, 2F

Chair: Bo Woo Nam,, Korea Research Inst of Ships & Ocean Eng, Korea

Coupled-Dynamic Analysis of Ship-shaped Floating Structure with Dynamic Mooring Lines in Horizontal Plane

Yuda Apri Hermawan, Yoshitaka Furukawa, Kyushu Univ, Japan

Development of Platform 6-DOF Motion-Mooring System Coupled Solver using Open Source Libraries

Sang Chul Lee, Sunho Park, Seongjin Song Korea Maritime and Ocean Univ; Se-Min Jeong, Chosun Univ, Korea

Multi-Mode Reliability Analysis of the Mooring System for Floating Structures

Junfeng Du , Anteng Chang, Man Zhang, Min Zhang, Dawei Chu, Ocean Univ of China, China

Safety Analysis of Underwater Ultra-long Fiber Optical Micro-cables

Xuesong Xu, Yan Meng, Shanghai Jiao Tong Univ, China

89. ADVANCED SHIP TECH III: Navigation, Control 1 (V. 4)

Wednesday June 13 10:30 Emerald A, 3F

Chair: Michele Martelli, University of Genoa, Italy

Statistics and Analysis of Maritime Traffic Accidents in Yangtze River and Accidents Prediction

Di Guo, Yadong Yang, Feng Xiong, Wuhan Univ of Tech, China

Optimization Study of Ship Path Planning in Complex Water Area Based on Nautical Practice

Zheng Chang, Yanmin Xu, Chunming Zou, Jianyu Wang, Junchao Zhao, Wuhan Univ of Tech, China

Path Following Control for Formation of Underactuated Surface Vessels

Gang Liao, Hai-xiang Xu, Wen-zhao Yu, Hui Feng, Wuhan Univ of Tech, China

Optimized Unbiased Grey Markov Ship Traffic Flow Prediction Model

Qingbo Fan, Fucui Jiang, Quangdang Ma, Wuhan Univ of Tech, China

Metoccean Data Drived Voyage Optimization Using Genetic Algorithm

Helong Wang, Wengang Mao, Leif Eriksson, Chalmers Univ of Technology, Sweden

Engineering Concerns of Passing Ship Effect at Typical Waterfronts

Erick T Huang, Naval Facilities Engineering Command; Hamn-Ching Chen, Chia-Rong Chen, Texas A&M Univ, USA

Numerical Study of Zigzag Maneuver of a Fully Appended ONR Tumblehome Ship in Waves

Jianhua Wang, Decheng Wan, Gang Chen, Shanghai Jiao Tong Univ, China

Three-Coordinate Theory of Similarity for Likeness Models of the Ships

Nikolai A. Taranukha Irina N. Zhurbina Evgenii I. Selivanov Andrei A. Kozlov,
Komsomolsk-na-Amure State Technical Univ, Russia

**90. OMGH I: DEEP OCEAN MINING 1:
Minerals, Exploration, Environment 1 (V. 1)**

Wednesday June 13 10:30 Emerald B, 3F

Chair: Frank Lim, 2H Offshore, China

Co-chair: Anatolii V Kondratenko, FSBI "VNIIOkeangeologia";Russia

Deep Ocean Mining Technology (1975-2018)

Jin S Chung, ISOPE, USA

**Ferromanganese Crusts in the Northwestern Pacific Seamounts - A Review:
Variations in Grade and Abundance on the Regional to Microscopic Scales**

Akira Usui, Kochi Univ; Katsuhiko Suzuki, JAMSTEC, Japan

**A Series of Scientific Drilling at the Areas of Submarine Hydrothermal Deposits with
Core-log Integration for Deciphering Mineralization Processes**

Hidenori Kumagai, Tatsuo Nozaki, JAMSTEC; Jun-ichiro Ishibashi, Kyushu Univ;
Saneatsu Saito, JAMSTEC; Shogo Komori, AIST; Yohei Hamada, Yoshinori Sanada,
Tomokazu Saruhashi, Lena Maeda, Yu'usuke Kubo, and Ken Takai, JAMSTEC, Japan

**A Preliminary Study of the Relation between Topographic Features and the
Distribution of Polymetallic Nodules in Japanese License Area, Central Pacific**

Keisuke Nishi, Akira Koizumi, Akira Tsune, Soichiro Tanaka, Deep Ocean Resources
Development, Japan

**Distributions of Megabenthic Organisms in the Areas of North-west Pacific
Seamounts Where are Covered with Cobalt Rich Ferromanganese Crust**

Hideki Sugishima, Takaaki Matsui, Nobuyuki Okamoto, Japan Oil, Gas & Metals National
Corp; Tomohiko Fukushima, JAMSTEC, Japan

Origin of Neodymium in the Surface Layer of Ferromanganese Crusts

Hiroshi Amakawa, Yusuke Fukami, Junji Torimoto, JAMSTEC; Akira Usui, Kochi Univ;
Tatsuo Nozaki, Koishi Iijima, Katsuhiko Suzuki JAMSTEC, Japan

91. ARCTIC IV: Ice Structure Interaction (V. 1)

Wednesday June 13 10:30 Emerald C, 3F

Chair: Robert Frederking, National Research Council, Canada

Co-Chair: Vilho Jussila, VTT Technical Research Centre of
Finland, Finland

**Toward the Long-term Response Analysis of Ice Load for Fatigue Analysis [Oral
presentation]**

Jeong Hwan Kim, Yooil Kim, Inha Univ, Korea

Simulation of Ice-Sloping Structure Interactions with Peridynamic Method

Wei Lu, Qing Wang, Bin Jia, Li Shi, Harbin Engineering Univ, China

General Principles of Procedure for Ice-Structure-Interaction (PSSII)

Vilho Jussila, VTT Technical Research Centre of Finland, Finland

A Dynamic Ice-structure Interaction Model for Non-simultaneous Ice Failure

Xu Ji, Univ of Strathclyde, UK; Dale G Karr, Univ of Michigan, USA; Erkan Oterkus, Univ of Strathclyde, UK

WEDNESDAY 13:10

Keynote

Moved to Monday 13:10

Hydrogen Trapping Sites and Hydrogen Embrittlement of Iron and Steels [Oral presentation]

Room Crystal A, 2F

Kenichi Takai, Sophia Univ, Japan

Keynote

A Large-Scale Plant Construction and Transportation in the Arctic Region

Room Emerald C, 3F

Shigeru Abe, Kota Ueki, JGC Corporation, Japan

WEDNESDAY 14:00

92. TSUNAMI IV: Panel

Wednesday June 13 14:00 Royton D

Chair: Hiroyasu Kawai, National Institute for Maritime, Port and Aviation Technology (MPAT), Japan

Co-Chair: Kazuhiko Honda, National Institute of Land and Infrastructure Management (NILIM), Japan

Tsunami Issues after 2011 East Japan Earthquake

93. HYDRODYNAMICS X: MetOcean 1 (V. 3)

Wednesday June 13 14:00 Empress, 2F

Chair: Katsuji Tanizawa, National Maritime Research Inst, Japan

Hindcasting Accuracy of Meteorological Fields and Storm Surge Due to Hurricane Irma

Kazuhiro Fujiwara, Taro Arikawa, Katsumi Seki, Chuo University, Japan

Characteristics of Sea Level Change along China Coast during 1968-2017

Zhigang Gao, Hui Wang, Wenshan Li, Qiulin Liu, Wenjing Fan, Tong Gao, Bowen Jin, Song Pan, National Marine Data & Info Service, China

Statistical Characteristics of Global Winds and Waves

Masaru Tsujimoto, Takatoshi Matsuzawa, Kenichi Kume, National Maritime Research Inst, MPAT, Japan

Estimation of Extreme Significant Wave Heights in the Yellow Sea, China
Huijun Gao, Lvqing Wang, Bingchen Liang, Xinying Pan, Ocean Univ of China, China

Numerical and Experimental Investigation of Extreme Events in JONSWAP Seas [Proceedings only]

Guillaume Ducrozet, Ecole Centrale de Nantes, France; Alessandro Toffoli, Univ of Melbourne, Australia; Amin Chabchoub, Aalto Univ, Finland

94. RENEWABLE ENERGY X: Wave Energy 2 (V. 1)
Wednesday June 13 14:00 Regent, 2F

Chair: Lars Johanning, Univ of Exeter, UK

Coupled Modelling of a Non-linear Wave Energy Converter and Hydraulic PTO
Caitlin J Worden Hodge, William Bateman, Zyba Ltd; Zhiming Yuan, Univ of Exeter; Philipp R Thies, Univ of Strathclyde; Tom Bruce, Univ of Edinburgh, UK

Hydrodynamic Model Fitting for Wave Energy Applications Using Moment-Matching: A Case Study

Yerai Pe˜na-Sanchez, Nicol´as Faedo, John V. Ringwood, Maynooth Univ, Ireland

A Cost and Time Effective Prediction Technique for OWC-WEC Devices
Nagi Abdussamie, Minki Ham, Roberto Ojeda, Irene Penesis, Univ of Tasmania, Australia

Effects of Foils Quantity and Distance on the Propulsive Performance of Tandem Foils Propulsor

Peng Liu, Ocean Univ of China; Shuling Huang, Beijing Aerospace Unmanned Vehicles System Eng Research Inst; Xujie Wang, Tongshun Yu, Ocean Univ of China, China

Experimental Investigation into the Hydrodynamic Performance of a TLP-OWC Device [Proceedings only]

Jack Hore, Nagi Abdussamie, Roberto Ojeda, Irene Penesis, Univ of Tasmania, Australia

95. SUBSEA, PIPELINES, RISERS VI: Pipeline 2 (V. 2)
Wednesday June 13 14:00 Highness, 2F

Chair: Mason Wu, DMAR Engineering, USA

Co-chair: Nicholas J Vaughan, IKM Ocean Design, Norway

Global Buckling Behavior of Snaked-laid and Straight laid Subsea Pipelines
Wenbin Liu, Jianbao Fu CCCC First Harbor Engineering, China

Effect of Initial Imperfection on the Global Buckling of Submarine Pipelines with Different Length

Run Liu, Chengfeng Li, Tianjin Univ, China; Xinli Wu, Pennsylvania State Univ, USA;

Tail Behaviour of Pipeline Mechanical Strength Distributions

Ruud Selker, Ping Liu, INTECSEA; Erich Jurdik, Jay Chaudhuri, South Stream Transport, Netherlands

Improving the Analysis Accuracy for Deformation by the Internal Loading Method Applied to Centrifugal Reinforced Concrete Pipe

Kouki Ooyama, Masahiro Hyodo, Hidehiko Ogata, Tottori Univ; Masayuki Ishii, Shimane Univ, Japan

Nonlinear Analysis of Large-diameter and Thin-walled Submarine Pipeline against Fault Movement [Proceedings only]

Wenran Cao, Xiongzhi Wang, CNPC Engineering Technology Research, China

96. ENVIRON-ASSISTED CRACKING I: Sour Service

Materials (V. 4)

Wednesday June 13 14:00 Crystal A, 2F

Chair: Takuya Hara, Nippon Steel & Sumitomo Metal Corp., Japan

Assessing the Performance of Carbon Steel Pipes for Severe Sour Service [Oral presentation]

Amir Bahrami, Brian D Newbury, ExxonMobil Production, USA

Microstructural Design for Improving the Resistance to Hydrogen Induced Cracking in Recent Linepipe Steels

Tomoyuki Yokota, Nobuyuki Ishikawa, Norichika Aramaki, Satoshi Ueoka, Shinichi Kakihara, Joe Kondo, JFE Steel, Japan

Determination of Sour Environment from Equal Hydrogen Concentration Approach

Takuya Hara, Taishi Fujishiro, Nippon Steel & Sumitomo Metal; Daisuke Mizuno, Nobuyuki Ishikawa, JFE Steel; Eiji Tada, Tokyo Inst of Tech; Mitsuo Kimura, Univ of Tokyo, Japan

Analysis of Hydrogen Flux on X65 Pipe Steel Measured in a Sour Environment

Feng Gui, Ramgopal Thodla, DNV GL USA, USA

97. COASTAL VIII: Sediment Transport, Erosion 2 (V. 3)

Wednesday June 13 14:00 Crystal B, 2F

Chair: Luca Martinelli, Univ of Padova, Italy

Co-Chair: N Inukai, Nagaoka Univ of Tech, Japan

Innovative Sand Groin Beach Nourishment with Environmental, Defense and Recreational Purposes

Piero Ruol, Luca Martinelli, Chiara Favaretto, Daniele Scroccaro, Univ of Padova, Italy

Numerical Investigation on Hydrodynamic Performance of a WEC Array Integrated into a Pontoon

Xuanlie Zhao, Dezhi Ning, Xuanlie Zhao, Dalian Univ of Tech, China; Lars Johanning, Univ of Exeter, UK; Bin Teng, Dalian Univ of Tech, China

Raster Based Model of Inland Coastal Flooding Propagation Using Linearized Bottom Friction and Application to a Real Case Study in Caorle, Venice (IT)

Chiara Favaretto, Luca Martinelli, Piero Ruol, Univ of Padova, Italy

Design of Multipurpose Coastal Protection Measures at the Reno River Mouth (Italy)

Renata Archetti, Maria Gabriella Gaeta, Univ of Bologna, Italy

A CFD Study on Impact Wave Loadings Exerted behind Overtopping Type WECs
Mariano Buccino, Mohammad Daliri, Univ of Naples Federico II; Fabio Dentale, Angela Di Leo, Univ of Salerno, Italy

Structural Response of Seawave Slotcone Generators (SSG): Analysis of a Nearshore Device
Mariano Buccino, Daniela Salerno, Mario Calabrese, Univ of Naples Federico II, Italy

The Effects of Porous Sea-Access Road on the Hydrodynamics and Suspended Sediment Transport in the Yellow River Delta, China
Rui Liu, Bingchen Liang, Xinying Pan, Lvqing Wang, Ocean Univ of China, China

98. OCEAN TECH X: FPSO (V. 1)
Wednesday June 13 14:00 Crystal C, 2F

Chair: Sungho Lee, Glosten, Inc., USA

Numerical Study of a Fixed FPSO-Shaped Body under Focused Waves in Different Headings
Yuan Zhuang, Qi Li, Decheng Wan, Shanghai Jiao Tong Univ, China

Experimental Investigation on Oil-water Displacement Process of a Vertical Oil Storage System in Offshore Floating Platform
Dongxi Liu, Shanghai Maritime Univ; Jij Wang, COTEC Offshore Engineering Solutions; Yunxiang You, Wenyong Tang, Shanghai Jiao Tong Univ, China

Research on Ethylene Glycol Loss in Dew Point Control System
Meng Ying Zhu, Tao Cheng, Xia Ying Du, Zhao Guang Qu, Bing Kong, Yi Shan Guo, CNOOC, China

Predicting Wind Loads on Single Vessels and in Side by Side Offloading Configuration for FPSO and Shuttle Tanker Using CFD
Daniel Yoo, Jong-Chun Park, Pusan National Univ, Korea; Patrick Schrijvers, Arjen Koop, MARIN, Netherlands

Global Strength Analysis of a Monocolumn FPSO
Yue Lei, Shunhuai Chen, Lizheng Wang, Wuhan Univ of Tech; Hongchang Xu, Port & Shipping Administration of Jiaying, China

Combined Supersonic Separator for FPSO
Viktor S Vlasenko, Vyacheslav V Slesarenko, Georgii M Karpov, Far Eastern Federal Univ, Russia

Development of the New Concept of Sandglass-type Floating Production, Storage and Offloading System
Wen-hua Wang, Ya-zhen Du, Lin-lin Wang, Yi Huang, Yu-xin Yao, Hao Gao, Dalian Univ of Tech, China

99. ADVANCED SHIP TECH IV: Navigation, Control 2 (V. 4)
Wednesday June 13 14:00 Emerald A, 3F

Chair: Suak Ho Van, Korea Research Inst. of Ships & Ocean Eng, Korea

Image-based Ship Detection and Classification for Unmanned Surface Vehicle Using Real-Time Object Detection Neural Networks

Sung-Jun Lee, Myung-Il Roh, Hye-Won Lee, Ji-Sang Ha, Seoul National Univ; Il-Guk Woo, Daewoo Shipbuilding & Marine Eng, Korea

Development of Track Keeping Algorithm Using Fuzzy Inference

Bora Choe, Yoshitaka Furukawa, Kyushu Univ, Japan

An Optimization Tool for Ship Route Planning in Real Weather Scenarios

Raphael Zaccone, Massimo Figari, Michele Martelli, Univ of Genova, Italy

Evaluation of Heading Control System for Offshore Service or Observation

Takayuki Watanabe, Nobukazu Wakabayashi, Kobe Univ; Misako Urakami, Tokuyama College, Japan

The Prediction of Shipping Traffic Flow Based on GA-SVM Model

Jiawei Deng, Yadong Yang, Wuhan Univ of Tech, China

CFD Simulation of Site-Specific Passing Ship Effects on Multiple Moored Ships

Hamn-Ching Chen, Chia-Rong Chen, Texas A&M Univ; Erick T Huang, Naval Facilities Engineering Command, USA

CFD-based Analysis of Hull-Spacing Effects on Manoeuvrability of SWATH

Li Xia, Zao-Jian Zou, Yi Liu, Lu Zou, Shanghai Jiao Tong Univ, China

**100. OMGH II: DEEP OCEAN MINING 2:
Minerals, Mining Systems, Tech 1 (V. 1)**

**Wednesday June 13 14:00 Emerald
B, 3F**

Chair: Jin S. Chung, ISOPE, USA

Electro-Osmotic with Injection of Microbial for Strengthening Clay

Shao-Chi Chien, Hsuan Chuang Univ; Chang-Yu Ou, National Taiwan Univ of Sci & Tech; Pio-Go Hsieh, Hwa Hsia Univ of Tech, Taiwan China

Dynamic Response of a Deepsea Mining Riser

Ting Ting Li, Frank Lim, Yong Sha, Hui Zhang, 2H Offshore, China

Testing of Umbilical Cable for Reliable and Safe Operation

Gnanaraj. A. A, Venkatesan. K, Sasikala. T, Ramesh. N. R, Muthuvel. P, S. Muthukrishna Babu, Gopakumar. K, Ramadass. G. A, National Inst of Ocean Tech, India

Physical-Mechanical Properties of the Bottom Formations of the Hydrothermal Ore Fields on the Mid-Atlantic Ridge

Anatolii V Kondratenko, Igor V. Egorov, FSBI "VNIIOkeangeologia"; Victor N. Ivanov Polar Marine Geosurvey Expedition; Dmitrii L. Kell, Maria S. Stepanova, FSBI "VNIIOkeangeologia", Russia

101. ARCTIC V: Arctic Environment (V. 1)

Wednesday June 13 14:00 Emerald C, 3F

Chair: Vladimir Pavlenko, Arkhangelst Scientific Center, RAS, Russia
Co-Chair: Aleksey Marchenko, University Centre in Svalbard, Norway

Wave Attenuation in Marginal Ice Zone of Arctic Pack Ice to the North of Spitsbergen

Aleksey Marchenko, University Centre in Svalbard, Norway

Analysis of Iceberg Drift Trajectories Using the Multivariate Empirical Mode Decomposition

Leif Erik Andersson, NTNU; Francesco Scibilla, Statoil ASA, Norway; Luke Copland, Univ of Ottawa, Canada; Muhammad Faisal Aftab, Lars Imsland, NTNU, Norway

Reconstruction of Icea Drifting Lines in the Barents Sea, Using IFREMER Sea Ice Products

Nataliya A Marchenko, University Centre in Svalbard, Norway

Study of Short-term Sea Ice Prediction along the Northern Sea Route

Liyanarachchi Waruna Arampath De Silva, Hajime Yamaguchi, Univ of Tokyo, Japan

Indirect Economic Impact Assessment of Sea Ice Disasters on Industries Related in China [Proceedings only]

Xueqin Liu, Shuai Yuan, National Marine Environmental Monitoring Center; Jidong Wu, Beijing Normal Univ; Yuxian Ma, Wenqi Shi, Yuan Chen, National Marine Environmental Monitoring Center; Shanshan Sun, Dalian Univ of Tech, Ning Xu, National Marine Environmental Monitoring Center, China

WEDNESDAY 16:20

102. HYDRODYNAMICS XI: Comparative Study Panel

Wednesday June 13 16:20 Royton D

Chair: Sa Young Hong, Korea Research Inst. of Ships & Ocean Eng, Korea

Co-Chair: Shiqiang Yan, City Univ London, UK

Panelists

103. HYDRODYNAMICS XVI: Wave Mechanics 3 (V. 3)

Wednesday June 13 16:20 Empress, 2F

Chair: Moo Hyun Kim, Texas A&M Univ, USA

Co-Chair: Shiqiang Yan, City Univ London, UK

Direct Numerical Simulations of Air Entrainment Induced by Vortex Structures

Shangyu Yu, Shanghai Jiao Tong Univ, China; Dick Yue, Massachusetts Inst of Tech, USA; Lei Wang, Xiangming Yu, Shanghai Jiao Tong Univ, China

Simulation of Coastal Flooding during a Typhoon Event with the Consideration of Future Sea-level Rises in Tamsui River

Chih-Chung Wen, Hung-Kuang Univ; Yong-Jun Lin, National Taiwan Univ; Shu-Huei Jhang, National Taiwan Ocean Univ; Li-Hung Tsai, Inst of Transportation, Taiwan China

Wave Scattering by Two Unequal Surface-piercing Vertical Plates with Stepped Bottom

Zhengzhi Deng, Zhejiang Univ; Lixin Wang, Wuhan Univ of Tech;, China

Flow Evolution of Mode-2 Internal Solitary Waves Propagating over a Submerged Ridge

Ming Hung Cheng, National Taiwan Ocean Univ; Chih Min Hsieh, Chia Kai Yu, National Kaohsiung Marine Univ; Robert R Hwnag, Academia Sinica; Wen Chang Yang, National Applied Research Labs, Taiwan China

New Wave Spectrum Models Developed Based on HOS Method

Jiaqi Song, Yuan Zhuang, Decheng Wan, Shanghai Jiao Tong Univ, China

104. RENEWABLE ENERGY XI: Wave Energy 3 (V. 1)

Wednesday June 13 16:20 Regent, 2F

Chair: Mariano Buccino, Univ of Naples, Italy

Numerical and Experimental Study on 30kW-class Impulse Turbine for Wave Energy Conversion

Kilwon Kim, KRISO; Seung-Kwon Yang, Korea Maritime and Ocean Univ; Keyyong Hong, KRISO; Beom-Soo Hyun, Korea Maritime and Ocean Univ, Korea

Experimental Study on the Effects of External Electrical Resistance on the Efficiency of a Point Absorber Wave Energy Converter

Chi-Yu Li, Wen-Kai Weng, National Taiwan Ocean Univ; Ruey-Syan Shih, Tungnan Univ; Hung-Yi Chen, Sheng-Yang Wu, National Taiwan Ocean Univ, Taiwan China

Wave Energy Converter with Wave Sensor and Velocity Control

Takashi Kawaguchi, Aquasys Corp; Kunio Nakano, Mitsui Zosen Steel Structures Engineering; Shogo Miyajima, Mitsui Zosen Akishima Labs; Taro Arikawa, Chuo Univ, Japan

Numerical and Experimental Study for a Cylindrical Wave Energy Converter with Different Rotational Axes

Haeng Sik Ko, Yoon Hyeok Bae, Il-Hyoung Cho, Jeongrok Kim, Chang-Hyun Ko, Jeju National Univ, Korea

105. SUBSEA, PIPELINES, RISERS VII: Pipeline 3 (V. 2)

Wednesday June 13 16:20 Highness, 2F

Chair: Han-Il Park, Korea Maritime and Ocean Univ, Korea

A Thermal Study of the Subsea Bundled Pipelines for Offshore Marginal Oilfields

Wenguang Wang, Yufei Wan, Ming Hao, Zhaoguang Qu, Xin Qian, CNOOC, China

Long-Term Monitoring System of Submarine Pipeline Vibration Based on Fiber Grating Sensor Technology

Xiuyi Nie, Yongchun Yang, Yingfeng Cui, Changlong Chen, Ocean Univ of China, China

Impact of Dropped Objects and Anchor Dragging on Pipeline Integrity

Ruud Selker, Ping Liu, Dimitrios Karras, INTECSEA; Romke Bijker, ACRB; Ozturk Aktan, INTECSEA, Netherlands

Numerical Simulation Research of Submarine Pipeline Depth against Emergency Anchor Loading

Jianguang Yue, Langxiong Gan, Yuanzhou Zheng, Chunhui Zhou, Yong Ma1, Lei Zhang, Ying Ouyang, Wuhan Univ of Tech, China

A Model Test on a Rigid Pipe Installation Using J-lay Method

Y J Kwon, B W Nam, N W Kim, I B Park, S Y Hong, Korea Research Inst of Ships & Ocean Eng, Korea

Research on Hydrodynamic Performance of Pipe Laying Vessel with Stinger during Operating

Hong-sheng Yan, Hao-tian Liu, Tianjin Univ; Yong-xin Chen, COOEC, China

106. ENVIRON-ASSISTED CRACKING II:

Hydrogen Embrittlement (V. 4)

Wednesday June 13 16:20 Crystal A, 2F

Chair: Hyun Jo Jun, ExxonMobil Research & Engineering, USA
Co-Chair: Yasuhiro Shinohara, Nippon Steel & Sumitomo Metal, Japan

Understanding the Interaction between a Steel Microstructure and Hydrogen: The Key to Develop More Hydrogen Resistant Materials

Tom Depover, Kim Verbeken, Ghent Univ, Belgium

Multi-scale Analysis of Hydrogen Cracking Behavior of High Strength Steels under Gaseous Hydrogen

Nobuyuki Ishikawa, Akihide Nagao, Hitoshi Sueyoshi, JFE Steel; Toshihito Ohmi, Teikyo Univ; A Toshimitsu Yokobori, Shonan Inst of Tech; Liang Wan, Shigenobu Ogata, Osaka Univ, Japan

Effect of Heat Treatment Paths on the Microstructure and Mechanical Properties of High Cr Containing Ultrahigh Strength Steels [Oral presentation]

G Park, Y Kwon, POSTECH, Korea; D Shih, Kumamoto Univ, Japan; Nack Joon Kim, POSTECH, Korea

Hydrogen Embrittlement Behavior of High-Mn TWIP Steels: Effects of Alloy Composition and Microstructure [Oral presentation]

Young Jin Kwon, POSTECH; Young Soo Chun, POSCO, Korea; HyunWoo Jin, ExxonMobil Research & Engineering, USA; Chong Soo Lee, POSTECH, Korea

Hydrogen Trapping in X70 Structural Pipeline Steel and Weldments

Jean-Gabriel Sezgin, National Inst of AIST, Japan; Hallvard G Fjær, Inst for Energy Technology, Norway; Hisao Matsunaga, Kyushu Univ Junichiro Yamabe, AIST; Japan; Vigdis Olden, SINTEF Materials and Chemistry, Norway

Inhibition of Hydrogen Embrittlement of Cr-Mo Steel by the Addition of Impurities to Hydrogen Environment and the Effect of Material Strength

Ryosuke Komoda, Masanobu Kubota, Shuichi Yoshida, Aleksandar Staykov, Kyushu Univ; Patrick Ginet, K K Air Liquide Labs, Japan; Francoise Barbier, Jader Furtado, Air Liquide R&D, France

107. COASTAL IX: Sediment Transport, Erosion 3 (V. 3)
Wednesday June 13 16:20 Crystal B, 2F

Chair: Piero Ruol, Univ of Padova, Italy
Co-Chair: Yoshimichi Yamamoto, Tokai Univ, Japan

Comparison of Flow and Energy Reduction by Representative Intertidal Plants, Southeast China

Yining Chen, Tinglu Cai, Yang Chang, Silong Huang, Tian Xia, Second Inst of Oceanography, China

Marine Bottom Boundary Layer Sediment Flux Measurements of Fluidized Mud and Muck Using Vertical and Horizontal Sonde Arrays

Charles R Bostater Jr, Tyler Rotkiske, Taylor Oney, Florida Inst of Tech, USA

Effect of Jetties in Northern Part of Coastal Change at Chumphon Estuary

Atsanupong Promngam, Nunthawath Charusrojthanadech, Komsan Maleesee, King Mongkut's Inst of Tech Ladkrabang, Thailand; Yoshimichi Yamamoto, Tokai Univ, Japan

Suspended Clay Load from Mixed Soil under Regular Waves

Rei Akahoshi, Yong-hwan Cho, Tomoaki Nakamura, Norimi Mizutani, Nagoya Univ, Japan

Three Dimensional Numerical Simulation on the Characteristic of Bow-Spray for Trailing Suction Hopper Dredger[Proceedings only]

Jifu Yin, Feixin Wang, Guojun Hong, National Eng Research Ctr of Dredging Tech & Equip; Lihua Wang, CCCC Shanghai Dredging, China

108. OCEAN TECH XI: Jackup & Installation (V. 1)
Wednesday June 13 16:20 Crystal C, 2F

Chair: L F. Boswell, City University London, UK

Numerical Analysis of Penetration and Extraction of Pile-Leg for J350 Jack-up Rig

Chao Wang, Xuehui Zhang, Shanghai Waigaoqiao Shipbuilding; Guangxing Lou, China Telecom Corp; Bo Zhou, Shanghai Waigaoqiao Shipbuilding, China

Evaluation of Drag Coefficient Variation in Transit Mode on Leg & Spud can of DP Jackups Vessel

Nitin D Thulkar, Satoru Yamaguchi, Kyushu Univ, Japan

Application of RPD on Spudcan Sliding during Jack-up Installation near the Footprints

Chang Gao, Hongtao Li, Song Liu, China Classification Society, China

Dynamic Simulation Studies of Spudcan Penetration on an Adjacent Pile

Run Liu, Wenguan Ma, Haiyang Zhang, Tianjin Univ; Hui Xiao, Jun Wan, CNOOC, China

CFD Investigation of Regular Wave Forces on Pile Group in China-Maldives Friendship Bridge

Ningbo Gao, Hong Zhang, CCCC Second Harbour Eng; Jianmin Yang, Shanghai Jiao Tong Univ; Yongtao Zhang, CCCC Second Harbour Eng, China

Research on Power System for Lingshui 17-2 SEMI platform with Large Capacity Electric-driven Compressors [Proceedings only]

Guofeng Liu, Hao Zhang, Yiru Hu, Che Wei, CNOOC Research Inst, China

Study on Punch-Through Prediction and Risk Control Method of Jack-Up Spudcan [Proceedings only]

Hao Xu, Zhenwen Liu, Lei Qi, Haifeng Deng, Chun Li, CNPC Engineering Technology Research Co, China

109. ADVANCED SHIP TECH V: Powering 1 (V. 4)
Wednesday June 13 16:20 Emerald A, 3F

Chair: Munchiko Minoura, Osaka Univ, Japan

Numerical Prediction of Hydroelastic Performance of the Flexible Composite Propeller

Ji-Hye Kim, Byoung-Kwon Ahn, Chungnam National Univ; Gun-Do Kim, KRISO; Chang-Sup Lee, Chungnam National Univ, Korea

RANS Simulations for Propeller Open Water Tests in Towing Tank

Kwang-Soo Kim, Yoo-Chul Kim, Yoonsik Kim, Jin Kim, Suak Ho Van, Korea Research Inst of Ships & Ocean Eng, Korea

Numerical Simulations of Sheet and Cloud Cavitation on NACA0015 with RANS and LES Turbulence Model

Kaijie Chen, Decheng Wan, Gang Chen, Shanghai Jiao Tong Univ, China

Propeller-Engine Interaction in a Dynamic Model Scale Environment

Lode Huijgens, Arthur Vrijdag, Hans Hopman, Delft Univ of Technology, Netherlands

Numerical Investigation of Scale Effect for Propeller Boss Cap Fins

Lurong Xu, Decheng Wan, Shanghai Jiao Tong Univ, China

Research on the Technology of Vibration Reduction by Air Curtain to Control Fluctuating Pressure of Propeller

Xin Gu, Weiguo Wu, Yongshui Lin, Tao Yang, Jiezheng Wei, Wuhan Univ of Tech, China

Numerical Simulation of Fluid-structure Interaction of Anisotropic Composite Propeller

Peng-peng He, Zi-rui Li, Wei He, Ling-yu Zhu, Wuhan Univ of Tech, China

Estimation of Thruster-thruster/current Interaction in a Dynamic Positioning System through Supervised Learning with Neural Networks

Bo Li, Lei Wang, Xuefeng Wang, Shengwen Xu, Xin Li, Shanghai Jiao Tong Univ, China

110. OMGH III: OCEAN MINING 3 - Minerals, Explorartion, Environment 2 (V. 1)

Wednesday June 13 16:20 Emerald B, 3F

Chair: Akira Usui, Kochi Univ, Japan

Environmental Condition 17-18 Years after the Benthic Impact Experiment

Tomohiko Fukushima, JAMSTEC; Akira Tsune, Deep Ocean Resources Development Co, Japan

Periodic Behavior of Abyssal Flow in Okinawa Trough Hydrothermal Fields

Yasuo Furushima, JAMSTEC; Hironori Higashi, National Inst for Environmental Studies; Tatsuo Fukuhara, KANSO Co; Takeya Matsuda, Kokusai Kogyo Co; Hiroyuki Yamamoto, JAMSTEC; Naoki Furuichi, Japan Fisheries Resesarch & Education Agency; Tomohiko Fukushima, JAMSTEC, Japan

Lander Observatory with Non-Contact Power Supply and Communication Interfaces for Long-Term Ecosystem Monitoring at Deep-Sea

Tatsuhiro Fukuba, Jin-Kyu Choi, Yasuo Furushima, Tetsuya Miwa, Hiroyuki Yamamoto, JAMSTEC, Japan

Comparison of Components and Description for Benthic Organisms between Existing Environmental Impact Statements and Administrative Frameworks

Yoji Miyata, Tomohiko Fukushima, JAMSTEC, Japan

Confirming the Validity of ADCP Velocity Measurements for Physical Environmental Assessment in Japan's Exploration Areas for Cobalt-rich Ferromanganese Crusts

Masayuki Nagao, Yoshio Takasugi, Atsushi Suzuki, Yuichiro Tanaka, National Inst of AIST; Hideki Sugishima, Takaaki Matsui, Nobuyuki Okamoto, Japan Oil, Gas and Metals National Corp, Japan

Evaluation of Turbidity and Resedimentation through Seafloor Disturbance Experiments for Assessment of Environmental Impacts Associated with Exploitation of Seafloor Massive Sulphides Mining

Takaaki Matsui, Hideki Sugishima, Nobuyuki Okamoto, Yoshiaki Igarashi, Japan Oil, Gas & Metals National Corp, Japan

111. ARCTIC VI: Ice Management, Stationkeeping (V.1)

Wednesday June 13 16:20 Emerald C, 3F

Chair: Mohamed Sayed, National Research Council, Canada.

Co-Chair: Yooil Kim, Inha Univ, Korea

Numerical and Experimental Investigations of Managed Ice Loads acting on Fixed Conical Structure

Kenta Hasegawa, Shotaro Uto, Haruhito Shimoda, Daisuke Wako, Takatoshi Matsuzawa, National Maritime Research Inst, Japan

Numerical Estimation of Ice Clearing Performance of Ships and Its Validation with Model Tests

Akihisa Konno, Kogakuin Univ; Shigeya Mizuno, Japan Marine United Corp, Japan

2D Simulation of the Icebreaking Pattern for Sea Ice Management

Junji Sawamura, Osaka Univ, Japan; Egil Pedersen, UiT , Norway

An Illustration of Acceptable Ice Conditions for Vessel Station-keeping Operations in Pack Ice

Mohamed Sayed, Shameem Islam, David Watson, National Research Council Canada; Brian Wright, B Wright & Assoc, Canada

An Experimental Investigation of Icevaning Control for Arctic Station-keeping
Young-Shik Kim, KRISO; Jinwhan Kim, KAIST; Hyung-Do Song, Jong-Gil Yum,
KRISO, Korea

THURSDAY 08:00

112. HYDRODYNAMICS XII: MetOcean 2 (V. 3)
Thursday June 14 08:00 Royton D

Chair: Qingwei Ma, City Univ London, UK

Spatio-Temporal Modelling of Wind Speed Variations

Wengang Mao, Oscar Ivarsson, Igor Rychlik, Chalmers Univ of Technology, Sweden

Design and Test Performance of a Wave Overtopping Automated Measurement System

Xu Zhao, Yanan Xu, Yunpeng Jiang, Yajing Zhang, Hanbao Chen, Tianjin Resch Inst of Water Transp Eng, China

Characteristics of Tide Variation/Change along the China Coast

Jianli Zhang, Hui Wang, Wenjing Fan, Wenshan Li, Tong Gao, Qiulin Liu, National Marine Data & Info Service, China

113. HYDRODYNAMICS XVII: CFD 1-Applications (V. 3)

Thursday June 14 08:00 Empress, 2F

Chair: Yonghwan Kim, Seoul National University, Korea

Co-Chair: Shiqiang Yan, City Univ London, UK

On Development of Accurate Multi-phase Particle Methods with SPS Turbulence Modeling for Ocean Engineering Applications

Yuma Shimizu, Kyoto Univ; Naoki Tsuruta, Port and Airport Research Inst; Abbas Khayer, Hitoshi Gotoh, Kyoto Univ, Japan

Fluid Structure Interactions Between Waves and Coastal Structures Using SWE-SPH

Taiga Kanehira, Hidemi Mutsuda, Hiroshima Univ, Japan; Andi Ardianti, Hasanuddin Univ, Indonesia; Yasuaki Doi, Hiroshima Univ, Japan

SPH Simulations of Fluid Flow with Surface Tension

Kazuhiko Kakuda, Shinichiro Miura, Nihon Univ, Japan

Numerical Prediction of Flow in a Circular Tank for Seed Production

Koichi Tsubogo, Open University of Japan; Tetsuya Sumida, Oshima College, Japan

Numerical Analysis in Wastewater Purification Circulation Equipment

Koichi Tsubogo, Open University of Japan; Takahiro Yasuhara, Mitsunori Ouchi, Yasuhara Setsubi Kougyou Ltd, Japan

An Efficient Shape Parametrisation by Free-form Deformation Enhanced by Active Subspace for Hull Hydrodynamic Ship Design Problems in Open Source Environment

Nicola Demo, Marco Tezzele, Andrea Mola, Gianluigi Rozza, SISSA (Int'l School for Advanced Studies), Italy

114. RENEWABLE ENERGY XII: Wave Energy 4 (V. 1)
Thursday June 14 08:00 Regent, 2F

Chair: Lars Johanning, Univ of Exeter, UK

Optimization of Mooring Line Axial Stiffness Characteristics for Offshore Renewable Energy Applications

Ajit C Pillai, Philipp R Thies, Lars Johanning, Univ of Exeter, UK

Study on the Flow of Magnetofluid in Wave Power Device

Yang Liu, Xueling Cao, Aiguo Chen, Weiwei Tang, Guangzhou Maritime Univ, China

Pile-Soil Interaction Analysis of Hybrid 3kW Ocean Wave Energy Extraction Device Subjected to Hydrodynamic Loads

Jeongsoo Kim, Min-Su Park, Yeon-Ju Jeong, Korea Inst of Civil Eng & Building Tech, Korea

Numerical Study on Oil-seawater Mixed Flow under Electromagnetic Field

L.Z. Zhao, X. Q. Chen, A.W. Peng, R. Li; C. W. Sha, Inst of Electrical Engineering, CAS, China

Design and Performance Analysis on 5kW Prototype Device of Heaving Float Wave Energy Conversion with Liquid Metal MHD Generator [Proceedings only]

Yanjiao Liu, Baolin Liu, Mina Liu, Aiwu Peng, Chinese Academy of Sciences, China

On the Absorption of Wave Power Using Ship-Like Structures [Proceedings only]

Kim Nielsen, Ramboll Offshore Wind; Harry Bingham, Technical Univ of Denmark; Jonas Bjerger Thomsen, Aalborg Univ, Denmark

115. SUBSEA, PIPELINES, RISERS VIII: Pipeline 4 (V. 2)
Thursday June 14 08:00 Highness, 2F

Chair: A.M. Gresnigt, Delft Univ. of Technology, Netherlands

Form of Energy Equation in Gas-Pipeline Simulations

Filip Sund, Uni Research Polytec; Tor Ytrehus, NTNU, Norway

Numerical Simulation of a Propagating Buckle in Sandwich Pipe Systems

Xipeng Wang, Qingui Xu, Shunfeng Gong, Zhejiang Univ, China

Numerical and Experimental Studies on Motion Response Characteristic of J-lay Vessel

Mingyuan Sun, Jinhong Ding, Shanghai Jiao Tong Univ; Meng Yuan, COSCO Shipping Specilized Carriers; Qi Yang, Chongben Ni, Xinquan Chen, Shanghai Jiao Tong Univ, China

Seepage Force on a Pipeline Buried in a Poroelastic Seabed Induced by a Solitary Wave [Oral presentation]

Meng-Yu Lin, Chung Yuan Christian Univ, Taiwan China

Numerical Investigation of Current-induced Local Scour below Two Parallel Vibrating Pipelines

Qi Zhang, Wan-Ling Li, Xiang-Lian Zhou, Jian-Hua Wang, Shanghai Jiao Tong Univ, China

116. ENVIRON-ASSISTED CRACKING III: Hydrogen Embrittlement (V. 4)

Thursday June 14 08:00 Crystal A, 2F

Chair: Hyun Jo Jun, ExxonMobil Research & Engineering, USA

Session 106 continues here.

117. COASTAL X: Reef Islands (V. 3)

Thursday June 14 08:00 Crystal B, 2F

Chair: Yuxiang Ma, Dalian Univ of Tech, China

Co-Chair: Eva Loukogeorgaki, Aristotle Univ of Thessaloniki, Greece

The Influence of Vertical-wall Structure on Monochromatic Wave Propagation Characteristics over the Deep-sea Coral Reefs

Gancheng Zhu, Dalian Univ of Tech; Yunqiang Xia, Navy Inst of Eng Design & Research; Bing Ren, Guoyu Wang, Dalian Univ of Tech, China

Geohazard Mitigation in the Design of Offshore Structures for a Luxury Island Resort in the Philippines

Jose Carlo Eric L. Santos, John Michael B. Gargullo, Joanne Marie T. Parafina, AMH Philippines, Philippines

Study of the Wave Impinging Forces on Seawalls on Reefs Using a Large Wave Flume

Songgui Chen, Hanbao Chen, Tianjin Research Inst of Water Transp Eng; Jinhai Zheng, Chi Zhang, Hohai Univ; Zihao Duan, Tianjin Research Inst of Water Transp Eng; Shuo Huang, Guangzhou Inst of Energy Conversion, China

Experimental Study of the Multidirectional Wave Transformation Characteristics on a Simplified Reef Flat Topography

Jiayi Xu, Shuxue Liu, Jinxuan Li, Zichun Lin, Dalian Univ of Tech, China

Numerical Simulation of Solitary Wave Transformation over Fringing Reef Profiles Using a Multi-layer Non-hydrostatic Model

Kezhao Fang, Shufeng Cheng, Ruili Fu, Dalian Univ of Tech; Jiawen Sun, National Marine Environmental Monitoring Center; Zhongbo Lu, Dalian Maritime Univ, China

A Numerical Study of Freak Wave Generated Over a Fringing Reef

Ruili Fu, Yuxiang Ma, Guohai Dong, Dalian Univ of Tech; Qiannan Du, China Continent Property & Casualty Insurance, China

Laboratory Research on Response of Artificial Sandbar to Regular Waves

Xuejian Han, Cuiping Kuang, Yue Ma, Hao Zhang, Tongji Univ, China

Wave Attenuation Mechanism of the Artificial Reef in Beidaihe, China

Yue Ma, Cuiping Kuang, Xuejian Han, Boling Dong, Tongji Univ, China

Continue at Session 127.

118. OCEAN TECH XII: Offshore, Aquaculture (V. 1)
Thursday June 14 08:00 Crystal C, 2F

Chair: Hong Gun Sung, Korea Research Inst of Ships & Ocean Eng, Korea

Review on Typical Marine Operations in Aquaculture and Numerical Simulation of One Example Operation Scenario

Jingzhe Jin, Ørjan Selvik, Decao Yin, SINTEF Ocean; Xue Yang, NTNU; Vegard Aksnes, Dariusz Fathi, SINTEF Ocean, Norway

Application of Dynamic Simulation Technology on Process Design Optimization of Offshore Oil and Gas Fields Development

Hualei Yi, Haishan Zhu, Yuehong Cui, Xiaohong Zhou, Zejun Yang, Yuxiao Jing, Ruilong Li, CNOOC Research Inst, China

The Impacts of Mooring Line Failure for Box-Shape Aquaculture Net Cages

Hung-Jie Tang, Ray-Yeng Yang, National Cheng Kung Univ, Taiwan China

Experimental Study on the Hydrodynamic Performance of a Long-Line Aquaculture Facility in Waves

Hui Yang, Yun-Peng Zhao, Chun-Wei Bi, Guo-Hai Dong, Tiao-Jian Xu, Dalian Univ of Tech, China

119. ADVANCED SHIP TECH VI: Powering 2 (V. 4)
Thursday June 14 08:00 Emerald A, 3F

Chair: Alexios Anagnostopoulos, Chalmers Univ of Tech, Sweden

Experimental Research on the Influence of Air Film on Propulsion Performance and Power Forecast of Low-speed Ship

Hao Wang, Shunhuai Chen, Lizheng Wang, Wuhan Univ of Tech, China

Research of Porpoising Phenomenon of M-hull Planing Craft

Xiaofei Mao, Zeshuang Yu, Liang Yan, Wuhan Univ of Tech, China

Comparative Study of Numerical Simulation and Empirical Methods for Air Resistance Analysis of a Ship

Seong-Wook Jeong, Seung-Gyu Jeong, Young-Doo Kim, Lloyd's Register Asia; Suak Ho Van, Kwang Soo Kim, Korea Research Inst of Ships & Ocean Eng, Korea

Numerical Estimation of Self-propulsion Factors for Ship with Air Lubrication

Daijiro Arakawa, Hideki Kawasima, Chiharu Kawakita, National Maritime Research Inst, Japan

A Practical Prediction Method for Self Propulsion Factors in Actual Seas

Masaru Tsujimoto, Naoto Sogihara, Mariko Kuroda, Kenichi Kume, Hiroki Ohba,
National Maritime Research Inst, Japan

Applying Steady and Unsteady Body Force Methods to the Simulation of Ship Self-Propulsion

Yu-Wen Hsieh, Suz-Kuan Huang, Sin-An Lai, Ching-Yeh Hsin, National Taiwan Ocean Univ, Taiwan China

120. OMGH IV: OCEAN MINING 4:

Mining Systems, Tech 2 (V. 1)

Thursday June 14 08:00 Emerald B, 3F

Chair: K. Gopkumar, National Inst of Ocean Tech, India

Co-Chair Akira Usui, Kochi Univ, Japan

Development and Testing of Locomotion Trials on Soft Sea Bed Soil and System Performance Checks of Experimental Undercarriage System

Janarthanan.C, Chandran.V, Sundaramoorthi.V, Viswanath.B.O, Dinesh Kumar.D, Muthuvel.P, Rajesh.S, Gnanaraj.A.A, Venkatesan.K, Muthukrishna Babu.S, Gopkumar K, Ramesh.N.R and Ramadass.G.A, National Inst of Ocean Tech, India

Investigation on Vertical Incipient Motion of Spherical Particles in Hydraulic Collecting

Guocheng Zhao, Longfei Xiao, Weijie Zhao, Yufeng Kou, Shanghai Jiao Tong Univ, China

An Analytical Model of the Effect of Internal Density Waves in Risers Subjected to Vortex Shedding

Mats Jørgen Thorsen, Svein Sævik, NTNU, Norway

Numerical Study on Settling and Floating Movements of a Sphere Particle Flowing in a Vertical Pipe

Hong Xiong, Yuxiang Chen, Ning Yang, Jianyu Xiao, Inst of Deep-sea Sci & Eng, CAS; Li Li, Central South Univ, China

121. ARCTIC VII: Ice Loads, Safety in Operations (V. 1)

Thursday June 14 08:00 Emerald C, 3F

Chair: Ove T Gudmestad, Univ of Stavanger, Norway

Co-Chair: Ling Zhu, Wuhan Univ of Technology, China

An Examination of the Besetting of the MV Berge Atlantic

Thomas Browne, National Research Council Canada; Captain David Fowler, Fowler Marine Inc; Ivana Kubat, David Watson, Mohamed Sayed, National Research Council Canada, Canada

Numerical Study of Interaction between Moored Ship and Ice Ridge for Head on Case

Li Zhou, Jianjie Niu, Jiangsu Univ of Sci & Tech; Wei Shi, Dalian Univ of Tech, China; Zhenju Chuang, DNV GL, Norway

Dynamic Analysis of Ship Plates under Repeated Ice Floes Impacts Based on a Simplified Ship-Ice Collision Model

Ling Zhu, Wei Cai, Mingsheng Chen, Yinggang Li, Wuhan Univ of Tech, China;
Shengming Zhang, Lloyd's Register EMEA, UK

THURSDAY 10:30

122. HYDRODYNAMICS XIII: Nonlinear Wave (V. 3)

Thursday June 14 10:30 Royton D

Chair: Bin Teng, Dalian Univ of Technology, China,

Co-Chair: Guanghua He, Harbin Inst of Tech at Weihai, China

Numerical Simulation of Solitary Waves Interacted with a Trapezoid Obstacle on the Sloping Beach

Rui You, Guanghua He, Jian Wang, Zhishuo Zhang, Harbin Inst of Tech, Weihai, China

Numerical Simulation of Internal Solitary Waves Interacting with a Uniform Slope

Junnan Cui, Sheng Dong, Zhifeng Wang, Ocean Univ of China, China

Experimental and Numerical Investigation on the Interaction between Freak Waves and a Submerged Breakwater

Mengyu Li, Xizeng Zhao, Zhouteng Ye, Zijun Hu, Zhejiang Univ, China

123. HYDRODYNAMICS XVIII: CFD 2-FSI/WSI 1 (V. 3)

Thursday June 14 10:30 Empress, 2F

Chair: Benlong Wang, Shanghai Jiao Tong University, China,

Co-Chair: Abbas Khayyer, Kyoto Univ, Japan

CFD Investigation of Flow Interactions of Four Fixed Columns with Free Ends in Square Configuration

Jiawei He, Weiwen Zhao, Decheng Wan, Shanghai Jiao Tong Univ, China

A Coupled Incompressible SPH-Hamiltonian SPH for Fluid-Structure Interactions

Hosein Falahaty, Abbas Khayyer, Hitoshi Gotoh, Kyoto Univ, Japan

Numerical Simulation of Vortex Shedding when the Linearly Stratified Fluid Past a Hydrofoil

Fenglai Huang, Yong Ding, Linxin Lan, Liming Pan, Harbin Engineering Univ, China

Numerical Simulations of the Strongly Stratified Flow Past Two Cylinders

Yong Ding, Weizhuang Ma, Yunbo Li, Fenglai Huang, Harbin Engineering Univ, China

Numerical Study of the Nozzle Spacing Effect on Dual Jets in a Wavy Cross-Flow

Yuling Zhang, Zhenshan Xu, Yongping Chen, Hohai Univ, China

Computational Simulation of Submarine Propeller Based on Overset Structured Grid and DES Model

Peng Wei, Kaijun Jiang, Lixiang Guo, Ran He, Zhiguo Zhang, Huazhong Univ of Sci & Tech, China

Large Eddy Simulation of Flows around a Free Surface Piercing Fixed 2D Rectangle Using a Ghost-cell Immersed Boundary Method

Xiaohui Zhang, Junli Bai, Xiechong Gu, Ning Ma, Shanghai Jiao Tong Univ, China

124. RENEWABLE ENERGY XIII: Resources (V. 1)

Thursday June 14 10:30 Regent, 2F

Chair: Fabian Vorpahl, Senvion GmbH, Osnabrück, Germany.

Dynamic Response and Power Production of an Integrated Offshore Renewable Energy System

Liang Li, Zhiming Yuan, Yan Gao, Univ of Strathclyde, UK

Effect of Viscous Damping on the Performance of a Pitch-type WEC Rotor

Sunny Kumar Poguluri, Yoon Hyeok Bae, Il-Hyoung Cho, Jeju National Univ, Korea

The Effect of Wavelength on a Floating Body and its Location for Wave Energy Absorption Using CFD

Hyunjong Kim, Nanjundan Parthasarathy, Pukyong National Univ; Kui Ming Li, Korea Marine Equipment Research Inst; Yoon Hwan Choi, Pukyong National Univ, Korea; Nobuyuki Oshima, Hokkaido Univ, Japan; Yeon Won Lee, Pukyong National Univ, Korea

Extreme Wave Height Estimation Formula for a Substructure of an Offshore Wind Turbine

Kenji Shimada, Shimizu Corp; Takeshi Ishihara, Univ of Tokyo, Japan

Effect of Typhoon Soulik on Kuroshio and Green Island Wakes

Tai-Wen Hsu, National Taiwan Ocean Univ; Shin-Jye Liang, Meng-Hsien Chou, National Cheng-Kung Univ; Wei-Ting Chao, Shin-Jye Liang, National Taiwan Ocean Univ, Taiwan China

125. OMGH V - GAS HYDRATES 1

Fundamental (V. 1)

Thursday June 14 10:30 Highness, 2F

Chair: Yutaek Seo, Seoul National Univ, Korea

Co-chair: Hideki Minagawa, National Inst. of AIST, Japan

Experimental Study on Mechanical Properties of Clay Sediment Containing Tetrahydrofuran Hydrate

Shuyun Wang, Xiaobing Lu, Xuhui Zhang, Inst of Mechanics, CAS, China

Effect of High Molecular Weight Asphaltenes on the Phase Stability of Methane Hydrates

Siddhant K. Prasad, Deepjyoti Mech, Vishnu Chandrasekharan Nair, Pawan Gupta, Jitendra S. Sangwai, IIT Madras, India

Spectroscopic Observation and Formation Kinetics of Chlorodifluoromethane Hydrate under Salt Environments [Oral presentation]

Ji-Ho Yoon, Korea Maritime and Ocean Univ; Yesol Woo, Ocean Science & Tech School; Jeasung Park, Korea Inst of Industrial Tech, Korea

Numerical Simulation of Dissociation Behavior in Experimental Production System Depending on Gas Hydrate Saturation

Seo-Yoon Moon, Hyo-Jin Shin, Jong-Se Lim, Korea Maritime and Ocean Univ; Jaehyoung Lee, Korea Inst of Geoscience & Mineral Resources, Korea

126. HPM VIII: Arctic, Cryogenic Materials (V. 4)
Thursday June 14 10:30 Crystal A, 2F

Chair: Satoshi Igi, JFE Steel, Japan

Co-Chair: Neerav Verma, ExxonMobil Upstream Research, USA

Properties of Polyurethane Foam Blown by Environment Friendly Blowing Agent

Yeongbeom Lee, Youngchul Yang, KOGAS, Korea

A New High Strength 9 %Ni Cryogenic Steel

George J Fraley, Fred B Fletcher, Murali Manohar, ArcelorMittal Global R&D, USA

New Cryogenic Material Technologies: Incentive Analysis & Opportunity Identification

Neerav Verma, Cecilie Haarsest, Timothy Anderson, ExxonMobil Upstream Research, USA

Factors Influencing Fatigue Behavior of High-Mn Steels [Oral presentation]

Sangshik Kim, Daeho Jeong, Hyokyung Sung, Gyeongsang National Univ; Jehyun Lee, Changwon National Univ, Korea

127. COASTAL XI: Ships & Harbors (V. 3)
Thursday June 14 10:30 Crystal B, 2F

Chair: Ray-Yeng Yang, National Cheng Kung Univ, Taiwan
China

Co-Chair: Yuxiang Ma, Dalian Univ of Tech, China

Numerical Study on the Resistance and Ship Wave of Ships Advancing Through a Canal

Sijing Zhang, Lizheng Wang, Aokui Xiong, Shunhuai Chen, Yan Jin, Wuhan Univ of Tech, China

A Generation Method of Harbor Ship Wave for Boussinesq-type Wave Transformation Model

Katsuya Hirayama, Naoto Higuchi, Port and Airport Research Inst, Japan

Effects on Harbour Resonance of Secondary Oscillations by Tidal Motion Inside the Small Bay

Kenji Tanaka, Munehiro Shimizu, Hiroshima Inst of Tech, Japan

Investigation on Effects of Vertical Baffle on Sloshing in a Tank under Random Excitation

Mi-An Xue, Xiaoli Yuan, Yichao Chen, Ruihu Zhu, Jianjian Xing, Hohai Univ, China

128. OCEAN TECH XIV: CCP-WSI Blind Tests 1V. 1)
Thursday June 14 10:30 Crystal C, 2F

Chair: Deborah Greaves, University of Plymouth, UK
Co-Chair: Shiqiang Yan, City, University of London, UK

Numerical Analysis of the Interaction Between a Fixed FPSO Benchmark Model and Focused Waves

Qi Li, Yuan Zhuang, Decheng Wan, Gang Chen, Shanghai Jiao Tong Univ, China

Numerical Simulation of FPSO-like Structure in Waves by RANS Method

Hao Wu, Tingqiu Li, Lin Ma, Xuemin Song, Dominic A Hudson, Pandeli Temarel, William Geraint Price, Wuhan Univ of Tech, China

Focused Wave Loading on a Fixed FPSO Using Naval Hydro Pack

Inno Gatin, Hrvoje Jasak and Vuko Vukcevic, Univ of Zagreb, Croatia; Steven Downie, Arup, UK

Spectral Element FNP Simulation of Focused Wave Groups Impacting a Fixed FPSO

Allan P. Engsig-Karup, Technical Univ of Denmark; Claes Eskilsson, Aalborg Univ, Denmark

129. ADVANCED SHIP TECH VII: Powering 3 (V. 4)
Thursday June 14 10:30 Emerald A, 3F

Chair: Suak-Ho Van, Korea Research Inst of Ships & Ocean Eng, Korea
Co-Chair: C Kawakita, National Maritime Research Inst, Tokyo, Japan

Characteristics of Wind Speed and Direction during Sea Trials of Ships

Semyun Oh, Daeyoul Kang, Soonho Choi, DongYeon Lee, Booki Kim, Samsung Heavy Industries, Korea

Big Data Techniques for Ship Performance Study

Alexios Anagnostopoulos, Chalmers Univ of Technology, Sweden

Estimation Model of Energy Efficiency Operational Indicator Using Public Data Based on Big Data Technology

Sung-Woo Park, Myung-Il Roh, Min-Jae Oh, Seong-Hoon Kim, Seoul National Univ; Won-Joon Lee, In Il Kim, Chang-Yong Kim, Daewoo Shipbuilding & Marine Eng, Korea

Numerical Simulation and Analysis of Thrust Deduction of Waterjet Propelled High Speed Planing Craft

Jiabing Jiang, Jiangming Ding, Jianguo Liu, Wuhan Univ of Tech, China

Analysis for the Powering Performance of Dry Cargo Ship in Operation

Ho Kim, Beom-Jin Park, Suak-Ho Van, Korea Research Inst of Ships & Ocean Eng, Korea

Numerical Prediction of Cavitation Performance for Rim Driven Thruster

Li-wei Zhang, Zi-ru Li, Wei He, Ling-yu Zhu, Wuhan Univ of Tech, China

A Study on G-modulus Measurement Using Strain Gauge Method for Accurate Shaft Power Measurement

Kyong-Min Bae, Sung-Won Yoon, Jong-Rok Ha, Jun Seok, Je-Hyoung Cho, Research Inst of Medium&Small Shipbuilding, Korea

130. GEOTECH VIII: Soil Property, Mechanics 2 (V. 2)
Thursday June 14 10:30 Emerald B, 3F

Chair: Jing Wen Chen, National Cheng Kung Univ, Taiwan China
Co-Chair: Young Sang Kim, Chonnam National Univ, Korea

Interaction between Grout Penetration and Fracture Deformation

Fei Xiao, Zhiye Zhao, Nanyang Tech Univ; Hezhen Yang, Univ of Glasgow Singapore, Singapore

**Shallow Water Depth Inversion Based on the Multi-spectral Data of GF-1 Satellite -
- Case Study on the Ganquan Island**

Lu Wenhui, Liu Shuming, Cai Renhan, Yin Yue, and Yu Ting, National Marine Data & Info Service, China

Evaluation of Soil Thrust Interference Effect in Track Systems from Model Track Tests

Gyu-Beom Shin, Sung-Ha Baek, Choong-Ki Chung, Seoul National Univ, Korea

Correlation of Soil Resistivity and Critical Shear Stress Using Rotating Cylinder Test

Young-sang Kim, Gyeong-o Kang, Chonnam National Univ; Jae-seong Lim, KEPCO Research Inst; Sung-ho Suh, Korea Fisheries Resources Agency, Korea

Experimental Study on the Effect of Compaction on Long-term Settlement of the Embankment of High-speed Railways

Kean Thai Chhun, Gangneung-Wonju National Univ; Su-Hyung Lee, Yeong-tae Choi, Korea Railroad Research Inst; Chan-Young Yune, Gangneung-Wonju National Univ, Korea

Retesting on Tension Fracture of Sand-packed Container in Small-size Model Tests

Yasuyuki Nabeshima, NIT, Akashi College, Japan

131. ARCTIC VIII: Ice Loads on Ships (V. 1)
Thursday June 14 10:30 Emerald C, 3F

Chair: Dmitri Matskevich, ExxonMobil Upstream Research Co., USA
Co-Chair : Koh Izumiyama, Hokkaido University, Japan.

Local Normal and Tangential Ice Forces on the R. V. Polarstern

Robert Frederking, National Research Council Canada, Canada

Improved Numerical Method for Calculation of Icebreaking Force

Jianwei Wang, Qing Wang, Bin Jia, Wei Lu, Harbin Engineering Univ, China

Estimation of Ship Bow-Iceberg Impact Forces with Consideration of the Sliding Effect

Ming Song, Jiangnan Shipyard (Group), China; Zhenhui Liu, Aker Solutions; Jorgen Amdahl, NTNU, Norway

Simulation of Ship-ice Collision Using a Constitutive Model of Ice Material Considering the Effect of Temperature

Tongqiang Yu, Kun Liu, Qingfeng Wang, Jiaxia Wang, Jiangsu Univ of Sci & Tech, China

Calculation of Ship Hull Fatigue Damage caused by Local Ice Loads in Ridged Ice Fields

Yue Han, Junji Sawamura, Osaka Univ, Japan

THURSDAY 12:00

Student Forum

THURSDAY 13:10

Keynote

Recent Status of Methane Hydrate R&D Program in Japan [Oral presentation]

Yoshihiro Masuda, Univ of Tokyo, Japan

Highness 2F

Introduction by Norio Tenma, National Inst. of AIST, Japan,

Keynote (Cancelled)

The Prospects for Large-scale Use of Resources Renewable Energy in the Russian Arctic

Regent, 2F

V I Pavlenko, S Yu Kutsenko, Federal Center for Integrated Arctic Research, Russian Academy of Sciences, Russia

THURSDAY 14:00

132. HYDRODYNAMICS XIV: Wave Mechanics 1 (V. 3)

Thursday June 14 14:00 Royton D

Chair: Erik Vanem, DNV GL, Norway

Co-Chair: Shiqiang Yan, City Univ London, UK

A High-order Spectral Method for a Vertical 2D Model of Nonlinear Water Waves Interacting with a Linear Shear Current

Philippe Guyenne, Univ of Delaware, USA

Accuracy and Stability of Virtual Source Method for Numerical Simulations of Nonlinear Water Waves

Omar Al-Tameemi, David I. Graham, Plymouth Univ; Kurt Langfeld, Univ of Liverpool, UK

Inland Flooding Responses to the Inclusion of Estuarine Discharges in the Storm Surge Modelling

Sangyoung Son, Chilwoo Lee, Korea Univ, Korea

Effect of Storm Surge Barrier at the North Branch on the Extreme High Water Level in Yangtze Estuary [Proceedings only]

Ao Chu, Jiaai Tai, Ya Tan, Hohai Univ, China

133. HYDRODYNAMICS XIX: CFD 3-FSI/WSI 2 (V. 3)

Thursday June 14 14:00 Empress, 2F

Chair: Abbas Khayyer, Kyoto Univ, Japan

Co-Chair: Shiqiang Yan, City Univ London, UK

New Method for the Parameterization of Wind Drag Coefficient under Coastal Storm Conditions

Hongyuan Shi, Zaijin You, Yongqing Li, Bin Li, Ludong Univ, China

Relaxation Zone Method in SPH-based Model Applied to Wave-structure Interaction

Corrado Altomare, Ghent Univ, Belgium; Bonaventura Tagliaferro, Univ of Salerno, Italy; Tomohiro Suzuki, Flanders Hydraulics Research, Belgium; Jose M. Dominguez, Alejandro J.C. Crespo, Vigo Uni, Spain; Riccardo Briganti, Univ of Nottingham, UK

Simulation of Dam-break Wave Impacting onto Square Column by GPU Accelerated MPS Method

Xin Tian, Decheng Wan, Shanghai Jiao Tong Univ, China

134. RENEWABLE ENERGY XIV: Hybrid, Thermal Systems

Thursday June 14 (V. 1) 14:00 Regent, 2F

Chair: Shuichi Nagata, Saga Univ, Japan

The Influence of Wave Energy Absorber Sizes on the Response of a Floating Hybrid Wind-Wave System

Jiyuan Men, Fasuo Yan, Qingwei Ma, Hongbin Hao, Harbin Engineering Univ, China;

Optimization Model of Island Multi-Energy Complementary Power Supply System for Based on Life-cycle Cost

Jing Jia, Bei Li, Huiying Gao, Hai Sun, Bingchen Liang, Kun Wang, Ocean Univ of China, China

Finite Element Analysis of Photovoltaic Floating Body Based on Design Wave Method

Wei Li, Li-lan Zhou, Jin Gan, Wei-guo Wu, Wuhan Univ of Tech, China

Numerical Investigation for Mooring System Analysis Accounting for Blade Force

Fan Bu, Long Yu, Hang Li, Yanping He, Shanghai Jiao Tong Univ, China

135. OMGH VI: GAS HYDRATES 2

-Production Fundamental (V. 1)

Thursday June 14 14:00 Highness, 2F

Chair: Takeshi Komai, Tohoku Univ, Japan

Experimental Study on Acid Injection for Enhanced Gas Recovery from Gas Hydrate Reservoir

Yusuke Nakano, Fuyuki Kaneko, Kengo Nakamura, Tohoku Univ; Yasuhide Sakamoto, National Inst of AIST; Takeshi Komai, Tohoku Univ, Japan

Risk Management of Hydrate Reformation Using Synergistic Inhibition during Methane Hydrate Production

Jakyung Kim, Daejun Chang, KAIST; Ki Heum Park, Yutaek Seo, Seoul National Univ, Korea

A Concept of Adapting an Oilfield Subsea Tree for Gas Hydrates Production

Jun Kai Feng, Tian Feng Zhao, Ji Li Yang, Frank Lim, China Univ of Petroleum-Beijing, China

Particular Qualities of the Formation and Decomposition of Natural Gas Hydrates from Sakhalin 3 Offshore Fields

Iurii M Em, Alexey A Morozov, Svetlana G Gulkova, Alexander N Gulkov, Far Eastern Federal Univ, Russia

136. HPM IX: Developments in Materials Panel (V. 4)
Thursday June 14 14:00 Crystal A, 2F

Chair: Eric J Wright, ExxonMobil Production, USA
Co-Chair: E Tsuru, Nippon Steel & Sumitomo Metal;

Panelists

137. COASTAL XII: Coastal Management 1 (V. 3)
Thursday June 14 14:00 Crystal B, 2F

Chair: L.-K. Chien, National Taiwan Ocean Univ., Taiwan China
Co-Chair: Kazuhiko Honda, National Inst for Land & Infrastructure Management, Japan

Effects of Erosion Control Structures on Shoreline Evolution of the Tainan Gold Coast, Taiwan

Hsien-Kuo Chang, Feng-Chun Tsai, Wei-Wei Chen, Jin-Cheng Liou, National Chiao Tung Univ; Shao-Gu Kuo, CECI Engineering Consultants, Taiwan China

Experiment on Coastal Dike Resiliency Against Unexpected Wave Overtopping

Tetsuya Takeshita, Fuminori Kato, Naoki Fukuhara, National Inst for Land & Infrastructure Mgmt; Tatsuyuki Igarashi, Public Works Research Center; Tomoyoshi Koizumi, Nihon Mikuniya Corp; Takaaki Uda, Public Works Research Center, Japan

Risk Analysis of Regional Wave Overtopping

Wen-Son Chiang, Wei-Shiun Lu, Kai-Cheng Hu, National Cheng Kung Univ, Taiwan China

The Influence of Coastal Developments on the Coastal Changes at Hsinchu Coast, Taiwan

Jui Chan Hsu, Wei Po Huang, Jaw Guei Lin, National Taiwan Ocean Univ, Taiwan China

The Comprehensive Renovation and Restoration of Coastal Zone in China

Shuxiu Liang, Wenbin Jiang, Dalian Univ of Tech; Jiawen Sun, National Marine Environmental Monitoring Center, China

138. OCEAN TECH XV: CCP-WSI Blind Tests 2(V. 1)
Thursday June 14 14:00 Crystal C, 2F

Chair: Ling Qian, Manchester Metropolitan University, UK

Numerical Modelling of Focusing Wave Impact on a Fixed Offshore Structure

Zihua Xie, Cardiff Univ; Shiqiang Yan, Qingwei Ma, City Univ of London; Thorsten Stoesser, Cardiff Univ, UK

Numerical Simulation of Focusing Wave Interaction with FPSO-like Structure Using FNPT-NS Solver

Qian Li, S.Yan, Jinghua Wang, Q.W. Ma, City, Univ of London; Zihua Xie, Cardiff Univ, UK; V Sriram, IIT Madras, India

Numerical Study on Flow Evolution after Dual Stepped Cylinder at Low Reynolds Number

Junxian Wang, Q W Ma, City, Univ of London, UK; Decheng Wan, Shanghai Jiao Tong Univ, China; S Yan, City, Univ of London, UK

Examination on Errors of Two Simplified Models for Simulating Weakly Spreading Seas

Jinghua Wang, Q W Ma, S Yan, City, Univ of London, UK

139. OCEAN TECH XIII: Structural Health, Monitoring (V. 1)

Thursday June 14 14:00 Emerald A, 3F

Chair: Constantine Michailides, Cyprus Univ of Technology, Cyprus

Co-Chair: Athanasios Kolios, Cranfield University, UK

Structural Integrity Management of Offshore Structures via RB-FEA and Fast Full Load Mapping Based Digital Twins

David J Knezevic, Akselos, Inc; HeonYong Kang, Texas A&M Univ; Partha Shrama, Grzegorz Malinowski, DNV-GL, USA; Trong Thuc Nguyen, Akselos SA, Switzerland

Structural Health Monitoring (SHM) of Residual and Applied Stresses Using a Non-Destructive Ultrasonic Technique

Jacob Kleiman, Yuri Kudryavtsev, Structural Integrity Technologies, Canada; Hiroo Sugihara, Laser Measurement Corp, Japan

Review of Technologies for Monitoring the Performance of Marine Structures

Renos A. Votsis, Constantine Michailides, Elia A. Tantele, Toulou Onoufriou, Cyprus Univ of Technology, Cyprus

Data Processing Strategies for Monitoring an Offshore SPM System

Michele Rizzo, Paolo Castelli, Ostilio Spadaccini, Andrea Vignoli, Univ of Florence; Paolo Castelli, Edison SpA, Italy

An Efficient Energy Management Scheme for Wireless Sensor Network-based Structural Health Monitoring System Using On-Site Earthquake Early Warning System and Wake-on Radio

Jiun Ting Ding, Shih Lin Hung, Yung Chi Lu, National Chiao Tung Univ, Taiwan China

Study on Jacket Structural Design by Rule Scantling and Structural Strength Evaluation for a 20K-ton Jacket Platform

Doyoub Kim, Byoungjae Park, Hyun-seok Kim, Kangsu Lee, Korea Research Inst of Ships & Ocean Eng, Korea

Shaped Pipes in Jack-up Rigs

Jennifer Hrabowski, Stefan Herion, Oliver Fleischer, KoRoH GmbH, Germany

Advanced Reliability Assessment of Offshore Wind Turbine Monopiles by Combining Reliability Analysis Method and SHM/CM Technology [Proceedings only]

Athanasios Kolios, Lin Wang, Cranfield Univ, UK

140. GEOTECH IX: Ground Improvement, Soft Soil (V. 2)
Thursday June 14 14:00 Emerald B, 3F

Chair: Osoon Kwon, Korea Inst of Ocean Science and Technology, Korea

Co-Chair: Dong-Sheng Jeng, Griffith Univ, Australia

Assessment of the Rainfall-induced Landslide Distribution

Jing-Wen Chen, National Cheng Kung Univ; Yie-Ruey Chen, Shun-Chieh Hsieh, Chang Jung Christian Univ, Taiwan China

Strength Behavior and Hydraulic Resistance Properties of Dredged Marine Clay Stabilized with Basic Oxygen Furnace Steel Slag

Gyeong-o Kang, Chonnam National Univ, Korea; Takashi Tsuchida, Arlyn Aristo Cikmit, Hiroshima Univ; Hideki Honda, JEF Steel; Yi Xin Tang, Kanmon Kowan Construction, Japan; Young-sang Kim, Tan Manh, Do, Chonnam National Univ, Korea

Strength Development of Stabilized Dredged Marine Clay Using Basic Oxygen Furnace Steel Slag

Arlyn Aristo Cikmit, Takashi Tsuchida, Gyeong O Kang, Hiroshima Univ; Yi Xin Tang, Kanmon Kowan Construction; Hideki Honda, JFE Steel, Japan

The Effect of Sand Content on Strength Development of Cement Treated Soil with Different Initial Water Content

Erika Yamashita, Arlyn Aristo Cikmit, Gyeong O Kang, Tarhata Pantao Kalim, Takashi Tsuchida, Hiroshima Univ, Japan

Interpretation of Creep Properties of Geogrid under Simulated Seismic Event Condition by SIM(Stepped Isothermal Method) Test

Han-Yong Jeon, Inha Univ, Korea

An Experimental Study on Ground Improvement Effect after Soil Improvement at the Back of the L-Shaped Retaining Wall

Toru Osakabe, Shozo Wada, Ashikaga Inst of Tech; Hiroshi Ijyuin, Asahi Kasei Homes; Hideto Sato, Nihon Univ Junior College, Japan

Experimental Investigations of Solute Transport Behavior in Underground Dam

R Hamada, K Inoue, H Takada, T Tanaka, Kobe Univ, Japan

Continue at Session 150

141. ARCTIC IX: Arctic Monitoring (V. 1)
Thursday June 14 14:00 Emerald C, 3F

Chair: Nataliya A Marchenko, University Centre in Svalbard, Norway

Co-Chair: Aleksey Marchenko, University Centre in Svalbard,

Norway

Experimental Analysis of Uniaxial Compressive Strength of Columnar Saline Model Ice

Yukui Tian, Shaopeng Ji, Xuan Zhang, Yinghui Wang, Wei Wu, China Ship Scientific Research Center, China

An Approach for Estimation of Ice Thickness Region Using TensorFlow

Dong-Ham Kim, Jong-Ho Nam, Korea Maritime and Ocean Univ, Korea

Experimental Investigation on the Wellhead Stability during the Drilling Behavior in Permafrost Layer [Oral presentation]

Lilin Li, Jin Yang, China Univ of Petroleum – Beijing; Ke Ke, Lei Wang, Sinopec Research Inst of Petroleum Eng; Qishuai Yin, Li Yan, China Univ of Petroleum – Beijing, China

Variability Characteristics of Winter Sea Ice in the Barents Sea Based on a Statistical Approach

Chenglin Duan, Sheng Dong, Zhifeng Wang, Shanshan Tao, Ocean Univ of China, China

The Research and Application of Seawater Temperature Profile Measurement System in Winter in Liaodong Bay

Ning Xu, National Marine Environmental Monitoring Center; Yanlin Wang, Dalian Univ of Tech; Yuan Chen, Yongjun Yang, National Marine Environmental Monitoring Center; Xiyu Zhao, Ruiqiang Huang, Likun Zhao, Dalian Univ of Tech, China

THURSDAY 16:20

142. HYDRODYNAMICS XV: Wave Mechanics 2 (V. 3)

Thursday June 14 16:20 Royton D

Chair: Philippe Guyenne, Univ of Delaware, USA

Combined Long-Term and Short-Term Description of Extreme Ocean Wave Conditions by 3-Dimensional Environmental Contours

Erik Vanem, DNV GL; Arne Bang Huseby, Univ of Oslo, Norway

Velocity Distribution and Energy Dissipation in Experimental Breaking Waves

Yuanyuan Xu, Dalian Univ of Tech; Yonghong Rao, Navy Research Academy; Shuxiu Liang, Zhaochen Sun, Dalian Univ of Tech, China

Research on Equivalent Design Waves of Container Vessel Based on Stress Spectrum Analysis

Yachong Liu, Jiameng Wu, Wenbo Zhu, Pingshu Li, Marine Design & Research Inst of China, China

Extreme Value Analysis of Linear Wave-induced Load Based on Brent Method

Penghao Shan, Fuhua Wang, Jiameng Wu, Marine Design and Research Inst of China, China

Study on the Wave Dissipation Performance of Vertical Revetment in Inland Waterway

Lilei Mao, Yimei Chen, Southeast Univ, China

Oblique Wave Trapping by a System of Floating Elastic Plate and Submerged Porous Plate near a Rigid Wall

Harekrushna Behera, SRM Univ, India; Chiu-On Ng, Univ of Hong Kong, China; Siluvai Antony Selvan, SRM Univ, India

143. HYDRODYNAMICS XX: CFD Panel

Thursday June 14 16:20 Empress, 2F

Chair: Shiqiang Yan, City Univ London, UK

Co-Chair: Sa Yong Hong, KRISO, Korea

Panelist

144. RENEWABLE ENERGY XV: Tidal, Current Energy (V.

Thursday June 14¹⁾ 16:20 Regent, 2F

Chair: Beom Soo Hyun, Korea Maritime & Ocean Univ, Korea

Motion Response Study of Floating Tidal Station with Consideration of the Turbine Working Load

Y S Yu, Zhejiang Ocean Univ; S L Chen, Micropowers Co; Y H Xie, Zhejiang Ocean Univ, China

MPPT Control Scheme for a Tidal Current Power Generation System using DFIG - Effect of the Gear Ratio and the Rated Capacity of Generator by Stator D-axis Current

Kentaro Tsuji, Kazuhisa Naoi, Mitsuhiro Shiono, Nihon Univ, Japan

Control Strategy for a Tidal Compensation System for Wave Energy Converter Device

Mohd Nasir Ayob, Valeria Castellucci, Johan Abrahamsson, Olle Svensson, Rafael Waters, Uppsala Univ, Sweden

Characterisation of Wave-Tidal Current-Turbulence Interactions at Tidal Energy Sites in the Orkney Islands

Vengatesan Venugopal, Univ of Edinburgh; Arne Vögler, Univ of the Highlands and Islands; Brian Sellar, Univ of Edinburgh, UK

The Relationship between Efficiency and Power Take-off Damping in Pivoted-cylinder Vortex-induced Vibration Marine Current Energy Extraction

Samantha Clark, Andrew Johnstone, Brad Stappenbelt, Univ of Wollongong, Australia

Post-Evaluation and Analysis of Key Components Design of Tidal Current Energy Generation Devices of 500kW Ocean Energy Isolated Power System Demonstration Project

Zhichuan Li, Ting Yu, Yonghu Wu, Juan Yue, Li Zhang, Gang Xiao, CNOOC Research Inst; Liang Zhang, Harbin Engineering Univ; Shujie Wang, Ocean Univ of China, China

Undersea Noise and Scale Effect of Counter-rotating Propellers in Tidal Stream [Proceedings only]

Pin Liu, Hoyun Jung, Tengen Murakami, Toshiaki Kanemoto, Saga Univ; Morihito Inagaki, JSE Co, Japan

145. OMGH VII: GAS HYDRATES 3 - CO₂ Storage (V. 1)
Thursday June 14 16:20 Highness, 2F

Chair: Norio Tenma, National Inst. of AIST, Japan

Calculation for Solubility of Methane and Carbon Dioxide in Water in Presence of Hydrate

Zunzhao Li, Xiaolin Wang, Qian Xue, Mingrui Liu, SINOPEC Dalian Research Inst of Petroleum and Petrochemicals, China

Pore-scale Numerical Simulation of CO₂ Hydrate Formation

Tatsuya Fuji, Toru Sato, Hiroyuki Oyama, Univ of Tokyo, Japan

Experimental Verification of CH₄ – CO₂ Replacement in Various Gas Hydrate Structures for CH₄ Production and CO₂ Sequestration

Wonjung Choi, Yohan Lee, Yongwon Seo, Ulsan National Inst of Science & Tech, Korea

Research of Improving CO₂ Hydrate Conversion from Microscopic Ice Particle in Fluidized Bed

Erii Kinoshita, Shinichiro Hirabayashi, Univ of Tokyo; Yoshitaka Yamamoto, Naoko Suzuki, Michika Otake, National Inst of AIST, Japan

Simultaneous Olivine Alteration and Carbonation in CO₂-rich Geological Condition

Jiajie Wang, Kengo Nakamura, Noriaki Watanabe, Takeshi Komai, Tohoku Univ, Japan

Experimental Study of the Effect of Intensifier Gases on the Kinetics of the Methane Replacement Process with Carbon Dioxide in Gas Hydrate

Pavel I Osmolovskiy, Yuri M Em, Ivan V Zemchenko, Anton A Pichugov, Alexander N Gulkov, Far Eastern Federal Univ, Russia

146. UNDERWATER TECH VII: Panel (V. 2)
Thursday June 14 16:20 Crystal A, 2F

Chair: Satoru Yamaguchi, Kyushu Univ, Japan
Co-Chair: Shojiro Ishibashi, JAMSTEC, Japan

Panelist

147. COASTAL XIII: Coastal Management 2 (V. 3)
Thursday June 14 16:20 Crystal B, 2F

Chair: Hiroyasu Kawai, National Inst. of Maritime, Port & Aviation Tech, Japan

Tsunami Interaction with Bay Beaches and Associated Headlands – A Numerical Case Study Based on 2004 and 2011 Tsunami Disasters

Akalanka Silva, Susumu Araki, Osaka Univ, Japan

Coastal Engineering Design for a Stable Beach Resort Development along Davao Gulf

Laurenz Luigi B Cruz, Eric C Cruz, Univ of the Philippines; Jose Carlo Eric L. Santos. AMH Philippines, Philippines

Sensitivity Analysis of Diffusion Coefficient in Water Environmental Capacity Calculation

Shasha Lu, Xiaoming Xia, Second Inst of Oceanography, China

Applicability of Environmental DNA Analysis and Numerical Simulation to Evaluate Seagrass Inhabitants in a Bay

Maiko Akatsuka, Yuriko Takayama, Kazunori Ito, Taisei Corp, Japan

148. OCEAN TECH XVI: CCP-WSI Blind Tests 3 (V. 1)

Thursday June 14 16:20 Crystal C, 2F

Chair: Qingwei Ma, City University of London, UK

Numerical Simulation of Phase-Focused Wave Group Interaction with an FPSO-Shaped Body

Hao Chen, Ling Qian, Zhihua Ma, Derek Causon, Clive Mingham, Manchester Metropolitan Univ, UK

Numerical Modelling of Wave Interaction with a FPSO Using a Combination of OpenFOAM and Lagrangian Models

Pablo Higuera, National Univ of Singapore, Singapore; Eugeny Buldakov, Dimitris Stagonas, University College London, UK

Numerical Modelling of Focused Wave Impact with a Fixed FPSO-like Structure Using Particle-in-Cell Solver

Qiang Chen, Jun Zang, Univ of Bath, UK

CPP-WSI Blind Test Series1: Assessment of the Required Model Fidelity for Numerical Simulation of Wave Interactions with a Fixed FPSO-like Structure [Oral Presentation]

Deborah Greaves, Univ of Plymouth, UK, et al

Numerical Simulation of Focused Wave Interactions with a Fixed FPSO Using OpenFOAM 4.1

Scott Andrew Brown, Pierre-Henri Musiedlak, Edward Jack Ransley, Deborah Greaves, Univ of Plymouth, UK

149. ADVANCED SHIP TECH VIII: Ship Production (V. 4)

Thursday June 14 16:20 Emerald A, 3F

Chair: [Nobukazu Wakabayashi](#), Kobe Univ; Japan

Tablet Control System for Offshore Support and Research Vessel — Development, Implementation, and Operational Testing—

Nobukazu Wakabayashi, Takayuki Watanabe, Kobe Univ; Misako Urakami, Tokuyama College; Yoshiji Yano, Kobe Univ, Japan

Experimental Investigation of Shafting Bearing Load Measurement under Dynamic Running State Condition

Zhongchi Liu, Ji Wang, Dalian Univ of Tech; Jianyi Bi, Bohai Shipbuilding Heavy Industries, China; Wie Min Gho, Nanyang Technological Univ, Singapore; Xiao Liu, Dalian Univ of Tech, China

Double-stage Mounting System Applied in Superyacht

Tatiana Pais, Dario Boote, Univ of Genoa, Italy

Experimental Study on the Vibration Characteristics of Ship Propulsion Forced by the Hull Deformation

Zhe Tian, Qinghao Lai, Ocean Univ of China; Wei Li, Powerchina Huadong Engineering; Zhixiong Li, Wentao He, Guijie Liu, Ocean Univ of China, China

Finite Element Frequency Analysis of Bridge Pier under the Soil-Pile Interaction

H.-T. Hu, P.-J. Chen, K.-M. Wu, K.-Y. Liu, National Cheng Kung Univ, Taiwan China

Flooding Analysis Based on PBD (Position Based Dynamics) for Ships and Offshore Structures

Ki-Su Kim, Myung-Il Roh, Seung-Min Lee, Seoul National Univ, Korea

150. GEOTECH X: Panel (V. 2)

Thursday June 14 16:20 Emerald B, 3F

Chair: Chun Fai Leung, National Univ of Singapore, Singapore

Co-chair: Yun Wook Choo, Kongju National Univ, Korea

Panelist

151. ARCTIC X: Panel(V. 1)

Thursday June 14 16:20 Emerald C, 3F

Chair: Mohamed Sayed, National Research Council, Canada

Co-Chair: Vladimir Pavlenko, Arkhangelst Scientific Center, RAS, Russia

Panelist