

TECHNICAL PROGRAM

ISOPE-2020 Shanghai, China
Online/Virtual Conference

**The Thirtieth (2020) International
Ocean and Polar Engineering Conference**
Shanghai, China, October 11–16, 2020



The number at the end of the session title indicates the tentative number of the proceedings volume. Only the changes in titles or authors the ISOPE-2020 Technical Program Committee (TPC) received in writing before June 15, 2020 are reflected in this program. Final corrections will be updated in the Conference Proceedings of peer-reviewed papers and the Final Program. Conference proceedings (ISBN 978-1-880653-84-5; ISSN 1098-85-2) will be available as a set of 4 volumes (4,023 pp.) from ISOPE during and after the Conference. Proceedings papers are **indexed** by EI (Compendex), Google Scholars, Scopus, Web of Science and others.

SUNDAY, October 11

Conference Reception: not in 2020

MONDAY

Session1 Opening General Session only
Live Zoom meeting
(Shanghai/Beijing time zone)
Zoom meeting information sent to the registered participants.

Session 2 HYDRODYNAMICS I through Session 136

Online video presentations

12 hours before Monday 19:00, the presenters' video files are available at individual sessions.
“Discussions”: Individual participants can post any time during or following the individual presentation.

17:00

Grand Ballroom 1

MONDAY 19:00

**1. Opening General Session:
OCEAN TECHNOLOGY—2020 (V. 1)**

Monday October 12 19:00 Zoom meeting

Chair: Hua Liu, Shanghai Jiao Tong University, China
Co-Chair: Eva Loukogeorgaki, Aristotle University of Thessaloniki;
Greece

Conference Opening Address

Sa Young Hong, ISOPE President, KRISO, Korea

Conference Welcome Address

Zongqin Lin, President of Shanghai Jiao Tong University, China

PLENARY 1 19:00

2020-TPC-1133 Moved to Monday Opening **Zoom meeting**

The Progress in the Verification of Key Technologies for Floating Structures Near Islands and Reefs

Yousheng Wu, Jun Ding, Xuekang Gu, Chao Tian, Yonglin Ye, Xiaoming Cheng, Xinyun Ni, Ze Sun, Minggang Tang, Yuchao Chen, Xiaofeng Wu, Xueliang Wang, Chun Xu, Wenhui Zheng, Zhen Lu, Zilin Li, Cheng Wang, China Ship Scientific Research Center; Chunyan Ji, Yong Cheng, Jie Cui, Jiangsu Univ of Science and Technology; Xiongbo Zheng, Harbin Engineering Univ; Li Ma, Mingxian Sun, Luoyang Ship Material Research Inst; Guoping Zhou, Shanghai Merchant Ship Design and Research Inst, China

KEYNOTE 1 Following Plenary 1

Monday October 12 Following Plenary 1 Zoom meeting

Chair:

2020-TPC-1024

Recent Progress in Research on Tsunami Hydrodynamics for South China Sea Region [Oral presentation]

Hua Liu, Shanghai Jiao Tong University, China

2. HYDRODYNAMICS I: Issue 1 (V. 3)

Monday October 12 ~~10:30~~ Room 1

Chair:

2020-TPC-0907

New Analysis on the Green Function in Water of Finite Depth

Xiaobo Chen, Charaf Ouled Housseine, Bureau Veritas, France;
Chunmei Xie, Tsinghua University, China

2020-DCW-0042

Exploring Mechanisms of Air-Injection Drag Reduction through Numerical-Experimental Data Correlation

Zhi Zong, Xiaojie Zhao, Li Zhou, Dalian University of Technology, China

2020-TPC-0368

Numerical Study on Hydrodynamic Coefficient of Chord with Complex Rack Structure

Haihua Lin, Chengmeng Sun, Shandong Jiaotong University, China

3. SLOSHING I: Wave Impact (V. 3)

Monday **October 12** ~~**10:30**~~ ~~**Room 2**~~

Chair:

2020-DCW-0020

Response Analysis of Seine Boat due to Sloshing of Fuel-Fresh Water

Chen Zhao, Zhejiang International Maritime College; Zheng-Shou Chen, Zhejiang Ocean University; Xiao-Sheng Li, Yan-Chao Liu, PaxOcean Engineering Zhoushan Co. Ltd.; Yao-Zhu Ma, Ming-Hai Dong, Bo Zhang, Zhejiang International Maritime College, China

2020-DCW-0066

Freak Wave-Induced Ship Motion with Sloshing Tanks based on a HOS-CFD Coupling Method

Yuan Zhuang, Decheng Wan, Shanghai Jiao Tong University; Zhonghua Li, Nanjing Hydraulic Research Institute, China

2020-TPC-0725

Study on Ship Motion in Waves with the Effect of Tank Sloshing

Guohua Dong, Chaobang Yao, Dakui Feng, Huazhong University of Science and Technology, China

2020-TPC-0923

Experimental Investigation of Wave Interaction with a Thin Floating Sheet

Sebastian Schreier, Gunnar Jacobi, Delft University of Technology, Netherlands

2020-TPC-1166

Assessment of Morison Equation for Non-Impacting Wave Loads on a Vertical Cylinder

Olivier Kimmoun, Aix-Marseille University; Laurent Brosset, GTT, France

4. RENEWABLE ENERGY I: Wave Energy 1 (V. 1)

Monday **October 12** ~~**10:30**~~ ~~**Room 3**~~

Chair:

2020-TPC-0711

Performance of an Oblate Spheroidal Heaving Wave Energy Converter

Nikos Tzellos, Eva Loukogeorgaki, Aristotle University of Thessaloniki; Eirini Anastasiou, Ioannis K. Chatjigeorgiou, National Technical University of Athens, Greece

2020-TPC-0649

Development of Simulator for the Oscillating Water Column Type Wave Power Generator

Kentaro Tsuji, Kazunori Yoshida, Toshio Shima, Etsuhiro Tsukidate, Mitsuhiro Shiono, Nihon University, Japan

2020-TPC-0928

Simulation of the Wave Evolution and Power Capture of an Oscillating Wave Surge Converter

Daniela Benites Munoz, Luofeng Huang, Enrico Anderlini, University College London, UK; Jose Marín-López, Escuela Superior Politécnica del Litoral, Ecuador; Giles Thomas, University College London, UK

2020-TPC-1092

A GIS-MCDM Combination for the Site Assessment of Wave Energy Power Station in Qingdao, Eastern China

Meng Shao, Zhi-xin Han, Jin-wei Sun, Shu-lei Zhang, Yuan-xu Zhao, Zhu-xiao Shao, Ocean University of China, China

5. DIGITALIZATION AND INTELLIGENCE (V. 1)

Monday **October 12** **10:30** **Room 4**

Chair:

2020-DCW-0044

Development of a Novel Wave-force Prediction Model based on Deep Machine Learning Algorithms

Ming Zhang, Zhi-Ming Yuan, Sai-Shuai Dai, Atilla Incecik, University of Strathclyde, UK

2020-TPC-1110

Flexible Riser Life Extension Associating Machine Learning and Innovative Monitoring

Pedro Viana, Asad Khalid, 2H Offshore, UK; Shankar Sundararaman, 2H Offshore, USA

2020-DCW-0065

Extreme Motion Predictions of Semi-submersible Platform based on Deep Learning Method and Prototype Monitoring Data

Ji Yao, Wenhua Wu, Chongchong Guo, Dalian University of Technology, China

2020-TPC-0120

Development and Employment of Dynamic Simulation Integrator for OLGA and HYSYS

Hyunho Kim, Nayoung Lee, Yutaek Seo, Seoul National Univ., Korea

2020-TPC-0286

Digitalization and Intelligence to Improve Quality and Efficiency

Fei Wu, Zhigang Li, Jinghua Chen, CNOOC Research Institute, China

6. ENVIRONMENT I: Ocean Plastics/Debris Pollution (V. 1)
Monday October 12 ~~10:30~~ Room 5

Chair:

2020-DCW-0109

Prediction of Ocean Debris Drift Trajectory and Recovery Range Using a Coupled Numerical Model

Junkai Sun, China University of Geosciences; Zhenfeng Yao, Department of Natural Resources of Huizhou Bureau; Enjin Zhao, China University of Geosciences, China

2020-DCW-0001

Plastic Debris in Waves: An Experimental Study

Yi Huang, Zhi-Ming Yuan, Sai-Shuai Dai, Lai-bing Jia, University of Strathclyde, UK

2020-TPC-0300

Numerical Simulation of Drifted Marine Debris in Suo-Nada Caused by the North Kyushu Heavy Rainfall on July 2012

Andhita Triwahyuni, Koji Asai, Yamaguchi University, Japan; Gede Hendrawan, Udayana University, Indonesia; Hajime Shirozu, Yamaguchi University, Japan

2020-TPC-0729

Tidal Flats Elevation Mapping by a Novel Remote Sensing Method WLRSM

Xuhui Zhang, Huan Li, Weiqi Dai, Xiaoyan Zhang, Hohai University, China

7. HYDRODYNAMICS YY1: Comparative Study 1 (V. 3)

Monday October 12 ~~10:30~~ Room 6

Chair:

2020-NCS-01

Laboratory Study on Steep Wave Interaction with Fixed and Moving Cylinder

V Sriram, Shagun Agarwal, IITMadras, India; T Schlurmann, Leibniz University of Hannover, Germany

2020-NCS-02

Comparative Study on Interaction of Steep Focused Waves with a Fixed Cylinder by HOBEM

Yi Zhang, Bin Teng, De-zhi Ning, Dalian University of Technology, China

2020-NCS-06

Comparative Study on Focusing Wave Interaction with Cylinder using QALE-FEM and qaleFOAM

Shiqiang Yan, Qingwei Ma, Windiman Asnim, City, University of London, UK; Zana Sulaiman, GustoMSC B. V., Netherlands; Hanbing Sun, Harbin Engineering University, China

2020-NCS-14

Simulation on Interaction of Steep Focused Waves with a Fixed Vertical Cylinder Using a Non-Hydrostatic Wave Model

Changfu Yuan, Yuxiang Ma, Congfang Ai, Guohai Dong, Dalian University of Technology, China

2020-NCS-18

Numerical Investigation of Steep Focused Wave Interaction with a Vertical Cylinder

Zhihua Xie, Santiago Martelo, Cardiff University; Aristos Christou, Thorsten Stoesser, University College London, UK; Lin Lu, Dalian University of Technology; Pengzhi Lin, Sichuan University, China

8. OCEAN TECHNOLOGY I: Float-over Installation 1 (V. 1)

Monday October 12 ~~10:30~~ Room 7

Chair:

2020-HGS-01

Model Test of Active Jacking System for Float-over Operation at Swell Area

Chungun Cho, DNV GL, Singapore; Jack Son, Hyeong-Woo Nam, Gloria Co; Hong-Gun Sung, Kangsu Lee, KRISO, Korea

2020-HGS-02

Design Sensitivity of Deck Support Frame Structure for Float-over Installation

ChangYong Song, Woo-Chang Park, Dong-Jun Lee, Mokpo National University; Kangsu Lee, Hong-Gun Sung, KRISO, Korea

2020-HGS-03

A Study on Data Collection during Installation of Offshore Structures Using Dual Crane Barges

Jun-Hyeok Bae, Ju-Hwan Cha, Sol Ha, Seung A Choi, Mokpo National University; Kang-Su Lee, KRISO, Korea

2020-TPC-0318

Experimental Investigation on Floatover Installation Using Rapid Load Transfer Technique for One Mega Topside in Beam Waves

Huailiang Li, Offshore Oil Engineering Co; Hanbing Luo, Xiaodong Bai, Peng Xie, Tianjin University; Licheng Qin, Shaohua Zhu, Offshore Oil Engineering Co., China

9. ADVANCED SHIP TECH I: Added Resistance (V. 4)

Monday October 12 ~~10:30~~ Room 8

Chair:

2020-TPC-0521

Description of Ship Motion and Comparison of a Real-time Unified Hydrodynamic Model with Free Running Tests in Calm Water and Regular Waves

Rami Zghyer, Karl Henning Halse, Norwegian University of Science and Technology, Norway

2020-TPC-0796

A Numerical Study of Wave Drift Force on an Oblique Moving Ship in Regular Waves

Tianlong Mei, Zaojian Zou, Shanghai Jiao Tong University, China

2020-TPC-0150

A CFD-Based Comparison Study of Conventional Rudder and Rudder with Bulb-Fins System of KVLCC2 in Waves

Win Naing Htay, Tho Quang Truong, Yasuyuki Toda, Osaka University, Japan

2020-TPC-1062

Comparative Study on Added Resistance of a Bulk Carrier in Regular Head and Oblique Waves

Jae-Hoon Lee, Beom-Soo Kim, Byung-Soo Kim, Jaehak Lee, Yonghwan Kim, Seoul National University; Kwang-Jun Paik, Inha University; Taeyoung Kim, Samsung Heavy Industries; Jin-Ho Yang, Hyundai Heavy Industries; Kang-Hyun Song, Korean Register of Shipping, Korea; Peter Kim, ABS, USA; Seung-Gyu Jeong, Lloyd's Register Asia, Korea; Frederik Gerhardt, SSPA Sweden AB, Sweden

2020-TPC-0805

A Simplified Shipwave Induced Added Resistance Calculation Method and Full-scale Measurements Validation in Head Sea

Xiao Lang, Wengang Mao, Chalmers University of Technology, Sweden

10. UNDERWATER I: Sensing, Path Planning Control 1(V. 2)
Monday October 12 ~~10:30~~ Room 9

Chair:

2020-TPC-0110

Deconvolved Matched Field Processing Localization with a Vertical Line Array

Jianshe Liu, Jingwei Yin, Guangping Zhu, Harbin Engineering University, China

2020-TPC-0138

Design Considerations for a Novel Electrothermal Micromirror-Based LiDAR Sensor

Xiaochun Wu, Rui Hu, Qiao Wu, Changshi Xiao, Yuanqiao Wen, Liwen Huang, Wuhan University of Technology, China

2020-TPC-0433

Large Scale Under-Actuated AUV Path Planning Based on Evolutionary Algorithm

Zhen Su, Ben Li, Linjian Jiao, Hongming Wu, Guohua Xu, Huazhong University of Science & Technology, China

2020-TPC-0588

Three-dimensional Target Tracking Control for a Biomimetic Underwater Vehicle

Ge Bai, Rui Wang, Yu Wang, Shuo Wang, Inst. of Automation, CAS, China

Special Presentation

**30 Years of International Society of Offshore and Polar Engineers (ISOPE), 1989
ISOPE Conference, Edinburgh, 1991 –
PACOMS Symposium, Seoul, 1990 -
EUROMS Symposium, Trondheim, 1990 -**

Founders and Progress

Monday **October 12** **12:00** **Room 1**

Chair:

11. HYDRODYNAMICS II: Issue 2 (V. 3)

Monday **October 12** **14:00** **Room 1**

Chair:

2020-DCW-0086

CFD Simulation of Two-Phase Flows Past a Surface-Piercing Circular Cylinder

Weiwen Zhao, Decheng Wan, Shanghai Jiao Tong University; Shengxiao Zhao, PowerChina Huadong Engineering Corp, China

2020-TPC-0731

Analysis and Optimization on the Hydrodynamic Performance of Hollow Otter Board in Antarctic Krill Trawl

Liyi Huang, Yuyan Li, Mingxiu Jia, Gang Wang, Ocean University of China; Chunlei Feng, East China Sea Fisheries Research Inst; Fenfang Zhao, Ocean University of China; Qingchang Xu, Yellow Sea Fisheries Research Inst; Hui Cheng, Ocean University of China, China

2020-TPC-0726

Nonlinear Wave Surface Elevation around Array of Truncated Cylinders

Xiudi Ren, Longbin Tao, University of Stathclyde, United Kingdom

2020-DCW-0090

The Pulsation Features of a Bubble Near a Free Surface and a Solid Wall Using Eulerian Finite Element Method

Liu-Yi Xu, Shi-Ping Wang, A-Man Zhang, Yun-Long Liu, Harbin Engineering University, China

12. SLOSHING II: Sloshing Experiment(V. 3)

Monday **October 12** **14:00** **Room 2**

Chair:

2020-SQY-05

Experimental Study on Heating Process for High-viscosity Oil in Sloshing Tank

Junjie Sun, Jinshu Lu, Yuan Yang, Zhejiang Ocean University, China

2020-TPC-0191

Numerical Investigation of Three-dimensional Shallow-water Sloshing

Xinyi Yuan, Zuyuan Liu, Yan Su, Wuhan University of Technology, China

2020-TPC-1145

Study of Global Wave Repeatability in the New Multiphase Wave Lab (MWL)

Vladimir Novaković, MARIN; Juan José Costas, Sebastian Schreier, TU Delft, The Netherlands; Olivier Kimmoun, École Centrale de Marseille, France; Ashwin A Fernandes, Rodrigo Ezeta, Miloš Birvalski, Hannes Bogaert, MARIN, The Netherlands

2020-TPC-0952

A Numerical Study on Sloshing in Horizontal Axisymmetric LNG Tanks

Cezar Augusto Bellezi, Liang-Yee Cheng, University of São Paulo, Brazil

13. RENEWABLE ENERGY II: Wave Energy 2 (V. 1)

Monday **October 12** **14:00** **Room 3**

Chair:

2020-TPC-0287

The Effect of Nonlinear Pitch-surge Coupling on the Performance of Multi-DOF Submerged WECs

Ngan Tran, Natalia Y. Sergiienko, Ben S. Cazzolato, Mergen H. Ghayesh, Maziar Arjomandi, University of Adelaide, Australia

2020-DCW-0030

Energy Conversion Performance of a Triplet BBDB Device Model under Regular Wave Conditions

Yunqiu Zhang, Jimei University; Henry Wu, South China Agricultural University; Jinpeng Hu, Jimei University; Bijun Wu, Guangzhou Institute of Energy Conversion; Xiuhua Chen, Guangzhou Maritime Inst; Yuanming Chen, South China University of Technology, China

2020-TPC-0641

Hydrodynamic Characteristics and Environment Load Analysis of a New Marine Energy Generating Turbine

Yu Cao, Andong Liu, Shanghai Ocean University; Zhao Wang, Sanden Autotive Air-conditioning; Yong Bai, Zhejiang University; Shiming Wang, Shanghai Ocean University, China

2020-TPC-0662

Experimental Study on the Hydrodynamic Performance of a Wave Energy Converter Using Floating Panels

Wei Peng, Yingnan Zhang, Xueer Yang, Fajing Lu, Chang Liu, Junwei Ma, Hohai University, China

2020-TPC-0310

Performance Analysis of Series-Type Expansion Zeotropic Organic Rankine Cycle for Ocean Thermal Energy Conversion

Xiaomeng Zhang, Han Yuan, Ning Mei, Yan Li, Zhixiang Zhang, Ocean University of China, China

14. VORTEX-INDUCED VIBRATIONS I (V. 3)

Monday October 12 ~~14:00~~ Room 4

Chair: ,

2020-DCW-0060

Numerical Study of Vortex-induced Vibration of a Flexible Riser under Offshore Platform Horizontal Motion

Yuqi Zhang, Decheng Wan, Shanghai Jiao Tong University, China; Changhong Hu, Kyushu University, Japan

2020-TPC-0109

Experimental Study on the Vortex-induced Vibration of Catenary Flexible Riser under Sheared Flows

Hongjun Zhu, Jie Hu, Honglei Zhao, Yue Gao, Southwest Petroleum University, China

2020-TPC-0576

Numerical Investigation of Vortex-induced Motion of a Semi-Submersible Floating Offshore Wind Turbine

Yuanchuan Liu, Ocean University of China; Tao Wang, PowerChina; Fushun Liu, Ocean University of China, China

2020-TPC-0111

Experimental Study on Vortex-Induced Motions of Floating Circular Single Cylinders with Low Aspect Ratio and Different Heave Plate Geometries

Rodolfo Trentin Gonçalves, The University of Tokyo, Japan; Raíza Oliveira Pereira da Silva, University of São Paulo; Matheus Antonio Marques, Federal University of Pernambuco, Brazil; Shinichiro Hirabayashi, The University of Tokyo, Japan; Gustavo Roque da Silva Assi, Alexandre Nicolaos Simos, University of São Paulo, Brazil; Hideyuki Suzuki, The University of Tokyo, Japan

2020-TPC-0788

The Relationship between Secondary Load Cycle and Ringing Response of a Vertical Cylinder with CFD Method

Yuqi Wang, Fuyou Xu, Dalian University of Technology, China

15. ENVIRONMENT II: Water Quality, Oil Spill (V. 1)
Monday October 12 ~~14:00~~ ~~Room 5~~

Chair:

2020-TPC-0737

Numerical Analysis of Arsenic Concentration in the Marine Sediments of Bagnoli Bay

Mohammad Daliri, University of Napoli Federico II; Renato Somma, Istituto Nazionale di Geofisica e Vulcanologia; Mariano Buccino, University of Napoli Federico II; Claudia Troise, Istituto Nazionale di Geofisica e Vulcanologia; Flavia Molisso, Istituto di Scienze Marine CNR; Giuseppe De Natale, Istituto Nazionale di Geofisica e Vulcanologia, Italy

2020-TPC-0262

Responses of Salinity Front to Runoff in the South Passage of the Yangtze River Estuary

Yunlong Wu, Cuiping Kuang, Kuo Chen, Zhichao Dong, Zilong Xia, Tongji University, China

2020-TPC-0845

The Oil Spill Volume Estimation and Environmental Impacts Assessment in China

Shasha Song, Wei An, Baozhan Liu, CNOOC Energy Technology & Services Limited; Weihai Yin, SOA; Jianwei Li, CNOOC Energy Technology & Services Limited, China

2020-DCW-0079

Numerical Simulation Study on Oil Leaking of Subsea Oil Pipelines

Geng Geng, Lei Chen, Hong Jing, Qin Feng, SINOPEC Shanghai Offshore Oil & Gas Company, China

2020-TPC-0615

Numerical Study on Flare Black Soot of Offshore Oilfield

Renwei Liu, CNOOC Research Institute; Yufei Wan, CNOOC Ltd.; Xiaohong Zhou, Xiangdong Liu, Qian Zhang, Xin Guo, CNOOC Research Institute, China

16. HYDRODYNAMICS YY2: Comparative Study 2 (V. 3)
Monday October 12 ~~14:00~~ ~~Room 6~~

Chair:

2020-NCS-05

Numerical Simulation of Focus Wave Interaction with Fixed Cylinder

Kang-Ping Liao, Qing-Wei Ma, Wen-Yang Duan, Harbin Engineering University; Rong-Gui Han, Yantai CIMC Raffles Offshore Limited, China

2020-NCS-12

Numerical Study of Focused Waves on Fixed Vertical Circular Cylinders

Zhongbing Zhou, Dalian University of Technology; Jianmin Qin, Dalian University; Yucheng Li, Zhiwei Song, Dalian University of Technology, China; Zhihua Xie, Cardiff University, UK; Xiaofan Lou, Lin Lu, Dalian University of Technology, China

2020-DCW-0005

Numerical Study of Interaction of Focusing Waves with Fixed Cylinder

Bo Han, Weiwen Zhao, Decheng Wan, Shanghai Jiao Tong University, China

2020-NCS-17

Simulation of Steep Focused Waves Interaction with a Fixed Cylinder Using Fully Nonlinear Potential Flow and Navier-Stokes Solvers

Zaibin Liu, Ling Qian, Wei Bai, Zhihua Ma, Manchester Metropolitan University, United Kingdom

17. OCEAN TECHNOLOGY II: Float-over Installation 2 (V.

1)

Monday October 12 ~~14:00~~ ~~Room 7~~

Chair:

2020-TPC-0657

Attitude Control of Payload Subject to Wave Interaction for Offshore Lifting/Lowering with OpenFOAM

Mingwei Yan, Xin Ma, Yibin Li, Shandong University, China; Wei Bai, Manchester Metropolitan University, UK

2020-TPC-0205

Load Spectrum Models for Offshore Crane Fatigue Analysis

JangRyong Shin, Daewoo Shipbuilding & Marine Eng., Korea

2020-TPC-0519

A Continuous Simulation Method of Load Transfer Process during Twin-Barge Float-over Installation

Wei Tao, Shuqing Wang, Xiancang Song, Yuanzhi Guo, Yixiang Zhao, Ocean University of China, China

2020-TPC-1132

Dynamic Analysis of Lift-Off Operation of a Subsea Spool from a Barge Using Different Fender Models

Lin Li, Ismail Gökay Karatas, University of Stavanger; Xinying Zhu, Ocean Installer AS; Muk Chen Ong, University of Stavanger, Norway

2020-DCW-0099

Aerodynamic Load Analysis of a Floating Turbine System Based on CFD Method under Random Wind

Wang Lizhi, Ju Fan, Shanghai Jiao Tong University, China

18. ADVANCED SHIP TECH II: Cavitation (V. 4)

Monday October 12 ~~14:00~~ Room 8

Chair:

2020-DCW-0050

High Resolution Numerical Simulation on Cavitation Collapse

Xiaobin Yang, Cheng Liu, Decheng Wan, Shanghai Jiao Tong University, China

2020-TPC-0347

Flow-induced Noise Characteristic Analysis of Submarine Flow Cavity Based on Large Eddy Simulation

Hao Liu, Hangzhou Applied Acoustics Research Institute, China

2020-TPC-0501

Numerical Study on the Effect of Rudder Cavitation on Hull Pulsating Pressure

Anbin Yu, Jinming Ye, Yinglong Zhao, Naval University of Engineering, China

2020-TPC-0899

Properties of the Vapor-Water Mixture inside a Cavitation Region over a Hydrofoil

Hao Zhang, Benlong Wang, Shanghai Jiao Tong University, China

19. UNDERWATER II: Sensing, Path Planning/Control 2 (V. 2)

Monday October 12 ~~14:00~~ Room 9

Chair:

2020-TPC-0384

Fuzzy Automatic Disturbance Rejection Control Technology of Underwater Auto Trolley

Jijia Liu, Gang Liu, Lulu Feng, Ji Kong, Guohua Xu, Huazhong University of Science & Technology, China

2020-TPC-0893

Longitudinal Motion Control of ARVs via Sliding Mode Controller Driven by Nonlinear Disturbance Observer

Bolun Huang, Qi Yang, Shanghai Jiao Tong University, China

2020-TPC-0440

Near Bottom Altitude Keeping and Collision Avoidance Control of an Under-Actuated AUV Based on Behavior Coordination

Linjian Jiao, Ben Li, Zhen Su, Zhongxiang Chen, Guohua Xu, Huazhong University of Science & Technology, China

2020-TPC-0493

Analysis of the Vibration Transmission and Impediment Characteristics of Simplified Double Bottom

Qi Chen, Hangzhou Applied Acoustics Research Institute, China

20. HYDRODYNAMICS III: Issue 3 (V. 3)

Monday **October 12** **16:20** **Room 1**

Chair:

2020-TPC-0728

Numerical Simulation of the Interaction Motion Features for a Submarine with Internal Solitary Wave

Huang Miaomiao, Zhang Nan, Zhu Aijun, China Ship Scientific Research Center, China

2020-TPC-0800

Large Eddy simulation of Micro Water-Jet in a Coaxial Swirling Gas

Meirong Wei, Yan Liu, Tao Zhang, Huazhong University of Science and Technology; Hui Li, Wuhan University, China

2020-DCW-0045

Effect of Wavelength on the Hydrodynamic Characteristics of a Finite-Span Wing with Leading-edge Tubercles

Peng Yan, Churui Wan, Ning Li, Science and Technology on Water Jet Propulsion Laboratory, China

2020-DCW-0004

Numerical Simulation of Bubble Breakup and Coalescence in a Turbulent Boundary Layer Flow

Xiaosong Zhang, Jianhua Wang, Decheng Wan, Shanghai Jiao Tong University, China

2020-TPC-0472

Application of Multiple Intake Heads in Engineering Field

Chen-Shan Kung, Pin-Tzu Su, ATE Energy International Co.; Chin-Pin Ko, SINOTECH Engineering Consultants; Pei-Yu Lee, ATE Energy International Co, Taiwan China

21. SLOSHING III: LNG Sloshing Modeling (V. 3)

Monday **October 12** **16:20** **Room 2**

Chair:

2020-TPC-1048

Numerical Investigation on Sloshing Pressure for Moss-Type LNG Tank based on Different SPH Models

Chong Ma, Masayoshi Oka, National Maritime Research Institute, Japan

2020-TPC-1060

Application of Neural Network Scheme for Prediction of Extreme Sloshing Loads in LNG Cargo

Yangjun Ahn, Jeoungkyu Lee, Jieung Kim, Yonghwan Kim, Seoul National University, Korea

2020-TPC-1021

Simulations of Violent Sloshing based on 3D δ -SPH Model

Yi You, Peng-fei Sun, Xing Zheng, Harbin Engineering University, China; Abbas Khayyer, Kyoto University, Japan; Qingwei Ma, City University, UK

22. RENEWABLE ENERGY III: Tidal & Current Energy 1 (V. 1)

Monday October 12 ~~16:20~~ ~~Room 3~~

Chair:

2020-TPC-0567

Study on Power Input Model for Active Blade Pitch Control of a Vertical-Axis Tidal Current Turbine

Zhijia Suo, Ke Sun, Harbin Engineering University; Jinhui Zhao, Norinco Group, China

2020-TPC-0739

Fault Tolerant Control Design for a Tidal Current Turbine Generation System

Xuhua Yan, Rosemary Norman, Mohammed Elgendy, Newcastle University, UK

2020-TPC-0360

Optimization Design of Curved Blade Shape based on Improved Genetic Algorithm

Ling Ge, Shanghai Ocean University, China; Yamamoto Ikuo, Nagasaki University, Japan; Shiming Wang, Shanghai Ocean University, China; Murray John Lawn, Toshiki Yamada, Yuka Kawabuchi, Nagasaki University, Japan; Fengyun Wang, Shanghai Ocean University, China

23. VORTEX-INDUCED VIBRATIONS II (V. 3)

Monday October 12 ~~16:20~~ ~~Room 4~~

Chair:

2020-TPC-0618

An Experimental Investigation on Concomitant Vortex-induced Vibration and Cross Flow Top-motion Excitation with Flexible Risers

Chuanzhen Ma, Zhuang Kang, Cheng Zhang, Harbin Engineering University, China

2020-TPC-0972

VIV Hysteresis Effect on the Allowable Span Length of Submarine Pipelines

Jun Liu, Fu-ping Gao, Inst. of Mechanics, CAS, China

2020-TPC-0466

An Experimental Study on Vortex-induced Vibration of Two Cylinders in Tandem in Air

Li Zhou, Chaoqun Yan, Dalian University of Technology, China

2020-TPC-0516

Two Degree of Freedom Vortex Induced Vibration of Two Tandem Cylinders at Low Mass and Damping

Xiaokun Qu, Zhendong Cui, Zhengshou Chen, Caiyu Yue, Zhejiang Ocean University, China

2020-TPC-0480

Experiments on Vortex Shedding Control by Forward Jets

Shaoshi Dai, Harbin Engineering University, China; Bassam A Younis, University of California, Davis, USA; Tianlei Zhai, Harbin Engineering University, China

24. HPM I: Advanced Metallurgy & Welding (V. 4)

Monday October 12 ~~16:20~~ Room 5

Chair:

2019-TPC-1273

Progressive Collapse Analysis of Stiffened Panel Structure with Consideration of Actual Welding Distortion and Residual Stresses

Hui Huang, Hidekazu Murakawa, Ninshu Ma, Osaka University, Japan; Zhili Feng, Oak Ridge National Laboratory, USA

2020-TPC-0610

The Rolling Process Study and Mechanical Property of 460MPa Class Steel Plate Used for Hull Structure

Peng Zhang, Wuyang Iron and Steel Co, HBIS, China; Zhe Rong, The University of Queensland, Australia; Jianjun Deng, Jie Long, Huiyong Pang, Xiaoshu Wang, Wuyang Iron and Steel Co, HBIS, China; Xiaodong Ma, Geoff Wang, Baojun Zhao, The University of Queensland, Australia

2020-TPC-0429

Experimental Studies on Dynamic Behavior of Tubular Pipes under Repeated Impacts

Ling Zhu, Xiangui Wang, Kailing Guo, Bin Ma, Wuhan University of Technology, China; Bin Wang, Brunel University, UK

2020-TPC-0284

Validation of Strain-Based Fracture Assessment Methods – BS 7910, R6 and DNVGL-RP-F108

Guiyi Wu, Longjie Wang, Isabel Hadley, TWI Ltd, UK

2020-TPC-0200

Internal Longitudinal Residual Stress in Thick Weld by Contour Method

Qingya Zhang, Zichao Zhuo, Bin Yi, Huazhong University of Science and Technology, China

25. HYDRODYNAMICS YY3: Comparative Study 3 (V. 3)

Monday October 12 ~~16:20~~ Room 6

Chair:

2020-NCS-21

CFD Study for Steep Focused Waves Interaction with Fixed and Moving Cylinder

Yoon-Jin Ha, Sa Young Hong, Kyong-Hwan Kim, Seok-Kyu Cho, Dong-Min Park, Korea Research Inst of Ships & Ocean Eng, Korea

2020-NCS-10

Study on Interaction of Steep Focused Waves with Fixed Cylinder Based on CFD Method

Qiang Wang, Zhi-Tao Zhai, Kang-Ping Liao, Harbin Engineering University, China; Qing-Wei Ma, City University, London, UK; Yan-Lin Shao, Technical University of Denmark, Denmark

2020-DCW-0061

Numerical Simulation of Interaction between Focused Wave and Moving Cylinder

Xiaotong Yang, Decheng Wan, Shanghai Jiao Tong University; Zhonghua Li, Nanjing Hydraulic Research Institute, China

26. OCEAN TECHNOLOGY III: Floating Tunnel (V. 1)

Monday October 12 ~~16:20~~ Room 7

Chair:

2020-TPC-0212

A Parametric Method for Submerged Floating Tunnel Cross-section Design

P.X. Zou, Jeremy Bricker, Wim Uijtewaal, Delft University of Technology, Netherlands

2020-TPC-0257

Study on Settlement Monitoring Technology of Improvement Ground in Transition Section of Immersed Tunnel

Jinfang Hou, Jian Yu, CCCC Tianjin Port Engineering Institute Co. Ltd, China

2020-TPC-0517

An Experimental Study on 2D Hydrodynamic Responses of Submerged Floating Tunnel under Regular Waves

Zhiwen Yang, Chunguang Yuan, Huaqing Zhang, Tianjin Research Inst. for Water Transport Eng.; Jinzhao Li, Shandong University of Science and Technology; Mingxiao Xie, Hua Yang, Tianjin Research Inst. for Water Transport Eng., China

2020-TPC-0717

Study on Mathematical Model and Exact Solution of Overall Structural Response and Natural Frequency of Submerged Floating Tunnel

DUAN Wei-guo, Weinan Normal University; LI Zi-shang, ZHANG Jie-qiong, YANG Zi-hao, Northwestern Polytechnical University; LIN Wei, CCCC Highway Consultants Co, China

2020-TPC-0183

Study on the Characteristics of Soft Soil Foundation Rebound-Recompression of Immersed Tunnels

Jiaying Zhang, CCCC Tianjin Port Engineering Institute Co, China

2020-TPC-0172

Experimental Study of Wave Force Coefficients of Rectangle Cross-Section Submerged Floating Tunnel

Chunguang Yuan, Zhiwen Yang, Huaqing Zhang, Tianjin Research Institute of Water Transport Engineering, China

27. ADVANCED SHIP TECH III: Design, Optimization (V. 4)

Monday October 12 ~~16:20~~ Room 8

Chair:

2020-TPC-0619

Comprehensive Evaluation Index System of Green Intelligent Technology for Yangtze River Ships

Yanlong Zhang, Lizheng Wang, Wuhan University of Technology, China

2020-TPC-1107

Introduction to the Design Concept for the LNG Fueled Ultra Large Containerships

Teuk-Jin Koh, Mun Namgung, Dong-Kwon Lee, Daewoo Shipbuilding & Marine Engineering Co., Korea

2020-DCW-0096

Comparative Study of Hull Form Optimization with or without Design-Space Dimensionality Reduction

Xinwang Liu, Decheng Wan, Shanghai Jiao Tong University, China; Moustafa Abdel-Maksoud, Hamburg University of Technology, Germany

2020-TPC-0328

Development μ -ASV Using Surfboard

Yamato Kawamura, Tetsu Kato, Junichiro Tahara, Koike Masakazu, Tokyo University of Marine Science and Technology; Shoichiro Baba, JAMSTEC, Japan

2020-TPC-0131

Design and Optimization of Distributed Belowground LNG Storage System for End-users

Fei Xiao, Nanyang Technological University, Singapore; Hezhen Yang, University of Glasgow, UK; Zhiye Zhao, Nanyang Technological University, Singapore

2020-TPC-0574

Unfold of Skirt Bag at Bow and Stern Corner with Sophisticated Configuration of Air Cushion Vehicle

Zongke Zhang, Marine Design & Research Inst of China; Shengjie Xu, Shanghai Jiao Tong University; Donghui Wang, Shanghai HaiXun Mechanical and Electronic Corporation, China

2020-TPC-0792

Numerical Investigation on Noise Reduction Technique of Ship Elbow Pipes with Damping Materials

Fan Xu, Weiguo Wu, Yongshui Lin, Xin Gu, Wuhan University of Technology, China

28. UNDERWATER III: Design, Application (V. 2)

Monday **October 12** **16:20** **Room 9**

Chair:

2020-TPC-0168

A 4G Robotic Platform for Shallow Water Operations

Giuseppe Conte, David Scaradozzi, Davide Animobono, Università Politecnica delle Marche, Italy

2020-TPC-0215

Optimization of Hydrodynamic Performance of Ocean Bottom Flying Node

Lingyun Xu, Peng li, Hongde Qin, Harbin Engineering University, China

2020-TPC-0463

Development of Sea Urchin Removal ROV System

Junichiro Tahara, Mikihiro Saito, Yamato Kawamura, Kai Ito, Mitsuru Izumi, Tokyo University of Marine Science and Technology, Japan

2020-TPC-0442

Research on Depth Control of Underwater Platform based on Buoyancy Adjustment

Wei Zhang, Gang Liu, Jijia Liu, Junwei Li, Guohua Xu, Huazhong University of Science & Technology, China

2020-TPC-0513

Research of Sea-water Pressure and Density for the Motion of Underwater Glider

Xiaowei Ye, Junjuan Tang, Shengjie Yu, Yanmin Liu, China Ship Science Research Center; Guixiang Hu, NJUST, China

29. HYDRODYNAMICS IV: Issue 4 (V. 3)

Tuesday **October 13** **08:00** **Room 1**

Chair:

2020-DCW-0051

Numerical Simulations of Droplet Impact onto a Pool Surface

Zheng Li, Cheng Liu, Decheng Wan, Shanghai Jiao Tong University, China

2020-DCW-0018

Hydrodynamic Analysis of Ultra-High Pressure Water Derusting Nozzle

Lu-Xin Ni, Zheng-Shou Chen, Zhejiang Ocean University; Zhen Liu, Xie-Fen Feng, PaxOcean Engineering Zhoushan Co Ltd., China

2020-TPC-1049

Application of Vortex Method Using Fluid Velocity and Vorticity as Unknown Variables to Motion Analysis of a Floating Body in Waves

Yutaka Okamoto, Hitachi Zosen Corp; Shuichi Nagata, Yasutaka Imai, Saga University; Hideyuki Niizato, Hitachi Zosen Corp, Japan

2020-TPC-0563

Numerical Study of the Effect of Stabilized Fins on a SWATH in Head Waves

Yilin Yang, Minmin Zheng, Zixin Wu, Jianpeng Li, Shanghai Ship and Shipping Research Institute, China

2020-TPC-0296

An Active Learning Strategy to Study the Flow Control of a Stationary Cylinder with Two Asymmetrically Attached Rotating Cylinders

Juhan Wang, University of Michigan; Dixia Fan, Massachusetts Institute of Technology, USA

30. SJTU Hydrodynamics Symposium I:

Honoring Prof. Y Liu and Prof. Y He (V. 3)

Tuesday October 13 ~~08:00~~ ~~Room 2~~

Chair:

2020-DCW-0076

CFD Investigations of Ship Propulsion Performance at Different Trim Angles

Jianhua Wang, Decheng Wan, Shanghai Jiao Tong University, China; Moustafa Abdel-Maksoud, Hamburg University of Technology, Germany

2020-DCW-0077

CFD Study of Tip Vortex Cavitation around Hydrofoil

Shang Liang, Decheng Wan, Shanghai Jiao Tong University, China; Changhong Hu, Kyushu University, Japan

2020-DCW-0105

Hydrodynamic Analysis of a Planing Hull in Calm Water Using Overset Mesh and Rigid Body Motion Method

Hui Wang, Ren-chuan Zhu, Shan Huang, Le Zha, Shanghai Jiao Tong University, China

31. RENEWABLE ENERGY IV: Tidal & Current Energy 2 (V. 1)

Tuesday October 13 ~~08:00~~ ~~Room 3~~

Chair:

2020-TPC-0552

Optimization Design on Hydrodynamic Performance of Counter-rotating Tidal Turbine Using Blade Element Momentum Theory and CFD

Jiazhi Wang, Shiming Wang, Shanghai Ocean University, China; Boyin Ding, University of Adelaide, Australia; Yu Cao, Shanghai Ocean University, China

2020-TPC-0355

Tidal Water Level Prediction based on Machine Learning and Empirical Mode Decomposition

Tao Song, Jiaying Wang, Jia Gao, Lin Mu, China University of Geosciences, China

2020-TPC-0279

A Comprehensive Assessment of the T-shape Dynamic Tidal Power System

Peng Dai, Nanjing Hydraulic Research Institute; Jisheng Zhang, Hohai University, China

32. ADVANCED SHIP TECH XX: Structure Dynamics and Vibration (V. 4)

Tuesday October 13 ~~08:00~~ ~~Room 4~~

Chair:

2020-TPC-0759

Dynamic Stability Analysis of Stiffened Plate under Bi-Axial Thrust

Kailong Liu, Zhiyong Pei, Nian Li, Weiguo Wu, Wuhan University of Technology, China

2020-TPC-0686

Numerical Fluid-Structure-Interaction Study of a Hydrofoil

Yingbo Xu, Denghai Tang, China Ship Scientific Research Center, China

2020-DCW-0071

MPS-FEM Coupled Method for Wave-Induced Vibration of Elastic Ship Hull

Guanyu Zhang, Decheng Wan, Shanghai Jiao Tong University; Zhonghua Li, Nanjing Hydraulic Research Institute, China

2020-TPC-0746

Research on Fault Diagnosis of Marine Steam Turbine based on Decision Tree

Fei Geng, Shunhuai Chen, Wuhan University of Technology, China

2020-TPC-1176

Experimental Research on Fatigue Strength and S-N Curve Fitting of Special Structural Joints of Ships

Xiinyin Chen, Shuoqiu Feng, Han Dong, Jingbo Xu, Marine Design & Research Institute of China, China

33. HPM II: EAC 1: Sour Service (V. 4)

Tuesday October 13 ~~08:00~~ ~~Room 5~~

Chair:

2020-TPC-0353

Full Ring Sulfide Stress Cracking Evaluation of X65 UOE Sour Linepipe Steels

Junji Shimamura, Daichi Izumi, Satoshi Igi, Kazuhiko Baba, Satoshi Ueoka, Koichi Ihara, Nobuyuki Ishikawa, Joe Kondo, JFE Steel Corporation, Japan

2020-TPC-1138

TMCP Pipe Prequalification for Sour Service Applications: A Case Study

Timothy Anderson, Doug Fairchild, Brian Newbury, Xin Yue, ExxonMobil Upstream Integrated Solutions, USA; Koichi Ihara, Joe Kondo, JFE Steel, Japan

2020-TPC-0871

Sour Resistant Line Pipe for High-pressure H₂S Sour Service

Taishi Fujishiro, Takuya Hara, Yasuhiro Shinohara, Masahiko Hamada, Nippon Steel Corporation, Japan

2020-TPC-0358

Effect of Stress and Hardness on Corrosion Groove of Sour Linepipe Steel in Low H₂S Content Sour Environment

Daichi Izumi, Itaru Samusawa, Junji Shimamura, Satoshi Igi, Nobuyuki Ishikawa, Joe Kondo, JFE Steel Corporation, Japan

2020-TPC-0735

Improved Hardness Testing Practices for Sour Service Material Qualification

Timothy Anderson, Doug Fairchild, Brian Newbury, ExxonMobil Upstream Integrated Solutions, USA; Koichi Ihara, Joe Kondo, JFE Steel Corporation, Japan

34. HYDRODYNAMICS YY4: Comparative Study 4 (V. 3)

Tuesday October 13 ~~08:00~~ ~~Room 6~~

Chair:

2020-NCS-07

Simulation of Steep Waves Interacting with a Cylinder by Coupling CFD and Lagrangian Models

Pablo Higuera, University of Auckland, New Zealand; Eugeny Buldakov, University College London; Dimitris Stagonas, Cranfield University, UK

2020-NCS-03

A Numerical Study on Interaction of Focused Waves with Fixed Cylinder by a Hybrid Model Coupling SPH and QALE-FEM

Ningbo Zhang, Harbin Engineering University, China; Shiqiang Yan, City University London, UK; Xing Zheng, Harbin Engineering University; Guochun Xu, Ningbo University, China; Qingwei Ma, City University London, UK

2020-NCS-04

Numerical Simulation of Fixed and Moving Cylinders in Focusing Wave by a Hybrid Method Coupling QALE-FEM with OpenFOAM

Jiaye Gong, Harbin Engineering University, China; Shiqiang Yan, Qingwei Ma, City, University of London, UK; Yunbo Li, Shanghai Maritime University, China

2020-NCS-19

Numerical Simulation of Focusing Wave Interaction with Fixed Cylinder Using qaleFOAM

Yanyan Li, Jinshu Lu, Zhejiang Ocean University, China; Shiqiang Yan, Qingwei Ma, City, University of London, UK

35. OCEAN TECHNOLOGY IV: Floating Bridge, Tunnel (V. 1)

Tuesday October 13 ~~08:00~~ Room 7

Chair:

2020-TPC-0733

Design and Verification of Large Floating Coastal Structures: Floating Bridges for Fjord Crossings

José Miguel Rodrigues, Ole Økland, Nuno Fonseca, SINTEF Ocean; Bernt Leira, NTNU; Hagbart Skage Alsos, Bjørn Christian Abrahamsen, Vegard Aksnes, Halvor Lie, SINTEF Ocean, Norway

2020-TPC-1120

Experimental Study on Wave Forces Acting on the Bridge at the Junction of the Island and Bridge in the Shenzhen-Zhongshan Channel West Artificial Island

Ge Long-zai, Liu Hai-yuan, Luan Ying-ni, Chen Han-bao, Tianjin Research Institute for Water Transport Engineering, China

2020-DCW-0135

Developments of Experimental Facilities and Techniques for Floating Wind Turbine Model Tests

Binrong Wen, Xinliang Tian, Zhihao Jiang, Zhanwei Li, Yongsheng Zhao, Tao Peng, Zhike Peng, Shanghai Jiao Tong University. China

2020-DCW-0136

An Experimental Study on Dynamic Behavior of a New Concept of 10MW Semi-Submersible Wind Turbine

Qun Cao, Longfei Xiao, Zhengshun Cheng, Mingyue Liu, Shanghai Jiao Tong University. China

36. ADVANCED SHIP TECH IV: Ship Hydrodynamics 1 (V. 4)
Tuesday October 13 ~~08:00~~ Room 8

Chair:

2020-TPC-1118

Numerical Prediction of Large Patrol Boat in Shallow Water

Yucheng Wang, Wei Xie, Sheng Xu, China Ship Development and Design Center, China

2020-DCW-0038

Experimental Study on the Evolution and Leakage of Bubbles in the Moonpool Subjected to External Flow

Zeyu Shi, Haisong Xiao, Xiaobing Hu, Marine Design & Research Inst of China, China

2020-TPC-0538

Hydrodynamic Optimization Design Research Based on Parametric Deformation of DTMB5415

Yu Lu, Ziyang Li, Shewen Liu, Dalian Maritime University; Junhua Xing, China Ship Development and Design Center; Zhuhao Gu, Dalian Maritime University, China

2020-TPC-0331

Investigation on Motion and Loads of 21000TEU Container Ship Navigating in Calm Water by Fully Nonlinear Method

Ying Tang, Shi-Li Sun, Xue-Qian Zhou, Harbin Engineering University; Shi-Yan Sun; Jiangsu University of Science and Technology, China

2020-TPC-0431

Numerical Simulations of Flow Field around a 64 TEU Inland Container Ship

Jinyu Kan, Jialun Liu, Xiuming Wang, Wuhan University of Technology; Bingqian Zhao, China Classification Society, China

2020-DCW-0058

Numerical Simulation of Bow Waves Generated by a Rectangular Plate

Yiding Hu, Cheng Liu, Decheng Wan, Shanghai Jiao Tong University, China

37. UNDERWATER IV: CFD (V. 2)
Tuesday October 13 ~~08:00~~ Room 9

Chair:

2020-TPC-0345

Study on Hydrodynamic Performance of a Blended Wing Body for an Underwater Glider based on Numerical Analysis

Satoru Yamaguchi, Yutaro Miyai, Kyushu University, Japan

2020-TPC-0197

Design and Analysis of Contra-Rotating Propellers behind Vehicles via Coupling of a Lifting-Surface Method with an Unsteady RANS Solver

Hao-peng Cai, Ming-gang Liu, Cheng-peng Hao, Chinese Academy of Science; He Zhang, China Ship Research and Development Academy, China

2020-DCW-0068

Computational Analysis of Sphere Wakes in a Linearly Stratified Fluid

Liushuai Cao, Fenglai Huang, Decheng Wan, Shanghai Jiao Tong University, China; Qing Xiao, University of Strathclyde, UK

2020-TPC-1046

Hydrodynamic Analysis of Fish's Traveling Wave Based on Grid Deformation Technique

Liyang Gao, Hongde Qin, Peng Li, Harbin Engineering University, China

2020-TPC-0509

Impacts of Rudder Profiles on UV Maneuverability Based on Numerical Simulation

Kunyu Han, Xide Cheng, Wuhan University of Technology; Chenran Huang, China Ship Development and Design Center; Kangli Tan, Wuhan University of Technology, China

38. HYDRODYNAMICS V: FSI 1 (V. 3)

Tuesday October 13 ~~10:30~~ Room 1

Chair:

2020-TPC-0485

Fully Nonlinear Simulation of Wave Interaction with a Freely Floating Cylinder

Zi-Lin Zhang, Shi-Li Sun, Hui-Long Ren, Harbin Engineering University, China

2020-TPC-0929

Tertiary Wave Interactions Effects upon Large Floating Structures

Ouled Housseine C., De Hautecocque G., Bureau Veritas Marine & Offshore; Molin B., Aix Marseille Univ, France; Zhao W., University of Western Australia, Australia

2020-TPC-0901

An Approximation Model for Nonlinear Wave Induced Moment on a Vertical Surface-Piercing Column

Xingya Feng, Southern Univ. of Science and Tech, China; P. H. Taylor, University of Western Australia, Australia; S. Dai, S. Day, University of Strathclyde; T. A. A. Adcock, University of Oxford, UK

2020-ZX-01

A Solitary Wave Interaction with a Submerged Thin Plate in Various Angles of Attack

Aristos Christou, Thorsten Stoesser, University College London; Zhihua Xie, Cardiff University, UK

**39. SJTU Hydrodynamics Symposium II:
Honoring Prof. Y Liu and Prof. Y He (V. 3)**

Tuesday ~~October 13~~ ~~10:30~~ 197 ~~Room 2~~

Chair:

2020-DCW-0073

Three-Dimensional Numerical Simulation of Vortex-Induced Vibration of a Rigid Cylinder

Chunhui Ma, Decheng Wan, Shanghai Jiao Tong University, China; Zhiming Yuan, University of Strathclyde, UK

2020-DCW-0114

A Research on Control Strategy for Autonomous Sailboats

Chongping Huang, Xiao-feng Liang, Zao-jian Zou, Shanghai Jiao Tong University, China

2020-DCW-0120

CFD Simulation of Leaked Gas Dispersion for a LNG Powered Ship

Changhong Hu, Kyushu University, Japan; Cheng Liu, Shanghai Jiao Tong University, China; Mohamed M. Kamra, Kyushu University, Japan

2020-DCW-0078

VIV of Flexible Riser Conveying Internal Fluid Subjected to Uniform Current

Min Li, Di Deng, Decheng Wan, Shanghai Jiao Tong University, China

40. RENEWABLE ENERGY V: Aquaculture System (V. 1)

Tuesday October 13 ~~10:30~~ ~~Room 2~~

Chair:

2020-TPC-0960

Hydrodynamic and Structural Analysis of a Semi-Submersible Fish Cage under Irregular Waves

Yihou Wang, Yuwang Xu, Shixiao Fu, Shanghai Jiao Tong University, China; Hidetaka Senga, Kazuhiro Iijima, Akira Tatsumi, Takahito Iida, Osaka University, Japan

2020-TPC-0547

Study on Fixing Modes of Netting for the Fully Submerged Aquaculture Cage

Chuanzhi Zhu, Yongchun Yang, Xiang Shi, Changlong Chen, Ocean University of China, China

2020-TPC-0425

Experimental Investigation into Structural Deformation of Large Flexible Semi-Submersible Structure

Hidetaka Senga, Takahito Iida, Akira Tatsumi, Iijima Kazuhiro, Osaka University, Japan; Yuwang Xu, Shixiao Fu, Shanghai Jiao Tong University, China

2020-TPC-1149

Experimental Study of Sub-Model of a Kelp Farm with Textile Sheet

Decao Yin, Halvor Lie, SINTEF Ocean, Norway

41. SUBSEA, PIPELINES, RISERS I: Pipeline 1 (V. 2)
Tuesday October 13 ~~10:30~~ Room 4

Chair:

2020-TPC-0707

Optimisation of Ultra-deepwater Pipeline Design, Construction and Pre-commissioning

Jay Chaudhuri, South Stream Transport BV; Ping Liu, INTECSEA BV; Arjen Meijer, South Stream Transport BV, Netherlands; Peter Dixon, Baker Hughes, UK

2020-TPC-0426

Numerical and Theoretical Study on the Homogenized Axial Elastic Moduli of Reinforced Thermoplastic Pipes (RTPs)

Wencheng Liu, Shuqing Wang, Ocean University of China, China

2020-TPC-0534

Optimization of Subsea Production Systems Layout Considering Flowline Diameters

Philip Stape, Murilo Fiorenzano Rapozo, Juliana Souza Baioco, COPPE/UFRJ; Djalene Maria Rocha, CENPES/PETROBRAS; Breno Pinheiro Jacob, COPPE/UFRJ, Brazil

2020-TPC-0246

Study on Performance Analysis and Optimization Strategy for Conveying System of Hydraulic Dredgers

Feixin Wang, Hongsheng Zhang, National Engineering Research Center of Dredging Technology and Equipment; Jinhong Du, CCCC SDC (Fujian) Communication Construction Engineering; Haifei Zhang, National Engineering Research Center of Dredging Technology and Equipment, China

42. HPM III: EAC 2: HE & Others (V. 4)
Tuesday October 13 ~~10:30~~ ~~Room 5~~

Chair:

2020-TPC-1038

Understanding Mechanisms of Sulfide Stress Cracking in Carbon Steels [Oral presentation]

Hyun Jo Jun, Garrett Wadsworth, Peter Sarosi, Donald Carpenter, Adnan Ozekcin, Thirumalai Neeraj, ExxonMobil Research and Engineering Company, USA

2020-TPC-1039

Effect of Steel Microstructure and Sour Environment on Stress Grooving [Oral presentation]

Fang Cao, Garrett Wadsworth, Hyun Jo Jun, Adnan Ozekcin, Thirumalai Neeraj, ExxonMobil Research and Engineering Company, USA

2020-TPC-0658

Diffusible Hydrogen Concentration in Draw Arc Stud Weldments under Harsh Conditions

Oliver Brätz, Fraunhofer IGP; Knuth-Michael Henkel, University of Rostock, Germany

2020-TPC-0640

Effect of Ammonia Impurity on Hydrogen Embrittlement of SCM440 Low-Alloy Steel in Hydrogen Gas

Zhang Nan, Kyushu University, Ryosuke Komoda, Fukuoka University; Kazuki Yamada, Kyushu University, Japan; Cynthia A Volkert, Lin Tian, Reiner Kirchheim, University of Göttingen, Germany; Petros Sofronis, Kyushu University; Hosseinisarani Zahra S, University of Illinois at Urbana-Champaign; Mohsen Dadfarnia, Seattle University, USA; Masanobu Kubota, Aleksandar Staykov, Kyushu University, Japan

43. COASTAL I: Wave, Current Modeling 1 (V. 3)
Tuesday October 13 ~~10:30~~ ~~Room 6~~

Chair:

2020-TPC-0780

Half-Century-Long Wave Observation in and around Japanese Ports through NOWPHAS

Hiroyasu Kawai, Koji Kawaguchi, Takashi Fujiki, Port and Airport Research Institute, Japan

2020-TPC-1005

Comparative Study of Chinese and Foreign Codes for Return Period and Design Working Life in Coastal Engineering

GENG Baolei, Tianjin Research Institute for Water Transport Eng.; LI Siyao, Dalian Ocean University; ZHANG Ciheng, Tianjin Research Institute for Water Transport Eng., China

2020-DCW-0032

Current Profile Extreme Prediction in the South China Sea Based on the EOF and ACER method, by Considering Current Directions

Siyuan Yu, Wenhua Wu, Ji Yao, Dalian University of Technology, China; Arvid Naess, NTNU, Norway

2020-TPC-0393

Numerical Investigation on Wind Set-up and Wind Waves in Front of Piazza San Marco, Venice (IT)

Chiara Favaretto, Matteo Volpato, Luca Martinelli, Piero Ruol, University of Padova, Italy

2020-TPC-0436

Typhoon Waves and Storm Surges Modeling Based on a Coupled Wave-Current Model in the Bohai Sea

Tianping Xu, Mingliang Zhang, Hui Xu, Yaru Kang, Dalian Ocean University; Shulin Fang, Dalian Marine Environment Monitoring Center Station, China

2020-TPC-0267

Dynamic Averaging Method to Determine Bathymetry Profile from Radar Images

Andreas P Wijaya, Ismail A Jabbar, PT. Bahari Berjaya Indonesia, Indonesia

44. OCEAN TECHNOLOGY V: VLFS, Hydroelasticity (V. 1)

Tuesday October 13 ~~10:30~~ Room 7

Chair:

2020-TPC-0322

Coupled and Lumped Methods in Time Domain Dynamics Analysis of Floating Structure with Multi-Bodies and Connector Beams

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

2020-TPC-0329

Numerical Study on Fast Estimation of Wave-Induced Responses of Highly Numerous Floating Bodies with Connectors

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

2020-TPC-0343

Digital Image Correlation Application to a Modular Flexible Floating Structure

Min Zhang, Sebastian Schreier, Hans Hopman, Delft University of Technology, Netherlands

2020-TPC-0411

Configuration Study of a Multi-Functional Semi-submersible Platform

Yongjun Chen, Dagang Zhang, DMAR Engineering; Wenui Xie, Xuliang Han, CNOOC Research Institute, China

2020-TPC-0804

Study on Model Test of a Trapezoidal Large Floating Structure for Load and Response Characteristics

Ke Hu, Wei-guo Wu, Wei-qin Liu, Guo-Wei Zhang, Wuhan University of Technology, China

45. ADVANCED SHIP TECH V: Ship Hydrodynamics 2 (V. 4)
Tuesday October 13 ~~10:30~~ ~~Room 8~~

Chair:

2020-DCW-0037

Theoretical Analysis and Model Test for Tail-Flick of Hovercraft
Song Gao, Qin He, Yi Liu, Marine Design & Research Inst of China, China

2020-TPC-0330

Identification of Rudder Actions under Surf-Riding Condition Which Lead to Ship Broaching and Capsizing

Haichun Zhang, Liwei Yu, Ocean University of China, China

2020-TPC-0808

Comparative Study on Hydrodynamic Performance of Different Rudder Types

Zili Xu, Chaobang Yao, Dakui Feng, Zhiguo Zhang, Xianzhou Wang, Huazhong University of Science and Technology, China

2020-DCW-0118

Numerical Calculations of Wave-induced Hydroelastic Response of a Ship with Forward Speed Using Legendre Polynomials as Mode Functions

Yang Hong, Masashi Kashiwagi, Kyeonguk Heo, Osaka University, Japan

2020-TPC-0106

Auto-Pitch Wing-in-Ground Effect Oscillating Foils for Marine Propulsion

Jiadong Wang, University of Tasmania, Australia; Pengfei Liu, Newcastle University, UK; Christopher Chin, University of Tasmania, Australia; Guanghua He, Harbin Institute of Technology-Wenhai, China

46. UNDERWATER V: Thrusters, Steering (V. 2)
Tuesday October 13 ~~10:30~~ ~~Room 9~~

Chair:

2020-TPC-0342

Development of Side Thruster System for ASV

Tetsu Kato, Yamato Kawamura, Junichiro Tahara, Tokyo University of Marine Science and Technology; Shoichiro Baba, JAMSTEC; Yukihisa Sanada, Japan Atomic Energy Agency, Japan

2020-TPC-0479

Study on the Influence of Linear Channels' Cross-section on Performance of a Marine MHD Thruster

Liang Li, Lingzhi Zhao, Xiaoqiang Chen. Aiwu Peng, Inst. of Electrical Eng., CAS, China

2020-TPC-0692

Research on Hydrodynamic Performance of Underwater Robot with Ducted Propellers Based on Supercomputer Platform

Yizhe Dou, Jiaming Wu, South China University of Technology; Haiyan Lv, Guangzhou Shunhai Shipyards; Xiangxi Han, Peng Dai, Dongjun Chen, South China University of Technology, China

2020-TPC-0443

Research on AUV Control System based on Integral Separation Fuzzy PID Control

Yingjie Shao, Guohua Xu, Guanxue Wang, Zhen Su, Hongming Wu, Huazhong University of Science & Technology, China

2020-TPC-0441

Comparison of the Solver for Control Allocation Algorithm of the X-rudder Underwater Vehicle

Hongming Wu, Guohua Xu, Wenjin Wang, Yingkai Xia, Linjian Jiao, Huazhong University of Science & Technology, China

2020-TPC-0445

Research on Force Tracking Control of Underwater Vehicle Steering Gear Load Simulation System

Xiaokang Xu, Guohua Xu, Zhang Xin, Xiaolong Ma, Wenjin Wang, Huazhong University of Science & Technology, China

Prof. Jin S Chung Award and Lecture

Tuesday October 13 ~~13:10~~ Room 1

Introduction: Jin S Chung, formerly Lockheed Missiles & Space Co., USA:

2020-TPC-1131 **(Chung Award Lecture)**

Three Problems Related to Seakeeping Evaluation and Wave Energy Absorption in Irregular Waves [Oral presentation]

Shigeru Naito, Professor Emeritus, Osaka University, Japan

47. HYDRODYNAMICS VI: FSI 2 (V. 3)

Tuesday October 13 ~~14:00~~ Room 1

Chair:

2020-DCW-0043

Numerical Simulation of Water Entry of a Wedge into Waves

Kai Wang, Xin Ma, Shandong University, China; Wei Bai, Manchester Metropolitan University, UK; Yibin Li, Shandong University, China

2020-TPC-0606

Hydroelasticity and Structural Safety of Oil and Gas Resources Development Support Platform

Ye Lu, Xinyun Ni, Ye Zhou, Hua Zhang, Jun Ding, China Ship Scientific Research Center, China

2020-TPC-0137

Numerical Simulation of Wave-Body Interactions Based on VOF Method

Yunxing Zhang, Wenyang Duan, Kangping Liao, Shan Ma, Harbin Engineering University, China

2020-TPC-0940

Estimation of Asymmetric Factor for Semi-Submersible Platform

Hyun-Seung Nam, Young-Jae Oh, Sa Young Hong, Dong-Min Park, Korea Research Institute of Ships & Ocean Engineering; Joo-Sung Kim, Samsung Heavy Industries, Korea; Hakon Storheim, Moss Maritime, Norway

48. SJTU Hydrodynamics Symposium III:

Honoring Prof. Y Liu and Prof. Y He (V. 3)

Tuesday October 13 ~~14:00~~ Room 2

Chair:

2020-DCW-0081

Numerical Simulation of Cavitation Flows around NACA66

Hydrofoil by Adaptive Mesh Refinement

Minsheng Zhao, Decheng Wan, Shanghai Jiao Tong University; , Zhonghua Li, Nanjing Hydraulic Research Institute, China

2020-DCW-0097

Effect of Restitution Coefficient on CFD Simulation of Slurry Transport by Pipelines

Wei-huang Liu, Yan-ping He, Feng Wang, Ming-zhi Li, Shanghai Jiao Tong University, China

2020-TPC-0108

Integrated Design Approach of Offshore Support Structure

Yiming Zhou, Jiangsu Goldwind Science & Technology Co; Xiaoqing Chen, China International Engineering Consulting; Rongfu Li, Jiangsu Goldwind Science & Technology Co, China

49. RENEWABLE ENERGY VI: Offshore Wind 1:

Bottom Support (V. 1)

Tuesday October 13 ~~14:00~~ Room 3

Chair:

2020-TPC-0685

Model Test of Monopile-Type Offshore Wind Turbine under Breaking Waves

Songhao Zhang, Wei Shi, Lin Zhou, Lixian Zhang, Dalian University of Technology, China; Constantine Michailides, Cyprus University of Technology, Cyprus

2020-TPC-0564

Coupled Analysis of an Offshore Monopile Wind Turbine Subjected to Wind and Waves

Yuhao Zhang, Fushun Liu, Yuanchuan Liu, Ocean University of China, China; Dianzi Liu, University of East Anglia, UK

2020-TPC-0548

Experimental Study on Bearing Characteristics of Suction Four-bucket Foundation under Double-point Cyclic Loads for Offshore Wind Turbines

Yuliang Ma, Yongchun Yang, Jiaqiang Wu, Ocean University of China, China

2020-TPC-0208

An Experimental Study on Nonlinear Damage Identification of Offshore Wind Turbine Structures Based on Coherence Function

Chen Huang, Huaxun Yang, Yingchao Li, Yanqing Han, Ludong University, China

2020-TPC-0612

Mitigation of Jacket Offshore Wind Turbines under Misaligned Wind and Ice Loading Using a 3D Pendulum Tuned Mass Damper

Zhu Benrui, Tianjin University, China; Sun Chao, Jahangiri Vahid, Louisiana State University, USA; Huang Yan, Tianjin University, China

50. SUBSEA, PIPELINES, RISERS II: Pipeline 2 (V.2)

Tuesday October 1 ~~14:00~~ Room 4

Chair:

2020-TPC-0313

Settlement Assessment of Dual Suction Anchor for Troll West PLEM

Moeen Nazari, Otilia Vermeulen, Tom Strandbakken, Per R. Nystrøm, IKM Ocean Design; Asle Eide, Equinor ASA, Norway

2020-TPC-0165

Comparative Assessment of Pipeline Plough Performance Prediction Models Against Field Experience in Sand

Paul Brunning, Marine Geotechnics Ltd; Gillian Ashton, Saipem Ltd; Michael John Brown, Scott Robinson, University of Dundee; Keith Lauder, Ternan Energy, UK

2020-TPC-0235

A Bellows Type of Flexible Piezo-Electric Energy Harvester for Structural Health Monitoring of Pipelines

Xinru Du, Hidemi Mutsuda, Taichi Yamada, Takuji Nakashima, Yasuaki Doi, Hiroshima University, Japan

2020-TPC-0469

Solutions to the Problems after Marginal Oilfield Joins to Complicated Pipe Network

Wenguang Wang, Yufei Wan, Ping Lu, Lin Cheng, Yueqi Wang, CNOOC China Limited, China

2020-TPC-0524

Experimental Study on Localized Skin Effect Current Tracing Technology in Offshore Environment

Yufei Wan, Wenguang Wang, Zhaoguang Qu, CNOOC Ltd.; Renwei Liu, CNOOC Research Inst.; Qian Xin, Chunyu Liu, CNOOC Ltd., Jingzhe Fang, CNOOC EnerTech Equipment Technology Co. Ltd., China

51. HPM IV: Asset Integrity 1 (V. 4)

Tuesday

October 13

14:00

Room 5

Chair:

2020-TPC-0613

Low-cycle Fatigue of High Strength Steels under a Low Ambient Temperature

Xudong Qian, Liuyang Feng, National University of Singapore, Singapore

2020-TPC-0428

New Developments in the Fatigue Design of Circular Hollow Section K-Joints

Jennifer Hrabowski, Stefan Herion, KoRoH GmbH, Germany

2020-TPC-1094

Improved Bending Correction Factor for Fatigue Assessment of Welded Joints

Xing Sun, Matthew Doré, TWI Ltd, UK

2020-TPC-0730

Improvement of Fatigue Strength in Heavy Steel Offshore-constructions through Arc Brazing

Andreas Gericke, Fraunhofer IGP; Karl Drebenstedt, Ulrike Kuhlmann, University of Stuttgart; Knuth-Michael Henkel, University of Rostock, Germany

2020-TPC-0967

Numerical Study on Fatigue Behavior of Carbon Steel-concrete-stainless Steel Double-Skin Tube (DST)

Fa-cheng Wang, Jia-Cheng Shen, Lin-hai Han, Tsinghua University, China

2020-TPC-0474

**Fatigue Life Assessment of Tubular Joints for Jacket Platforms
Considering Corrosion**

Yuefu Yang, Chaohe Chen, Guoliang Pang, Yijun Shen, South
China University of Technology, China

52. COASTAL II: Wave, Current Modeling 2 (V. 3)

Tuesday October 13 ~~14:00~~ ~~Room 6~~

Chair:

2020-TPC-0971

**Physical Modeling of Breaking Wave Induced Pore Pressure in a
Fine-sand Seabed**

Chang-Fei Li, Fu-Ping Gao, Li-Jing Yang, Inst. of Mechanics,
CAS, China

2020-TPC-0975

**Physical Modelling of Pore Pressure Responses in a Fine-Sand
Seabed under Combined Waves and Current**

Li-Jing Yang, Chang-Fei Li, Wen-Gang Qi, Fu-Ping Gao, Inst. of
Mechanics, CAS, China

2020-TPC-0872

**Numerical Simulation of Intrusion Behavior of Oceanic Water
into the Seto Inland Sea, Japan**

Yusuke Nakatani, Ruoyi Huang, Yuki Tomura, Shuzo Nishida,
Osaka University, Japan

2020-TPC-0655

**Numerical Study on the Local Hydrodynamic Change due to
Construction of Sanya Airport**

Xiaoyu Tan, China Geological Survey; Zhenfeng Yao, Department
of Natural Resources of Huizhou Bureau; Jia Gao, Hao Qin, Si
Wang, China University of Geosciences, China

53. OCEAN TECHNOLOGY VI: Deepwater Installation (V.

1)

Tuesday October 13 ~~14:00~~ ~~Room 7~~

Chair:

2020-DCW-0033

**A Practical Framework for Efficient Assessment of the Fatigue
Damage of Mooring Systems in Non-Gaussian Seas**

Xiancang Song, Shuqing Wang, Yuanzhi Guo, Ocean University of
China, China

2020-TPC-0189

**An Overview of In-Service Deep-Water Compliant Tower
Platforms Worldwide**

Yang Li, Zhigang Li, Kankan Ni, CNOOC Research Institute,
China; Jim Li, Offshoretech LLC, USA

2020-TPC-0765

Compliant Piled Tower Technology and Its Application in South China Sea

Jim Li, Alex Ran, Jin Ling, Offshoretech LLC, USA

2020-DCW-0031

Using CFD to Assess the Wind Drag Force Acting on a Jack-up Truss Leg

Zana Sulaiman, GustoMSC B.V., Netherlands

2020-DCW-0082

Application of a New Method for Spectral Fatigue Analysis of Minimal Jacket Platform

Qin Feng, Liang Wang, Fengjun Yao, Wenxue Zhang, Juan Liu, Qing Wang, SINOPEC Shanghai Offshore Oil & Gas Company; Wenge Li, Shanghai Maritime University, China

2020-DCW-0089

Simulation Database on Structural Reliabilities of Jack-up Platforms

Xu Liu, Qin Feng, Chenguang Li, Yalin Qian, Qing Wang, SINOPEC Shanghai Offshore Oil & Gas Company, China

54. ADVANCED SHIP TECH VI: Maneuvering 1 (V. 4)

Tuesday October 13 ~~14:00~~ Room 8

Chair:

2020-TPC-0694

The Development of a Route Generation Procedure Incorporating Collision Avoidance Applicable to Automatic Maneuvering -The Effective Utilization of Collision Avoidance Polygons

Nobukazu Wakabayashi, Kobe University, Japan; Irena Jurdana, University of Rijeka, Croatia; Tatsuya Yashiro, Yokogawa Denshikiki Co, Japan

2020-TPC-0202

Analysis of the Grounding Avoidance Behavior of a Ro-Pax Ship in the Gulf of Finland Using Big Data

Mingyang Zhang, Jakub Montewka, Aalto University; Teemu Manderbacka, NAPA Ltd; Pentti Kujala, Spyros Hirdaris, Aalto University, Finland

2020-DCW-0011

Optimized Identification of Ship Maneuverability *KT* Index and Uncertainty Analysis

Feng Cai, Wei-ling Zhang, Long Huo, Bo Yang, Dalian Naval Academy, China

2020-TPC-0696

CFD-Based Virtual Static Captive Model Tests of a Cruise Ship

Lu Zou, Zao-jian Zou, Li Xia, Hang Gao, Shanghai Jiao Tong University, China

2020-TPC-0857

Estimation of Dynamic Drift of a Container Ship Using RANS Simulation

Yapeng Shen, Pengfei Zhu, Wanzheng Ai, Tianming Ding, Zhejiang Ocean University, China

55. UNDERWATER VI: ROV Launch, AUV Rescue (V. 2)
Tuesday October 13 ~~14:00~~ Room 9

Chair:

2020-TPC-0266

Numerical Modeling of Cable-Winch System for ROV Launching and Recovering Process Based on the Finite Element Approach

Hiroyoshi Suzuki, Ai Yamazoe, Thant Zin Htun, Osaka University, Japan

2020-DCW-0108

Numerical Simulation of 3 DOF Motion of a Towed System

Liang Xiaoyang, Ma Ning, Liu Han, Gu Xiechong, Shanghai Jiao Tong University, China

2020-TPC-0438

Research on Emergency Load Rejection System for AUV Self-Rescue

Zhongxiang Chen, Ben Li, Haiyang Sun, Xiaolong Ma, Guohua Xu, Huazhong University of Science & Technology, China

2020-TPC-1106

Whisker Mechanism of Marine Electronic Components

Zekun Wang, Fuxi Zhang, Auburn University, USA

2020-TPC-0450

Fault Diagnosis Analysis of Large Scale AUV Hydraulic Steering Gear Based on Multi-Information Fusion

Haiyang Sun, Wenjin Wang, Zhongxiang Chen, Guohua Xu, Yan Liu, Huazhong University of Science & Technology, China

2020-TPC-0283

Acoustic Cloaking in Three Dimensions Using a Feasible Metamaterial Approach

Mingsheng Wang, Hangzhou Applied Acoustics Research Institute, China

56. HYDRODYNAMICS VII: FSI 3 (V. 3)
Tuesday October 13 ~~16:20~~ Room 1

Chair:

2020-TPC-0432

Numerical Study on the Structural Response of Coastal Bridge Structures Induced by Tsunami Wave Forces based on CFD and FEM Methods

Xiangfei Yuan, China University of Geosciences; Zhenfeng Yao, Department of Natural Resources of Huizhou Bureau; Hao Qin, Lin Mu, Haoyu Jiang, China University of Geosciences, China

2020-DCW-0103

Structures Stability Based on Path Integral Solution under Random Beam Waves

Qian Qiao, Ju Fan, Shanghai Jiao Tong University, China

2020-DCW-0056

RBF-based Interpolation and Its Application in Flow-Structure Interaction

Yunzhe Zhang, Tingqiu Li, Zuyuan Liu, Min Yu, Jiangyan Shao, Wuhan University of Technology, China; William Geraint Price, Pandeli Temarel, Dominic Hudson, University of Southampton, UK

2020-DCW-0055

Numerical Simulation of Cylinder Falling in Flow Using OpenFOAM

Wenshu Chen, Xin Ma, Shandong University, China; Wei Bai, Manchester Metropolitan University, UK; Yibin Li, Shandong University, China

57. SJTU-NTNU Joint Session (V. 1)

Tuesday October 13 ~~16:20~~ ~~Room 2~~

Chair:

2020-DCW-0129

Simulation of Shipping Container Impact with Bridge Girders

Yanyan Sha, University of Stavanger; Zhenhui Liu, Aker Solutions; Jørgen Amdahl, NTNU; Cato Dørum, Norwegian Public Roads Administration, Norway

2020-DCW-0130

Structural Response Analysis and Fatigue Damage Estimation of a Floating Bridge Subjected to Inhomogeneous Wave Loads

Jian Dai, Bernt Johan Leira, Torgeir Moan, NTNU; Hagbart Skage Alsos, SINTEF Ocean, Norway

2020-DCW-0131

Dynamic Behavior Comparison of a 10 MW Drivetrain in a Bottom-fixed Monopile and a Spar Floating Wind Turbines

Shuaishuai Wang, Amir R. Nejad, Torgeir Moan, NTNU, Norway

2020-DCW-0133

Effect of Damping on the Dynamic Responses of a Floating Bridge in Wind and Waves

Sunghun Hong, TechnipFMC, Norway; Zhengshun Cheng, Shanghai Jiao Tong University, China; Zhen Gao, NTNU, Norway;

Yanlin Shao, Technical University of Denmark, Denmark; Xu Xiang, Norwegian Public Roads Administration, Norway

2020-DCW-0134

Numerical Study on the Dynamic Response of a Submerged Floating Tunnel Under Current Loads Based on the Segment Model Towing Test Results

Shi Deng, NTNU, Norway; Shuai Li, Yuwang Xu, Shanghai Jiao Tong University, China; Torgeir Moan, Shixiao Fu, Zhen Gao, NTNU, Norway

58. RENEWABLE ENRGY VII:

Panel

Tuesday October 13 ~~16:20~~ ~~Room 3~~

Chair:

59. SUBSEA, PIPELINES, RISERS III: Riser 1 (V. 2)

Tuesday October 13 ~~16:20~~ Room 4

Chair:

2020-TPC-0336

Simulation and Parametric Study of Speed Excursion of PIG in Low-pressure Gas Pipeline

Seungman Kim, Yutaek Seo, Seoul National University, Korea

2020-TPC-0956

Riser Integrity Management Plan for Lingshui 17-2 Project

Chenteh Alan Yu, Hao Song, ABS; Yongming Cheng, Keppel FloaTEC, USA; Jing Hou, CNOOC, China

60. HPM V: Asset Integrity 2 (V. 4)

Tuesday October 13 16:20 Room 5

Chair:

2020-TPC-1102

Towards an Improved Prediction of Fracture Behavior in Pipelines Using the Coupled Fluid-structure Interaction (FSI) Model

Aida Nonn, Vincent Keim, OTH Regensburg; Sebastian Münstermann, RWTH Aachen University, Germany

2020-TPC-0325

Analysis of Ultimate Strength of Steel Plates with Random Pitting Corrosion Using Stochastic FEM

Yang Zeng, Jingxi Liu, Guoqing Li, Rong Yu, Huazhong University of Science and Technology, China

2020-TPC-0332

Study on Corrosion of CO₂ in Pipelines in the Presence of Hydrate

Zunzhao Li, Shihan Li, Xiaolin Wang, Qian Xue, Kai Ding, Mingrui Liu, Wei Zhao, Fanfei Meng, SINOPEC Dalian Research Institute of Petroleum and Petrochemicals; Shuanshi Fan, Xuemei Lang, South China University of Technology, China

2020-TPC-0958

Evaluation Of Corrosion Inhibitor Properties of Partially Hydrolyzed Polyacrylamide Solutions

Julien Bonnier, Christophe Rivas, SNF; Vincent Martin, MECM; Denis Siguret, Arkema; Mathieu Cappon, Phelma, France

61. COASTAL III: Tide, Storm Surge (V. 3)

Tuesday October 13 ~~16:20~~ Room 6

Chair:

2020-TPC-0812

Temporal Variations in the Amplitude of the M₂ Nodal Cycle at San Francisco

Ying Yu, Xinlin Mo, China University of Geosciences; Zezheng Wang, China National Petroleum Corporation; Haidong Pan, Ocean University of China; Daosheng Wang, China University of Geosciences, China

2020-TPC-1003

Effect of Tidal Fluctuation on Temperature Field of Thermal Fluid in Porous Media by Beach of Ibusuki Coast

Akio Nagayama, Kagoshima University, Japan

2020-DCW-0006

Multiresolution Dynamics Analysis of Tidal Level at Hengmen of Pearl River Estuary Based on MODWT and Wavelet Coherence

Bing-Xian Liang, South China University of Technology; Jin-Peng Hu, Jimei University; Cheng Liu, Pearl River Hydraulic Research Institute; Bo Hong, South China University of Technology, China

2020-TPC-0177

A Numerical Study of the Storm Surge in the Pearl River Estuary and Coastal Waters

Zhuo Zhang, Peng Chen, Zhiyao Song, Fengfu Liu, Fei Guo, Dong Zhang, Nanjing Normal University, China

2020-TPC-0460

Evaluation on Storm Surge along Suo-nada Sea, Japan

Ayano Sonoda, Japan Weather Association; Yoshihiko Ide, Masaru Yamashiro, Noriaki Hashimoto, Kyushu University; Katsuyuki Suzuyama, Environmental Consultants for Ocean and Human, Japan

2020-TPC-1111

The BP Neural Network Optimized by Beetle Antenna Search Algorithm for Storm Surge Prediction

Si-qi Jiang, Qiang Liu, Ocean University of China, China

62. OCEAN TECHNOLOGY VII: FPSO (V. 1)

Tuesday **October 13** ~~**16:20**~~ ~~**Room 7**~~

Chair:

2020-TPC-1058

Research on Heading Instability of Turret Moored FPSO by the Nonlinear Method

Zhengxin Huang, Liqin Liu, Tianjin University, China; Ankit Garg, Ding Liu, Oil & Gas, Shapoorji Pallonji & Co, Singapore; Yaliu Liu, Tianjin University, China

2020-TPC-0532

Study on a New Concept of Offloading System for SDPSO

Xin Xu, COTEC Offshore Engineering Services, USA; Guolong Chen, CNOOC Research Institute, China; Wei-quan Zhu, COTEC Offshore Engineering Solutions; Yun Shi, CNOOC Research Institute, China; Wei Gao, COTEC Offshore Engineering Solutions, China; Jin Wang, COTEC Offshore Engineering Services, USA

63. ADVANCED SHIP TECH VII: Maneuvering 2 (V. 4)

Tuesday **October 13** ~~**16:20**~~ ~~**Room 8**~~

Chair:

2020-DCW-0046

Effect of Different Inflow Conditions on the Performance of a Waterjet Pump

Peng Yan, Ning Li, Xueqin Liu, Guorui Ji, Jianping Chen, Xinguo Dong, Science and Technology on Water Jet Propulsion Laboratory, China

2020-TPC-0346

Numerical Research on Thrust Deduction of Submerged Waterjet Propelled Transport Vessels on Inland Rivers

Ning Lyu, Jiangming Ding, Wuhan University of Technology, China

2020-TPC-0423

Study on Prediction Method of Propulsive Performance by Means of Gaussian Process Regression for On-board Monitoring Data

Issei Habu, Takayuki Ioki, Etsuro Okuyama, Akishima Laboratories (Mitsui Zossen) Inc., Japan

2020-DCW-0013

Research on Self-Propulsion Simulation and Applications on Hull Form Optimization

Lin Lin, Shengren Wei, Guisheng Peng, Dalian Shipbuilding Industry Design & Research Institute, China

64. ARCTIC I: Arctic Shipping, Logistics (V. 1)

Tuesday **October 13** ~~16:20~~ ~~Room 9~~

Chair:

2020-TPC-0983

Cracks in the Fast Ice and Their Impact on Ice Transport Operations

Nikolay V. Kubyshkin, Arctic Shelf Consulting; Andrey A. Skutin, Arctic and Antarctic Research Institute; Alexey A. Dobrodeev, Kirill E. Sazonov, Igor A.Sapershtein, Krylov State Research Centre, Russia

2020-SQY-01

Calculation of Ice Breaking Resistance of Level Ice Based on CFD-DEM Coupling Method

Hao Yuheng, Zheng Xing, Harbin Engineering University, China; Qingwei Ma, City University London, UK

2020-TPC-0419

Determination and Minimization of the Energy Consumption, Required for the Support of Year-round Navigation of the Ob-Yenisei Region Ports

Andreev O.M., Vinogradov R.A., Gudoshnikov Yu.P., Orlova E.Yu., Arctic and Antarctic Research Institute, Russia

2020-TPC-0854

Implementation of the Polar Code and Its Effect on the Shipbuilding Contract

Robert Douglas Tustin, Lloyd's Register Classification Society (China), China; Chihyun Sung, Lloyd's Register Asia, Korea; Mihailo Pavic, Lloyd's Register, UK; Jinseong Kim, Daewoo Shipbuilding & Marine Engineering, Korea

2020-TPC-0762

Numerical Simulation of a Ship Sailing in Level Ice and Open Water Area

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

65. HYDRODYNAMICS VIII: Offshore Mechanics (V. 3)

Wednesday **October 14** ~~08:00~~ ~~Room 1~~

Chair:

2020-TPC-0367

Numerical Study on the Motion Response of a Typical Ten Thousand Cubic Meters-class Trailing Suction Dredger in Regular Medium and Long Period Waves

Zhongwei Zhou, Jifu Yin, Guojun Hong, Shaogang Shi, National Engineering Research Center of Dredging Technology and Equipment, China

2020-TPC-0652

Study on Wave Forces acting on Large-Diameter Cylindrical Structures for Offshore Wind Power Facilities

Takayuki Hashimoto, Takahide Honda, Yukinobu Oda, Kazunori Ito, Taisei Corporation, Japan

2020-TPC-0580

Numerical Investigation of a Floating Structure under the Rogue Wave

Muyang Wang, Ocean University of China; Hu Zhou, Huadong Engineering Corporation, Ltd.; Yuanchuan Liu, Shuang Chang, Zhe Tian, Ocean University of China, China

66. HYDRODYNAMICS XV: Wave Mechanics 1 (V. 3)

Wednesday October 14 08:00 ~~Room 2~~

Chair:

2020-TPC-0663

An Experimental Study of the Systematic Underestimation of Wave Crests Measured by Lagrangian Buoys, and a Retrospective Correction Method [Oral presentation]

Mark Laing McAllister, Ton S van den Bremer, University of Oxford, United Kingdom

2020-TPC-0339

Wave Hindcast Studies Using SWAN--Comparison with Measured Buoy Data of Western Bay of Bengal

Si Thu Hein, Fumin Xu, Hohai University, China

2020-TPC-0933

Influence of Short Wave Components on the Slamming Loads

Hui Sun, Jens B. Helmers, DNV GL, Norway

2020-TPC-0335

Study on Wave Attenuation Characteristics of Two Box Structures

Chang-Zhe Chen, Jing-Ping Wu, Wuhan University of Technology, China

67. RENEWABLE ENERGY VIII: Offshore Wind 2: Floating Support (V. 1)

Wednesday October 14 08:00 ~~Room 3~~

Chair:

2020-TPC-0531

CFD Simulation of Semi-Submersible Floating Offshore Wind Turbine under Regular Waves

Yu Wang, Hamn-Ching Chen, Texas A&M University, USA;
Guilherme Vaz, WavEC Offshore Renewables, Portugal; Simon
Burmester, University Duisburg-Essen, Germany

2020-TPC-0585

**Long-term Dynamic Performance Sensitivity Analysis for a V-
Shaped Semisubmersible Floating Wind Turbine: The Influence
of Substructure Configuration**

Shengtao Zhou, Chao Li, Yiqing Xiao, Harbin Institute of
Technology, Shenzhen, China

2020-TPC-0434

**Numerical Analysis of a Floating Semi-submersible Wind Turbine
Integrated with a Point Absorber Wave Energy Converter**

Mingsheng Chen, Ren Wang, Panpan Xiao, Ling Zhu, Fen Li,
Liang Sun, Wuhan University of Technology, China

2020-TPC-0178

**Model Tests of a TLP Floating Offshore Wind Turbine with a
Porous Outer Column**

Ed Mackay, Lars Johanning, University of Exeter, UK; Wei Shi,
Dezhi Ning, Dalian University of Technology, China

2020-DCW-0036

**Transient Response of a TLP-type Floating Offshore Wind
Turbine under Tendon Failure Conditions**

Haoyu Wu, Yongsheng Zhao, Yanping He, Shanghai Jiao Tong
University, China; Zhiyu Jiang, University of Agder, Norway;
Yanlin Shao, Technical University of Denmark, Denmark;
Zhaolong Han, Chao Huang, Xiaoli Gu, Shanghai Jiao Tong
University, China

68. SUBSEA, PIPELINES, RISERS IV: Riser 2 (V. 2)
Wednesday October 14 08:00 Room 4

Chair:

2020-TPC-0216

**Steady Slug Flow-Induced Vibration in Deep-Water Steel Lazy-
Wave Riser**

Mohamed Othman, Narakorn Srinil, Newcastle University, UK

2020-TPC-0955

**S-Lay Installation of Deepwater SCRs and Pipelines for Lingshui
17-2 Project**

Xuegang You, China National Offshore Oil Co, China; Yongming
Cheng, Keppel FloaTEC; Chenteh Alan Yu, ABS, USA

2020-TPC-0121

**Design of Deep water SCRs for the Application in South China
Sea**

Jing Hou, CNOOC, China; Yongming Cheng, Keppel FloaTEC,
LLC; Chenteh Alan Yu, ABS, USA

2020-TPC-0398

Numerical Simulation of Seabed Trench and Study of the Effect of Seabed Trench on Fatigue Life of Steel Catenary Risers

Ying Li, Ziang Wu, Yidi Gao, Tianjin University, China

2020-TPC-0539

Probability Study of Steel Catenary Riser Fatigue at Touch Down Zone

Ying Li, Penglong Ding, Liange Shan, Tianjin University, China

69. HPM VI: Advances in Materials 1 (V. 4)

Wednesday **October 14** **08:00** **Room-5**

Chair:

2020-TPC-0114

Performance of Pultruded Composites in Cold Climate Region

Yixin Shao, McGill University, Canada

2020-TPC-0482

Effect of Expansive Additive on Mechanical Properties of High-Fluidity Ductile-Fiber-Reinforced Cementitious Composite Using Recycled Fine Aggregate

Takumi Anzai, Ken Watanabe, Tokai University, Japan

2020-TPC-0569

A Novel Calcium Phosphate Cement with Good CO₂ and H₂S Corrosion Resistance

Haipeng Xin, Jianguo Zeng, CNPC Tianjin Bo-Xing Engineering Science & Technology Co.; Qiang Deng, PetroChina Tarim Oilfield Co.; Jianyao Wang, Linglong Shi, Jianlong Zou, CNPC Tianjin Bo-Xing Engineering Science & Technology Co., China

2020-TPC-0232

Exploratory Research on Water-channeling Self-healing Agent for Cementing

Haipeng Xin, Kunpeng Yanag, CNPC Tianjin Bo-Xing Engineering Science & Technology; Minghui Zhang, Qiang Deng, PetroChina Tarim Oilfield; Jianguo Zen, Jianlong Zou, Fuquan Sun, CNPC Tianjin Bo-Xing Engineering Science & Technology, China

2020-TPC-0839

Analysis of Heat Transfer Performance of Insulation Casing Filled with Phase Change Material for Downhole Instruments

Xiaohan Zhang, Chen An, Jin Zhang, China University of Petroleum (Beijing); Yi Zhang, Chinese Academy of Geological Sciences and China Geological Survey, China

70. COASTAL IV: Waves on Structures (V. 3)

Tuesday **October 14** **08:00** **Room-6**

Chair:

2020-TPC-0920

Analysis of Flow Characteristics and Wave Dissipation Performances of a New Structure

Lin Zhao, Ning Wang, Qian Li, Ocean University of China, China

2020-TPC-0870

Characteristics of Transmitted Waves behind Impermeable Submerged Breakwaters Studied by Model Experiments and Numerical Simulations

Katsuya Hirayama, Yuuki Hamano, Junya Naganuma, Port and Airport Research Institute, MPAT, Japan

2020-TPC-0695

Experimental Study on Swell Wave Load of Crest Wall

Yun-peng Jiang, Han-bao Chen, Wen-jun Shen, Tianjin Research Inst. for Water Transport Eng., China

2020-TPC-1006

Study of Large-scale Physical Model Test on Force Characteristics of Seawater Intake Riser

Cheng Peng, Tianjin Research Institute for Water Transport Eng.; Zaihong Guo, Jieyang Qianzhan Wind Power Co.; Yonghai Jia, PetroChina Southwest Pipeline Co.; Yina Wang, Tianjin Research Institute for Water Transport Eng., China

71. ADVANCED SHIP TECH XVI: Resistance Performance

(V. 4)

Wednesday October 14 ~~08:00~~ ~~Room 7~~

Chair:

2020-SQY-03

Numerical Study on Bow Wave of a High-Speed Ship Using 2d+t Theory

Congyu Xia, Xing Zheng, Harbin Engineering University, China; Qing-Wei Ma, City University London, UK; Yi You, Harbin Engineering University, China

2020-DCW-0014

Investigation on Trim Optimization of a Bulk Carrier Based on CFD Method

Xiang Fan, Haisu Sun, Xintao Xiang, Shanghai Merchant Ship Design and Research Institute, China

2020-DCW-0057

Multi-Objective Hull Form Optimization of Trimaran's Total Drag at Different Speeds

Xinwang Liu, Decheng Wan, Shanghai Jiao Tong University, China; Changhong Hu, Kyushu University, Japan

2020-TPC-1052

Research on Hull Form Optimization of Invisible Bulbous Ship

Xuyu Ouyang, Haichao Chang, Yongyan Yi, Baiwei Feng,
Chengsheng Zhan, Qiang Zheng, Wuhan University of Technology,
China

72. ADVANCED SHIP TECH VIII: Non-traditional Propulsors

(V. 4)

Wednesday **October 14** **08:00** ~~Room 8~~

Chair:

2020-DCW-0028

Duct Shape Optimization of Air Ducted Propeller on Hovercraft

Hubing Chu, Jingfeng Hu, Haipeng Zhang, Kejie Chen, Marine
Design & Research Inst of China, China

2020-DCW-0052

**Numerical Simulation and Analysis of the Pressure Fluctuation of
Four Waterjets in V-type Ship**

Yuanxing Dai, Xinguo Dong, Jun Wang, Jinbao Wang, Jianguo Liu,
Science and Technology on Water Jet Propulsion Laboratory, China

2020-TPC-0894

**Numerical Simulation on the Hydrodynamic Performance of
Azimuthing Podded Propulsors**

Wang Zhao, Jian Hu, Chong-Ge Chen, Harbin Engineering
University, China

2020-TPC-0791

**Study on Hydrodynamic Performance of a Marine Cycloidal
Propeller**

Jianghao Huang, Chaobang Yao, Dakui Feng, Huazhong University
of Science and Technology; Hangtao Cheng, The Second M-
Agent's Room, China

2020-TPC-0395

Research on Hydrodynamic Performance of Cycloidal Propeller

Wentao Liu, Zihua Liu, Feiyang Luo, Qian Chen, Naval
University of Engineering, China

2020-TPC-0377

Design of a Rim Driven Thruster Based on Lifting Line Theory

Lizhong Xiong, Lei Zhang, Jianglong Sun, Huazhong University of
Science and Technology, China

2020-TPC-0898

On Scale Effect of Rim-driven Thruster Based on RANS Method

Jun Yang, Wei He, Zi-ru Li, Wuhan University of Technology,
China

73. ARCTIC II: Ship Performance in Ice 1 (V. 1)

Wednesday **October 14** **08:00** ~~Room 9~~

Chair:

2020-TPC-0763

Numerical Simulation of Ice Resistance Based on FEM/SPH Coupling Method

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

2020-TPC-1123

Geometric Model on the Evolution of Brash Ice Channels

Robert Bridges, TOTAL S.A., France

2020-TPC-0959

Predicting Ship Speeds in the Arctic Using Deep Learning on Historical AIS Data

Ekaterina Kim, Bjørnar Brende Smestad, Bjørn Egil Asbjørnslett, Norwegian University of Science and Technology, Norway

2020-TPC-0326

A Numerical Study on the Hydroelastic Response of Ice Floes in Regular Wave Regimes

Meng Wang, China Classification Society; Li Zhou, Yiwei Yu, Zhi Zong, Dalian University of Technology, China

2020-TPC-1157

Phase-field Simulation Coupled Flow Field of Sea Ice Crystallization

Jiatong Song, Han Yuan, Yan Li, Ning Mei, Kunwei Wang, Ocean University of China, China

74. HYDRODYNAMICS IX: Particle Methods (V. 3)

Wednesday October 14 ~~10:30~~ Room 1

Chair:

2020-TPC-0937

A 3D Fully Lagrangian Meshfree Hydroelastic Solver; 3D ISPH-SPH

Abbas Khayyer, Hitoshi Gotoh, Yuma Shimizu, Hiroshi Sasagawa, Akari Nakano, Kyoto University, Japan

2020-DCW-0054

Numerical Study of Interaction between Internal Solitary Waves and Uniform Slope by MPS Method

Xiao Wen, Decheng Wan, Shanghai Jiao Tong University, China; Changhong Hu, Kyushu University, Japan

2020-TPC-0691

Comparisons of Two SPH Density Smoothing Algorithms for the Sloshing of a Rectangular Tank under the Forced Rolling Excitation

L Sun, C Cheng, H T Li, Dalian University of Technology; C F Liu, Dalian Ocean University, China

2020-SQY-02

Numerical Simulation of Anchor Dragged in the Soil Using Smoothed Particle Hydrodynamics

Peng-fei Sun, Xing Zheng, Harbin Engineering University, China;
Qing-wei Ma, City University London, UK

2020-TPC-0946

Simulation of Dam-break Flow over Partial Ice Cover by an Improved Mesh-Free Method

Yiqun Ye, Tibing Xu, Ningbo University, China

75. HYDRODYNAMICS XVI: Wave Mechanics 2 (V. 3)

Wednesday October 14 ~~10:30~~ ~~Room 2~~

Chair:

2020-DCW-0053

Numerical Simulations of Breaking Waves Based on Block-Structured Adaptive Mesh Refinement

Cheng Liu, Zheng Li, Yiding Hu, Decheng Wan, Shanghai Jiao Tong University, China

2020-TPC-1084

An Evaluation of Conditional Spatial Predictions of Significant Wave Height Based on the Nonstationary SPDE Model

Anders Hildeman, Wengang Mao, Chalmers University of Technology, Sweden

2020-TPC-0369

Energy Dissipation and Non-Potential Effects in Wave Breaking

Anatoliy Khait, Zhihua Ma, Ling Qian, Wei Bai, Zaibin Lin, Manchester Metropolitan University, United Kingdom

2020-TPC-0604

Numerical Simulation of Plunging Breaking Waves on a Ship Bow by a Two-phase Flow Solver

Qiu Jin, Dominic Hudson, Pandeli Temarel, University of Southampton, UK

76. RENEWABLE ENERGY IX: Offshore Wind 3 - Floating Support (V. 1)

Wednesday October 14 ~~10:30~~ ~~Room 3~~

Chair:

2020-TPC-1113

Preliminary Study on the Interaction of Two Floating Offshore Wind Turbines

Lijun Zhang, Shanghai Jiao Tong University; Yichen Jiang, Dalian University of Technology; Ye Li, Shanghai Jiao Tong University, China

2020-TPC-0506

**Dynamic Analysis of a Floating Offshore Wind Turbine
Integrated with a Steel Fish Farming Cage**

Yu Lei, Xiang Yuan Zheng, Huadong Zheng, Tsinghua Shenzhen
International Graduate School, China

2020-TPC-0887

**Multi-Variable Feedforward Control for Floating Wind Turbines
Using Lidar**

David Schlipf, Flensburg University of Applied Sciences; Frank
Lemmer, Universität Stuttgart; Steffen Raach, Sowento GmbH,
Germany

2020-TPC-1000

**Verification of a Passive Tuned Liquid Multi-Column Damper for
Floating Wind Turbine**

Wei Yu, Po Wen Cheng, University of Stuttgart, Germany

77. SUBSEA, PIPELINES, RISERS V: Riser 3 (V. 2)
Wednesday October 14 ~~10:30~~ ~~Room 4~~

Chair:

2020-TPC-0992

**Experimental Study on Interference Response Characteristics of
Triple Flexible Risers under Uniform Flow**

Bing Zhao, Mengmeng Zhang, Yuwang Xu, Haojie Ren, Xuepeng
Fu, Shixiao Fu, Shanghai Jiao Tong University; Chaowei Li,
CNOOC Research Inst., China

2020-TPC-1119

**Model Test Study of a Free-Standing Drilling Riser [Oral
presentation]**

Frank K Lim, 2H Offshore, UK; Lihui Li, Jinlong Wang, Hui
Zhang, 2H Offshore, Beijing; Liangbin Xu, Leixiang Sheng,
CNOOC Research Institute, China

2020-TPC-0756

**Numerical and Experimental Study on Full Scale Test of Typical
Offshore Dynamic Power Cable**

Yi Guo, Shanghai Natl. Center of Testing and Inspection for
Electric Cable and Wire Co., China; Naiquan Ye, SINTEF Ocean
AS, Norway

2020-TPC-0932

**On Modelling Alternatives of Non-critical Components in
Dynamic Offshore Power Cables**

Naiquan Ye, SINTEF OCEAN AS, Norway; Zhenqin Yuan,
Hengtong Submarine Power Cable Co, China

2020-TPC-0700

**Investigation on the Transmission Coefficient of Linear Wave
Propagating Over Submerged Barrier**

Zhaobing Jiang, Sanjiang University; Haiyuan Wang, Army Eng. University of PLA; Kun Tan, Youwei Li, Changjiang Waterway Planning, Design & Research Inst, China

78. HPM VII: Advances in Materials 2 (V. 4)
Wednesday October 14 ~~10:30~~ Room 5

Chair:

2020-TPC-1040

Considerations in Developing an Inspection Plan for Equipment in Sulfidation Service

Brian Ott, Ali Reza, Exponent, Inc., USA

2020-TPC-0634

Application of Induction Thermography for Detection of Near Surface Defects in Steel Products

Tanja Eisele, Hermann Lücken, Esslingen University of Applied Sciences; Siegfried Schmauder, University of Stuttgart, Germany

2020-TPC-0196

Free Vibration Analysis of Axially Functionally Graded Double-Tapered Timoshenko Beams by a NURBS-Based Approach

Zhiwei Zhou, Meixia Chen, Wenchao Jia, Huazhong University of Science and Technology, China

2020-TPC-0201

Study on Stress-Strain Relation of Welded Joint with Experiment and Computation Based on GTN Model

Zichao Zhuo, Jiangchao Wang, Qingya Zhang, Huazhong University of Science and Technology, China

2020-DCW-0116

MTT and LTT Weld Metal for Reduction of Stress Concentration and Tensile Residual Stress of Cruciform Welded Joint

Zhongyuan Feng, Ninshu Ma, Osaka University, Japan; Fenggui Lu, Shanghai Jiao Tong University, China

79. COASTAL V: Behavior of Structures (V. 3)
Wednesday October 14 ~~10:30~~ Room 6

Chair:

2020-TPC-0449

An Experimental Study on the Stability of Filter Units on Rubble Mound Breakwater

Aye Nyein Mon, Shin-ichi Aoki, Osaka University; Hirofumi Koyama, Masataka Kinoshita, Fudo Tetra Corporation; Koji Kajiwara, Hironori Kawamura, Kyowa Co, Japan

2020-TPC-0530

The Connection Design Study between Superstructure and Pile

Zhao Luo, Chao Wang, Hong-Xing Lin, Xian-Dao Feng, CCCC Second Harbour Engineering Co., Ltd., China

2020-TPC-0511

Analysis on Dynamic Response of Wharf with Arched Longitudinal Beams under Ship Abnormal Berthing

Qiu Zhai, Jiahao Zhang, Huakun Wang, Kang Shi, Hohai University, China

2020-TPC-0173

Motion Equation and Hydrodynamic Model for a Hinged Multi-body Array with Arbitrary Arrangement

Zhe Kang, Bin Teng, Dalian University of Technology, China

80. ADVANCED SHIP TECH XVII: Response in Waves (V. 4)
Wednesday October 14 ~~10:30~~ Room 7

Chair:

2020-TPC-0526

Study on Influence of Waves on High Speed Water Entry of Projectile

Shiming Sun, Jinliang Ji, Xuesen Chu, Kai Yan, China Ship Scientific Research Center, China

2020-TPC-0237

Influence of Wave Amplitude on Sea Keeping Performance of a High-speed Trimaran with T-foil in Head Seas

Ang Li, Harbin Engineering University; Yunbo Li, Shanghai Maritime University, China

2020-TPC-0528

Unified Viscous and Potential Method for the Study of Parametric Roll with Sloshing

Shu Xia Bu, Min Gu, China Ship Scientific Research Center, China

2020-TPC-1063

Study on Hull-Form Optimization Considering Ship Operational Performance in Waves

Beom-Soo Kim, Jae-Hoon Lee, Yonghwan Kim, Myung-Il Roh, Seoul National University; Min-Jae Oh, University of Ulsan, Korea

81. ADVANCED SHIP TECH IX: Strength & Fatigue (V. 4)
Wednesday October 14 ~~10:30~~ Room 8

Chair:

2020-TPC-0435

Probabilistic Residual Ultimate Strength Assessment of Cracked Plates Subjected to Uniaxial Compression

Changzi Wang, Lu Yao, Shuqing Wang, Wentao He, Ocean University of China, China

2020-TPC-0224

Multi-objective Ultimate Strength-Based Reliability Optimization of an Ultra Large Container Ship

Ji Yan, Jinju Cui, Deyu Wang, Shanghai Jiao Tong University, China

2020-TPC-0855

Empirical Formula of the Dynamic Ultimate Strength of Stiffened Panels under In-plane Impacts

Yufei Xiong, Deyu Wang, Shanghai Jiao Tong University, China

2020-TPC-0625

Research on Simplified Fatigue Assessment for Longitudinals of Large Container Ship Considering Warping

Shijian Cai, Tao Han, Jiameng Wu, Marine Design & Research Inst of China, China

2020-TPC-1098

Buckling/Plastic Collapse Behaviour and Strength of Stiffened Panels with U-beam Stiffeners

Tetsuya Yao, Osaka University; Kin Ogata, Iknow Machinery Co; Satoyuki Tanaka, Septia Hardy Sujiatanti, Hiroshima University, Japan

82. ARCTIC III: Ship Performance in Ice 2 (V. 1)

Wednesday October 14 ~~10:30~~ Room 9

Chair:

2020-TPC-1122

Experimental Tests on Brash Ice Channel Development

Robert Bridges, TOTAL S.A., France; Kaj Riska, TU Delft, The Netherlands; Mikko Suominen, Andrea Haase, HSVA, Germany

2020-TPC-0836

Power Performance Analysis of Ice-going Ship Under the Blocking Condition with Brash Ice in Front of Propeller [Oral presentation]

Shaopeng Ji, Yukui Tian, Ying Kou, Gengyao Qiu, China Ship Scientific Research Center, China

2020-TPC-0382

Torsional Vibration Calculation for Propulsion Shaft of 1A Ice Class Ship

Hong Jun Yang, Qing Wei Wu, Jiang Yang, Shanghai Merchant Ship Design & Research Institute, China

2020-TPC-0147

An Analysis of the Sea Ice Characteristics around the Coastal Nuclear Power Plant in China's Sea Ice Region based on Monitoring Data

Liu Xue-qin, Yuan Shuai, Shi Wen-qi, Ma Yu-xian, Xu Ning, Song Li-na, Liu Yong-qing, Yu Dan-zhu, National Marine Environmental Monitoring Center, China

83. HYDRODYNAMICS X: Naval Hydrodynamics 1 (V. 3)
Wednesday October 14 14:00 Room 1

Chair:

2020-TPC-0832

Moonpool Induced Added Resistance and Motion of a Drillship in Waves during Transit

Sing-Kwan Lee, China Merchants Marine and Offshore Research Inst; Lixin Xu, China Merchants Deepsea Research Inst, China

2020-DCW-0098

Numerical and Experimental Study of Dynamic PMM Tests of the ONRT Hull

Chenliang Zhang, Xiaojian Liu, Jinbao Wang, Marine Design and Research Institute of China; Decheng Wan, Shanghai Jiao Tong University, China

2020-TPC-0412

RANS Study of Propeller Impacts on Rudder Hydrodynamics

Suli Lu, Xide Cheng, Jialun Liu, Wuhan University of Technology; Bingqian Zhao, China Classification Society; Qiong Hu, China Ship Scientific Research Center, China

2020-TPC-0970

Application of Reinforcement Learning Technique for Parameter Identification of Coupled Heave-Pitch Motion Equations by Using Measured Reponse at Sea

Mohammadreza Javanmardi, Chris Hens, Jack Bucher, Gregory Hibbert, OMC International, Australia

84. HYDRODYNAMICS XVII: Extreme Waves, DP Control (V. 3)

Wednesday October 14 14:00 Room 2

Chair:

2020-TPC-1160

An Improved Coupled Level-Set and Volume-of-Fluid Method on Overset Grid Systems and Its Application to Extreme Wave on a Fixed Offshore Platform

Hamn-Ching Chen, Chia-Rong Chen, Texas A&M University, USA

2020-SWX-01

A Novel Saturation Protocol on the Thrust Allocation Strategy for Dynamic Positioning of Marine Vessels Operating in Extreme Wave Conditions

Liang Zhao, Shengwen Xu, Xuefeng Wang, Aibing Ding, Shanghai Jiao Tong University, China

2020-TPC-0558

Application of State-Space Model Based on Complex Exponential Decomposition to Analyze Dynamic Response of Semi-Submersible Controlled by Thrusters

Xingyu Zhou, Zhe Tian, Fushun Liu, Ocean University of China;
Hongchao Lu, South China University of Technology, China;
Dianzi Liu, University of East Anglia, UK

85. RENEWABLE ENERGY X: Offshore Wind 4: Floating Support (V. 1)

Wednesday October 14 ~~14:00~~ ~~Room 3~~

Chair:

2020-TPC-0661

Spectral Approach for Fatigue Damage Evaluation of Floating Offshore Wind Turbine under Combined Wind and Wave Loads by Considering the Coupling Effect

Ahmad Adilah, Kazuhiro Iijima, Tomoya Inoue, Osaka University, Japan

2020-TPC-0503

A Novel Floating Wind-Solar-Aquaculture Concept: Fully Coupled Analysis and Technical Feasibility Study

Huadong Zheng, Xiang Yuan Zheng, Yu Lei, Tsinghua University, China

2020-TPC-0424

Validation of Open-Source Overset Mesh Method Using Free-Decay Tests of Floating Offshore Wind Turbine

Romain Pinguet, Aix Marseille University, France; Sam Kanner, Principle Power Inc, USA; Michel Benoit, Bernard Molin, Aix Marseille University, France

2020-DCW-0064

Investigation of Spanwise Wavy Configuration for Performance Improvement of a Vertical Axis Wind Turbine

Jie Su, Yaoran Chen, Dai Zhou, Zhaolong Han, Shanghai Jiao Tong University, China

2020-DCW-0022

Power Performance and Aerodynamic Characteristics for a Straight-bladed Vertical Axis Wind Turbine with an External Diffuser

Limin Kuang, Zhaolong Han, Dai Zhou, Yan Bao, Shanghai Jiao Tong University, China

86. SUBSEA, PIPELINES, RISERS VI: Riser 4 (V. 2)

Wednesday October 14 ~~14:00~~ ~~Room 4~~

Chair:

2020-TPC-0155

High-D/t Pipe for Offshore Applications

Ruud Selker, Ping Liu, IntecSea, Netherlands; Alastair Walker, Advanced Mechanics and Engineering, Australia

2020-TPC-0404

Limit Load Capacity of Thick-Walled Pipe in Ultra-Deep Water

Ruud Selker, Joost Brugmans, Ping Liu, IntecSea, Netherlands; Carlos Sicilia, Total E&P, France

2020-TPC-0704

Feasibility Study of Loading/Unloading of Compressed Natural Gas Vessel in the Barents Sea

Decao Yin, Halvor Lie, SINTEF Ocean; Ivar Fylling, Ivar Fylling Marin Teknikk; Frøydis Solaas, Jan Roger Hoff, Janne K. Ø. Gjøsteen, SINTEF Ocean, Norway

2020-TPC-1146

Effect of Offshore Earthquake Ground Motions and Temporal-Spatial Correlation on the Dynamic Response of Subsea Pipelines

Xi Chen, Qi Zhang, Xiang Yuan Zheng, Tsinghua University, China

87. MECHANICS, IMPACT, RISK I: Impact, Explosion, Damage 1 (V. 4)

Wednesday October 14 ~~14:00~~ Room 5

Chair:

2020-TPC-0774

Development of a Simplified Method for Structural Response of Stiffened Plates under Explosion Loads

Dac Dung Truong, Beom-Seon Jang, Han-Baek Ju, Seoul National University, Korea

2020-TPC-0784

Application of Failure Mode and Impact Analysis to Cruise Ship Lifesaving System

Tao Zhang, Wei Cai, Wuhan University of Technology, China

2020-TPC-0254

A Quasi-dynamic Approach for the Evaluation of Structural Response in Ship Collisions and Groundings [Proceedings only]

Sang-Jin Kim, Mihkel Kõrgersaar, Ghalib Taimuri, Pentti Kujala, Spyros Hirdaris, Aalto University, Finland

2020-TPC-0352

The Large Deflection Dynamic Plastic Response Analysis of Fully-clamped Stiffened Square Plates Subjected to Blast Load

Hao Chen, Zixian Yu, Zhiyuan Shen, Yang Zeng, Rong Yu, Jingxi Liu, Huazhong University of Science and Technology, China

2020-TPC-0478

Modal Sensitivity-Based Method for Damage Detection and Foundation Scour Prediction in a Wind Turbine Structure Using Limited Data

Yufeng Jiang, Shuqing Wang, Wenkai wu, Yuchi Liu, Ocean University of China, China

88. COASTAL VI: Floating Breakwater (V. 3)

Wednesday October 14 ~~14:00~~ Room 6

Chair:

2020-TPC-0451

Experimental Studies on the Performance of a Box-Type Free-Surface Breakwater with Symmetrical Wavy Bottom

Ming Zou, Jing-Ping Wu, Wuhan University of Technology; Ming Yu Wang, CCCC First Harbor Engineering Co, China

2020-DCW-0009

Study on Wave Dissipation Effect of a New Floating Breakwater Based on Large-Scale Model Test

Zhan-hua Zhao, Xiao-feng Kuang, Can-hui Tao, Xin-yun Ni, China Ship Scientific Research Center; Jie Cui, Jiangsu University of Science and Technology, China

2020-TPC-0348

Hydrodynamic Performance of a Floating Breakwater with Pneumatic Chambers in Parallel Arrangement

Rongquan Wang, Dezhi Ning, Chongwei Zhang, Dalian University of Technology, China

2020-TPC-0716

Diffraction of Water Waves by Finite Floating Structure over Parabolic Bottom [Oral Presentation]

Amandeep Kaur, Subash Chandra Martha Indian Institute of Technology Ropar, India

2020-TPC-0159

Shape Optimization of Large-Span Floating Sector Gate Based on Multi-Island Genetic Algorithm

Chao Xu, Zheng-Zhong Wang, Northwest A&F University, China

89. ADVANCED SHIP TECH XVIII: Ship Routing Algorithm (V. 4)

Wednesday October 14 ~~14:00~~ Room 7

Chair:

2020-TPC-0389

Double-Layer Hybrid Path Planning Method for ASV Obstacle Avoidance

Jinjian Tong, Nailong Wu, Jie Qi, Donghua University; Jian Wang, Shanghai Jiao Tong University, China

2020-TPC-0344

Simulation Study of Ship Traffic Efficiency of Inland River Combined Hub

Xin Liu, Lizheng Wang, Shunhuai Chen, Wuhan University Of Technology, China

2020-TPC-0364

A Ship Route Design Method Based on Adaptive Niche Genetic Algorithm

Ziming Wang, Shunhuai Chen, Wuhan University of Technology, China

90. ADVANCED SHIP TECH X: Seakeeping (V. 4)

Wednesday October 14 ~~14:00~~ Room 8

Chair:

2020-TPC-0182

Numerical Prediction of Planing Vessel with Different Towing Points

Yucheng Wang, Wei Xie, Aimin Deng, China Ship Development and Design Center, China

2020-TPC-0557

Numerical Study on the Dynamic Characteristics of a Fixed Horizontal Cylindrical Fish Cage under Earthquake Load

An-Dong Wang, Chun-Wei Bi, Guo-Hai Dong, Shou-An Guo, Dalian University of Technology, China

2020-TPC-0153

System Identification of Ship Dynamics Nonlinear Model with Free-Running Tests based on Two Step Semi-Conjugate Bayesian Regression

Yifan Xue, Hengyu Liu, Yanjun Liu, Chen Ji, Shandong University, China

2020-TPC-0228

Calculation of the Seakeeping Behaviour of a Jack-Up Vessel During the Jacking Sequence in Time Domain

Maximilian Liebert, Hamburg University of Technology, Germany

2020-TPC-0248

Bow Lines Optimization Based on Seakeeping by the Approach of Deep Learning and Evolution Strategy

Yunfei Yang, Jianglong Sun, Huazhong University of Science and Technology, China

91. ARCTIC IV: Icebreaker Design (V. 1)

Wednesday October 14 ~~14:00~~ Room 9

Chair:

2020-TPC-0688

Numerical Optimization of an Icebreaker Hull Form for Minimizing Resistance in Ice

Keisuke Anzai, Japan Marine United Corporation; Takanori Hino, Yokohama National University; Yutaka Yamauchi, Shigeya Mizuno, Japan Marine United Corporation, Japan

2020-DCW-0067

Analysis of the Seakeeping Performance of Icebreaker Based on Maxsurf

LI Xing-yu, HE Yan-ping, CHEN Chao, Shanghai Jiao Tong University, China

2019-TPC-0451

Assurance of Load-carrying Capacity for Ice Propellers

Kseniia Borisovna Khlystova, Alexandr Vladislavovich Andryushin, Central Marine Research and Design Institute, Russia

2020-TPC-1114

Applicability Analysis of Jacket Platform in Marine Resources Development in Extremely Cold Regions

Yanlin Wang, Shanshan Sun, Qi Guo, Dalian University of Technology; Ning Xu, National Marine Environmental Monitoring Center, China

2020-TPC-0864

Advances in Simulator for Arctic Marine Structures

Raed Lubbad, Wenjun Lu, Marnix van den Berg, Sveinung Løset, Andrei Tsarau, Arctic Integrated Solutions (ArcISO AS), Norway

2020-TPC-0167

Conceptual Solutions for the Main Facilities of Field Development for the Arctic Shelf

Oleg Finagenov, VNIIG Vedeneev, Russia

92. HYDRODYNAMICS XI: Naval Hydrodynamics 2 (V. 3)
Wednesday October 14 ~~16:20~~ Room 1

Chair:

2020-TPC-1125

Research on Evolutions of Vortex Structures inside a Stepped Moonpool and the Added Resistance under Different Ship Forward Speed and Draft

Hongguan Lyu, Jiayang Gu, Yanwu Tao, Zhongyu Zhang, Jiangsu University of Science and Technology, China

2020-TPC-0892

The Effects of Number of Blades of Free Vane Wheel on Energy-Saving

Chong-Ge Chen, Jian Hu, Wei-Peng Zhang, Ying-Zhu Wang, Harbin Engineering University, China

2020-TPC-1137

Effects of Bow Flap and Stern Flap on the Resistance of a Bluff-Body Vehicle

Xinlei Sheng, Lilan Zhou, Jiangtao Qin, Wuhan University of Technology; Tao Li, Wuhan Branch of China Classification Society; Tian Pan, Wuhan Bureau of Register Shipping and Administration, China

93. GEOTECH I: Offshore Foundation 1: Wind Turbines (V.

Wednesday October 14 ~~16:20~~²⁾ Room 2

Chair:

2020-TPC-0253

Investigation of the Equivalent Rocking Stiffness for Pile Group Foundation Systems of Wind Turbines

Shuhan Cao, Khalid Abdel-Rahman, Florian Tom Wörden, Martin Achmus, Leibniz University Hannover, Germany

2020-TPC-1012

Inclination Simulation of Jacket Foundation Offshore Wind Turbine with Piles in Sand during a Storm

Wenjie Zhou, Zhen Guo, Lizhong Wang, Shengjie Rui, Zhejiang University, China

2020-TPC-1011

Long-term Settlement of Suction Bucket Foundations Supporting Offshore Wind Turbines

Donghua Liu, Bo Liu, Guangdong Electric Design Institute, China; Youhu Zhang, Norwegian Geotechnical Institute, Norway; Zhaorong Ma, Guangdong Electric Design Institute, China; Knut H. Andersen, Hans Petter Jostad, Norwegian Geotechnical Institute, Norway; Cong Li, Yuling Zhang, Guangdong Electric Design Institute, China

2020-TPC-1009

Numerical Studies on Seabed Trench Formation near the Mooring Foundation for Floating Wind Turbines

Shengjie Rui, Lizhong Wang, Zhejiang University; Kanmin Shen, Powerchina Huadong Engineering Corporation; Zhen Guo, Wenjie Zhou, Yujie Li, Zhejiang University, China

94. RENEWABLE ENERGY XI: Offshore Wind 5: Floating Support (V. 1)

Wednesday October 14 ~~16:20~~ Room 2

Chair:

2020-DCW-0012

Current Effect on the Hydrodynamic Responses of Spar Type Floating Offshore Wind Turbine

Yang Jie, He Yan-ping, Zhao Yong-sheng, Shanghai Jiao Tong University, China; Shao Yan-lin, NTNU, Norway; He Chong, Tongji University, China

2020-DCW-0039

Performance of Tuned Mass Dampers for Vibration Reduction in a TLP Floating Wind Turbine

Yi-Pin Wang, Yong-Sheng Zhao, Yan-Ping He, Shanghai Jiao Tong University, China; Zhi-yu Jiang, University of Agder, Norway; Zhao-Long Han, Shanghai Jiao Tong University, China; Wen-Gang Mao, Chalmers University of Technology, Sweden; Yan-Lin Shao, Technical University of Denmark, Denmark

2020-DCW-0040

Effects of Second Order Wave Force on Fatigue Damage Assessment of a TLP-type Floating Wind Turbine

Jia-Rong Liu, Yong-Sheng Zhao, Yan-Ping He, Shanghai Jiao Tong University, China; Yanlin Shao, Technical University of Denmark, Denmark; Weng-Gang Mao, Chalmers University of Technology, Sweden; Zhao-Long Han, Xiao-Li Gu, Chao Huang, Shanghai Jiao Tong University, China

2020-DCW-0048

Prediction of Springing-Induced Extreme Responses of a TLP-Type Floating Wind Turbine

Si-Hong Xie, Yong-Sheng Zhao, Yan-Ping He, Shanghai Jiao Tong University, China; Yan-Lin Shao, Technical University of Denmark, Denmark; Zhao-Long Han, Chao Huang, Xiao-Li Gu, Shanghai Jiao Tong University, China

2020-DCW-0041

CFD-Based Analysis of a 6MW Spar-Type Floating Wind Turbine with Focus on Nonlinear Wave Loads

Tian-cheng Yao, Yong-Sheng Zhao, Yan-Ping He, Shanghai Jiao Tong University, China; Yan-lin Shao, Technical University of Denmark, Denmark; Zhao-Long Han, Lei Duan, Chao-Huang, Shanghai Jiao Tong University, China

2020-TPC-0130

Investigation on the Limit State of a Triple-Column Spar Floating Wind Turbine Concept

Liang Li, University of Strathclyde, UK; Jin Wang, COTEC Offshore Engineering Solutions, USA

95. SUBSEA, PIPELINES, RISERS VII: Pipeline Analysis (V.

2)

Wednesday October 14 ~~16:20~~ Room 4

Chair:

2020-TPC-0723

Operational Through-Life Pipe Soil Interaction Modelling

Emil A Maschner, Shulong Liu, Yunxiao N Wang, Wood Plc, UK

2020-TPC-0148

Nonlinear Finite Element Analysis of RC Bridge Piers Strengthened by Composite Materials under the Soil-Pile Interaction

H.-T. Hu, C.-M. Huang, P.-J. Chen, K.-Y. Liu, National Cheng Kung University, Taiwan China

2020-TPC-1083

Degradation of the Ultimate Load about a Corroded Subsea Pipe Repaired with CFRP under Long-term Seawater Immersion

Yu Zhang, Qiang Huang, Qian Cheng, Jianhang Xin, China University of Petroleum-Beijing, China

2020-TPC-0701

Advanced Cyclical Numerical Material Model Supports Pipeline Reel-lay

Shulong Liu, Eric Giry, Vincent Cocault-Duverger, Saipem, France

2020-TPC-0627

Thermal Buckling of Inner Pipe at Super-High Temperature and in Continuous Multiple-Sinusoidal-Wave Mode Shape when Constrained within the Annulus of a Pipe-In-Pipe System

Yunxiao Nick Wang, Steve Langford, Colin McKinnon, Emil Maschner, Wood PLC, UK

2020-TPC-0584

Evolution of Magnetic Field in the Defect Area of Pipeline Steel under Cyclic Loading

Sheng Bao, Yan Li, Zhengye Zhao, Dongming Yan, Zhejiang University, China

**96. MECHANICS, IMPACT, RISK II:
Impact, Explosion, Damage 2 (V. 4)**

Wednesday

October 14

~~16:20~~

~~Room 5~~

Chair:

2020-TPC-0900

Saturation Impulse in Cabin Explosion

Jiayue Wang, Ling Zhu, Wuhan University of Technology; T. X. Yu, Hong Kong University of Science and Technology, Hong Kong; Lanren Tian, Wuhan University of Technology, China

2020-TPC-0815

Lateral Impact Response of Concrete Filled Double Steel Tubular Sandwich Structure Used in Submarine Pipelines

Feng Wan, Peng Huang, Yong-hui Liu, Feng Guan, Yangtze University, China

2020-TPC-0103

Local Interfacial Damage Identification of Grouted Rock Bolt Anchorage Based on Piezoceramic Wave Method

Shi Yan, Yaoyao Chen, Yuanyuan Yao, Xuenan Wang, Shenyang
Jianzhu University, China

2020-TPC-0188 Keep here too many papers in HPM
**Stress Intensity Factor Calculation for Surface Crack in Typical
Welded Joints of Ship Structures by 2D Weight Function Method**
Kuilin Yuan, Jiayun Liu, Ming Hong, Dalian University of
Technology, China

97. COASTAL VII: Sediment Transport (V. 3)

Wednesday October 14 ~~16:20~~ Room 6

Chair:

2020-TPC-0269
**Experimental Modeling of Scour around Tripod Foundation for
Offshore Wind Turbines**
Xuan Ni, Leiping Xue, Shanghai Jiao Tong University, China

2020-TPC-1028
Sand Bar Formation at a River Mouth after a Typhoon Attack
Takashi Katayama, Masamitsu Kuroiwa, Yuki Kajikawa, Daichi
Tajima, Tottori University, Japan

2020-TPC-0849
**Application of Analytical Model for Tidal Residual Sediment
Transport in Estuaries**
Yi Xu, Ao Chu, Yongping Chen, Hohai University, China

2020-TPC-0542
**Numerical Simulation on Complex Internal Flow Field and
Structure Optimization for Draghead of Trailing Suction Hopper
Dredger**
Minhua Shu, Jifu Yin, Guojun Hong, Wei Shu, Jin Xing, National
Engineering Research Center of Dredging Technology and
Equipment, China

**98. OMGH I: Deep-Ocean Minerals:
Exploration and Mining**

Wednesday October 14 ~~16:20~~ Room 7

Chair:

**KEYNOTES 2 and 3
Deep Ocean Minerals, Exploration and Seafloor Mining
Technology**

2020-TPC-1161 (Postponed to ISOPE-2021)
**Geological Parameters Controlling the Variability in Grade and
Abundance of the Ferromanganese Crusts in the NW Pacific**

Seamounts: A Review of ROV Exploration and Geochemical Characterization [Oral presentation]

Akira Usui, Koch University; Katuhiko Suzuki, JAMSTEC, Japan

2020-TPC-1165 (Postponed to ISOPE-2021)

Deep Ocean Nodules: Seafloor Collection Technology 2020: How Much Progress since the 5,000-m System Tests in 70's? [Oral presentation]

Jin S Chung, formerly Lockheed Missiles & Space Co.-Ocean Mining Program, USA

2019-TPC-0552

Prospects for Development of Deep-water Machinery for Exploration and Exploitation of Polymetallic Sulphides in Russian Exploration Area (the Mid-Atlantic Ridge)

Igor Vladilenovich Egorov, Anatolii Vladimirovich Kondratenko, FSBI VNIIOkeangeologia; Artur Vladimirovich Grigortsuk, HYCO Ltd, Russia

99. ADVANCED SHIP TECH XI: Navigation (V. 4)

Wednesday October 14 ~~16:20~~ ~~Room 8~~

Chair:

2020-TPC-0414

Survey on Ship Autonomous Docking Methods: Current Status and Future Aspects

Chen Li, Xiping Yan, Shijie Li, Jialun Liu, Feng Ma, Wuhan University of Technology, China

2020-TPC-0571

Experimental Study on Influence of Navigation Performance of Ship Passing the Inland Navigation Tunnel

Yingbiao Xiao, Lizheng Wang, Shunhuai Chen, Yan Jin, Wuhan University of Technology, China

2020-TPC-0272

Investigation of Ship Accidents Using Ship Handling Simulator

Kurisu Yamashita, Keisuke Watanabe, Tokai University; Kuniaki Shoji, Tokyo University of Marine Science and Technology; Masatoshi Shimpo, Tokai University, Japan

100. ARCTIC V: Ice Mechanics (V. 1)

Wednesday October 14 ~~16:20~~ ~~Room 9~~

Chair:

2020-TPC-0297

Application of Bond-Based Peridynamics Concerning Rotation of Bond

Jiabao Li, Qing Wang, Suchao Lu, Harbin Engineering University; Lili Zhang, Norinco-group Aviation Ammunition Research Inst, China

2020-TPC-0879

Hydrodynamic Forces on Slender Body Advancing in Water with Ice Cover

Alexandra V. Pogorelova, Sholom-Aleichem Priamursky State University; Victor M Kozin, Institute of Machining and Metallurgy, FEB-RUS; Vitaly L Zemlyak, Sholom-Aleichem Priamursky State University, Russia

2020-TPC-1071

Analysis of the Influences of Seawater Freezing and Melting on the Water Quality of Sea Surface Based on Monitoring Data

Yuan Chen, Ning Xu, Shuai Yuan, Wenqi Shi, Lina Song, National Marine Environment Monitoring Center, China

101. ADVANCED SHIP TECH XIX: Structures (V. 4)

Thursday October 15 ~~08:00~~ Room 1

Chair:

2020-TPC-0918

Plate Tearing Experiments over a Cone-Shaped Rock Considering Friction in Ship Grounding

Zhihui Zhou, Ling Zhu, Kailing Guo, Wuhan University of Technology, China

2020-DCW-0016

Research on Parameters of Hull Girder Stress Filtering Parameters and Sampling Frequency Based on Model Test

Kai Zheng, Fanchao Wang, Fuhua Wang, Marine Design & Research Inst of China, China

2020-TPC-0452

Research on the Hinged End of Corrugated Bulkheads

Zhou Min, Gao Mingze, Qiu Weiqiang, Li Chuang, Marine Design & Research Inst of China, China

2020-TPC-0256

Research on Topology Optimization of Transverse Web Frame in Midship Cargo Hold Region of VLCC

Junxia Zhu, Jiameng Wu, Marine Design & Research Institute of China, China

2020-TPC-0280

Shear Stress on a Ventilated Supercavity Wall

Wang Zou, Tingxu Liu, Jiixin Wang, Shanghai Jiao Tong University, China

2020-TPC-0867

Building the Semantic Reasoning Model of Hull Structures Based on Knowledge Graph

Jian Liu, Shanghai Jiao Tong University; Shichao Zhang, Shanghai Waigaoqiao Shipbuilding; Liumin Tian, Deyu Wang, Shanghai Jiao Tong University, China

102. GEOTECH II: Offshore Foundation 2 (V. 2)

Thursday October 15 ~~08:00~~ ~~Room 2~~

Chair:

2020-TPC-1050

Calibrating a T-bar Factor for Calcareous Silt Subjected to Simple Shear

Mohammad A. Mohiuddin, Muhammad S. Hossain, The University of Western Australia; Shah N. Ullah, Central Queensland University; Youngho Kim, Yuxia Hu, The University of Western Australia, Australia

2020-TPC-0273

Numerical Investigations of Failure Envelope for Rigid Pile Subjected to Inclined Tensile Loading in Dense Sand

Ting Huang, Chenwei Luo, Hohai University; Yinghui Tian, Tianjin University; Liangde He, Hohai University Rong Wang, China Harbour Engineering Company, China

2020-TPC-0648

Numerical Studies on Lateral Response of Top-Finned TLP Foundation Piles

Yaguang Jiao, China Merchants Marine and Offshore Research Institute Co, China; Xiaoyan Long, Fugro USA Marine, USA; Lixin Xu and Haidong Lu, China Merchants Deepsea Research Institute (Sanya) Co; Feng Jiang, Quanming Miao, China Merchants Marine and Offshore Research Institute Co, China

2020-TPC-0175

Research on Forming Experiment of Vibrating-Mooring Pile

Bin Li, CCCC Tianjin Port Engineering Institute; Xinyao Tong, Tianjin University, China

103. RENEWABLE ENERGY XII: Offshore Wind 6:

Installation and Decommission (V.1)

Thursday October 15 ~~08:00~~ ~~Room 3~~

Chair:

2020-TPC-0119

Simulative Approach for the Optimization of Logistic Processes in Offshore Ports

Stephan Oelker, Abderrahim Ait Alia, Silas Büsing, Michael Lütjen, Michael Freitag, Univ. of Bremen, Germany

2020-TPC-0831

Hydrodynamic Design of SWATH for Offshore Wind Turbine Transportation and Installation

Sing-Kwan Lee, Zicheng Chen, Qi Pan, China Merchants Marine and Offshore Research Inst.; Haidong Lu, Lixin Xu, China Merchants Deepsea Research Inst., China

2020-TPC-0278

Dynamic Analysis of Offshore Wind Turbine Installation Based on a Novel Integrated Mating Method

Mingsheng Chen, Fan Wang, Ling Zhu, Wuhan University of Technology, China; Preben Terndrup Pedersen, Technical University of Denmark, Denmark

2020-TPC-0390

Modeling and Simulation of Offshore Wind Farm Installation with Multi-Leveled CGSPN Approach

Shengrui Peng, Helena Szczerbicka, Matthias Becker, Leibniz University Hannover, Germany

2020-TPC-0350

Demand for Special Vessels for the Decommissioning of Offshore Wind Turbines in the German North Sea—A Simulation Study

Thies Beinke, Abderrahim Ait Alla, Stephan Oelker, Michael Freitag, University of Bremen, Germany

104. SUBSEA, PIPELINES, RISERS VIII : Slurry (V. 2)
Thursday October 15 ~~08:00~~ Room 4

Chair:

2020-TPC-0226

Application of High Performance Comb-Type Polycarboxylate Dispersant in High-Density Saline Cement Slurries with High Ambient Temperatures

Haipeng Xin, Jianyao Wang, CNPC Tianjin Bo-Xing Engineering Science & Technology; Xiangyu Wang, CNPC Bohai Drilling Engineering; Kunpeng Yang, Jianguo Zeng, Jianlong Zou, Fuquan Sun, CNPC Tianjin Bo-Xing Engineering Science & Technology, China

2020-TPC-0241

Laboratory Study on Low Temperature and Early Strength MTC Cementing Fluid Activator

Kunpeng Yang, Jianyao Wang, Qiushi Guo, Shuang Zou, Fuquan Sun, Jianguo Zeng, Jianlong Zou, CNPC Tianjin Bo-Xing Engineering Science & Technology, China

2020-TPC-0242

Research on a Reinforcement Material for Low-Cost and Low-Density Cement Slurry

Kunpeng Yang, Haipeng Xin, Linglong Shi, Fuquan Sun, Jianguo Zeng, Jianlong Zou, CNPC Tianjin Bo-Xing Engineering Science & Technology, China

**105. MECHANICS, IMPACT, RISK III:
Structure Buckling, Strength (V. 4)**

Thursday October 15 08:00 Room 5

Chair:

2020-TPC-0914

Study on the Ultimate Strength of Welded Thin-Walled Square Tubes under Axial Compression

Liang Xu, Ling Zhu, Wuhan University of Technology, China;
Shengming Zhang, Lloyd's Register EMEA, UK; Kun Sun, Wuhan University of Technology, China

2020-TPC-0203

Vibration Analysis of a Ring-stiffened Conical Shell with Complex Internal Structures by a Hybrid Analytical/Numerical Approach

Wenchao Jia, Meixia Chen, Zhiwei Zhou, Huazhong University of Science and Technology; Kun Xie, Huazhong Agricultural University, China

2020-TPC-0351

A Study on a Reliability Based Fatigue Criteria for Ship Structures

Norio Yamamoto, Tomohiro Sugimoto, Kinya Ishibashi, Nippon Kaiji Kyokai, Japan

2020-TPC-0386

The Sensitivity of Ultimate Ship Hull Strength to the Structural Component Load-Shortening Curve

Shen Li, Zhiqiang Hu, Simon Benson, Newcastle University, UK

2020-TPC-0752

Study on Hydroelasto-Plastic Test and Hysteretic Test of a Ship Model in Regular Waves by Changing Wave Length

Yu Huang, Wei-qin Liu, Xue-min Song, Wuhan University of Technology, China

2020-TPC-0207

Free Vibration Analysis of Stiffened Rectangular Plates With Circular Opening Based on Energy Principle

Rui Nie, Tianyun Li, Xiang Zhu, Xu Chen, Huazhong University of Science and Technology, China

106. COASTAL VIII: Beach Nourishment (V. 3)

Thursday October 15 08:00 Room 6

Chair:

2020-TPC-0505

Artificial Sandbar Equilibrium: An Experimental Investigation

Yu Cai, Chi Zhang, Yuan Li, Haoye Yang, Hohai University, China

2020-TPC-0490

Experimental Observation of Wave Nonlinearity Characteristics with Shoreface Nourishment

Haoye Yang, Chi Zhang, Yuan Li, Yu Cai, Hohai University, China

2020-TPC-0927

The Use of One-Line Model and Littoral Drift Rose Concepts in Predicting Long Term Evolution of the Molise Coast

Mariano Buccino, Margherita Carmen Ciccaglione, University of Naples Federico II; Gianluigi Di Paola, University of Molise; Mario Calabrese, University of Naples Federico II, Italy

2020-TPC-0595

Numerical Simulation of Channel and Shoal Evolution in Funnel-Shaped Estuary

Qing Zhang, Shanghai Water Engineering Design and Research Institute, China

2020-TPC-0670

Numerical Investigation of Shoreface Nourishment Performance during a Storm

Weida Fang, Huimin Zhu, Mingjie Gong, Jiangsu Province Surveying & Mapping Engineering Institute, China

107. OMGH II: DEEP-OCEAN MINING 1:

Collector, Hydraulic Lift (V. 1)

Thursday

October 15

08:00

Room 7

Chair:

2020-TPC-1080

Experimental Study on Dynamic Response Characteristics of Trailing Suction Dredger under Medium and Long Period Waves

Jifu Yin, Guojun Hong, Zhongwei Zhou, Minhua Shu, National Engineering Research Center of Dredging Technology and Equipment, China

2020-TPC-1140

Modeling and Dynamic Simulation of an Underwater Wheel/Track Convertor

Ming Chen, Jing Leng, Institute of Deep-sea Science & Engineering, CAS, China

2020-DCW-0034

Numerical Study on Collecting Performance of Nodule Pick-Up Devices in Seawater and Sediment-Seawater Mixture

Ziyu Yue, Guocheng Zhao, Longfei Xiao, Mingyue Liu, Shanghai Jiao Tong University, China

2020-TPC-0861

Studies on Techniques for Dewatering of Polymetallic Manganese Nodules

Kali Sanjay, Abdul Rauf Sheik , Pooja Sahu1 , Binapani Behera, CSIR-Institute of Minerals and Materials Technology; Gopkumar

Kuttikrishnan, Ramadass Ananda Gidugu, M.A. Atmanand ,
National Institute of Ocean Technology, India

2020-DCW-0035

**Experimental Investigation on Characteristics of Flow Field in
'Suck-Up-Based' and 'Coanda-Effect-Based' Nodule Pick-Up
Devices**

Jingchao Hu, Guocheng Zhao, Longfei Xiao, Mingyue Liu,
Shanghai Jiao Tong University, China

2020-TPC-0590

**Experimental Investigation on the Dynamics of Vertical
Transport of Deep-Sea Ores**

Shuting Liao, Qihang Chen, Rongjia Cui, Wenyang Wang, Haining
Lu, Lei Liu, Shanghai Jiao Tong University, China

108. ADVANCED SHIP TECH XII: Ship Production (V. 4)
Thursday October 15 ~~08:00~~ ~~Room 8~~

Chair:

2020-TPC-0523

**Research On Optimization of Dock Resource Allocation during
Ship Repair**

Weiwei Tang, Peixing Liu, Yipeng Huang, Haoming He,
Guangzhou Maritime University, China

2020-TPC-0494

**Virtual-Real Interaction Tests for Functional Testing of Smart
Ships**

Fan Yang, Jialun Liu, Shijie Li, Feng Ma, Wuhan University of
Technology, China

2020-DCW-0007

**Numerical Investigation of Propeller Lateral Loads and
Performance of Stern Tube Bearing in Oblique Flow**

Yuxin Zhang, Hongjun Yang, Kang Chen, Shanghai Merchant Ship
Design and Research Institute; Liang Feng, Ocean University of
China, China

109. ARCTIC VI: Ice Loads (V. 1)
Thursday October 15 ~~08:00~~ ~~Room 9~~

Chair:

2020-TPC-0302

**The Method of Design Ice Loads Standardization in Application
to Vertical Side Structures in the Bow and Stern Areas of Ice
Going Vessels**

Evgeny M Appolonov, Lazurit Central Design Bureau; Viktor V.
Platonov, Krylov State Research Centre; Vladimir N Tryaskin,
St.Petersburg State Marine Technical University, Russia

2020-TPC-0697

Analysis of Ice Resistance in Ice-Structure Interaction Based on the Cohesive Element Method

Baoyu Ni, Qi Huang, Harbin Engineering University, China

2020-DCW-0002

Numerical Simulation of Sloping Structure-Level Ice Interaction Based on SPH-FEM Conversion Algorithm

Zhe Chen, Yanping He, Chao Huang, Yupei Ren, Meng Wu, Shanghai Jiao Tong University, China

2020-TPC-0378

The Method of Numerical Modeling of the Level Ice Impact on the Sloping Profile Structures

Alexander S. Bolshev, Sergey A Frolov, Peter the Great St. Petersburg Polytechnic University, Russia

2020-DCW-0080

Cohesive Element Method for Ice Load on Conical Structures

Kaiyu Zhan, Decheng Wan, Shanghai Jiao Tong University, China; Zhiming Yuan, University of Strathclyde, UK

2020-TPC-1025

Simulation of Atmospheric and Oceanographic Parameters for Spray Icing Prediction

A Shojaei Barjoui, Masoud Naseri, UiT: The Arctic University of Norway; Truls Bakkejord Räder, SINTEF Nord AS; Eirik Mikal Samuelsen, Norwegian Meteorological Institute, Norway

110. HYDRODYNAMICS XII: Ship Hydrodynamics 1(V. 3)

Thursday October 15 ~~10:30~~ Room 1

Chair:

2020-TPC-0488

Numerical Study on Factors Affecting Wake Field of Twin-Skeg Type Ship with Large Breadth and Shallow Draught

Hua-wei Zhou, Lou-Feng Pan, Xian-qun Mao, Li-wei Mou, Marine Design & Research Inst of China, China

2020-TPC-0862

Study On the Resistance Characteristics of a Ship with Moonpool

Zi-yu Lin, Li-lan Zhou, Jiang-tao Qin, Wuhan University of Technology; Tao Li, Wuhan Branch of China Classification Society; Tian Pan, Wuhan Bureau of Register Shipping and Administration, China

2020-DCW-0015

Numerical Simulations of the Motion of Wharf Moored Ship Induced by Passing Ship

Ming Wu, Xiao Wang, Bo Yang, Feng Cai, Dalian Naval Academy, China

2020-DCW-0100

CFD-Based Study on the Bank Effects on a High-speed Container Ship

Han Liu, Ning Ma, Xiechong Gu, Shanghai Jiao Tong University, China

111. GEOTECH III: Offshore Foundation 3 (V. 2)
Thursday October 15 ~~10:30~~ ~~Room 2~~

Chair:

2020-TPC-0945

Application of a Damage Model to Submarine Slope Stability after Gas Hydrate Dissociation

Shaoli Yang, Khoa Huynh, Maarten Vanneste, Norwegian Geotechnical Institute, Norway

2020-TPC-1001

Improved CFD-DEM Model for Local Scour Simulation around Monopile

Seongjin Song, Sunho Park, Korea Maritime and Ocean University, Korea

2020-TPC-1013

Large-Deformation Finite Element Analysis for Bearing Capacity of Suction Caisson in Marine Clay

Yin Wang, Malik Faran, Shixing Zhang, Dalian University of Technology, China

2020-TPC-0233

Numerical Investigation of the Behavior of Gravity Base Foundations under Cyclic Loading

Shuhan Cao, Martin Achmus, Khalid Abdel-Rahman, Leibniz University Hannover, Germany

2020-TPC-1175

Engineering Solution to Piling Works under Extreme Wave Condition

Xian-dao Feng, CCCC Second Harbour Engineering Co; Ran Tao, China Harbour Engineering Co; Rui-yi Huang, CCCC Second Harbour Engineering Co; Zhi-wu Xue, CCCC Wuhan Harbour Engineering Design and Research Co, China

112. RENEWABLE ENERGY XIII: Offshore Wind 7: General (V.1)

Thursday October 15 ~~10:30~~ ~~Room 2~~

Chair:

2020-DCW-0074

Optimization of Wind Farm Layout Based on Bastankhah Wake Model

Nina Wang, PowerChina Huadong Engineering Corp; Yang Huang, Decheng Wan, Shanghai Jiao Tong University, China

2020-DCW-0075

Numerical Analysis of Atmospheric Turbulence Effects on Wind Turbine

Dezhi Wei, Decheng Wan, Shanghai Jiao Tong University; Shengxiao Zhao, PowerChina Huadong Engineering Corp, China

2020-TPC-0239

Hydrodynamic Analysis of a Floating Hybrid Renewable Energy System

Yapo Wang, Wei Shi, Lixian Zhang, Dalian University of Technology, China; Constantine Michailides, Cyprus University of Technology, Cyprus; Li Zhou, Jiangsu University of Science and Technology, China

2020-TPC-0751

Conceptual Analysis of the Power of Offshore Wind Plants Designed to Operate in Arctic Conditions

Alexander S. Bolshev, Viktor V. Elistratov, Alexander A. Panfilov, Aleksandr E. Kharseev, Peter the Great St. Petersburg Polytechnic University, Russia

113. SUBSEA, PIPELINES, RISERS IX: Flow Assurance (V. 2)

Thursday October 15 ~~10:30~~ Room 4

Chair:

2020-TPC-0779

Numerical Simulation of Characteristics of Oil-Gas-Water Three-Phase Flow in Different Dip Angle Fluctuating Tubes

Wenxing Wang, Jin Yang, Ting Sun, Huanhuan Wang, China University of Petroleum (Beijing); Hexin Liu, CNOOC; Yuan Chen, Yin Zhao, Tianwei Zhang, China University of Petroleum (Beijing), China

2020-TPC-0605

Rheological Behavior and Microstructure Characterization of Water-in-Oil Emulsion under Pipe Flow

Kaifeng Fan, Si Li, Liaoning Shihua University; Rongbin Li, China University of Petroleum-Beijing; Bo Wang, Liaoning Shihua University, China

2020-TPC-0271

Emulsified Water Fraction and Viscosity Characteristics of Oil-Water Mixture under Flowing Condition

Si Li, Kaifeng Fan, Liaoning Shihua University; Yue Cui, China University of Petroleum-Beijing; Chaoguang Liu, Liaoning Shihua University, China

2020-TPC-0229

Numerical Analyses of the Cushion Effect of Liquid Film on Particle Erosion in Elbows under Annular Flow Conditions

Mingyang Liu, Liming Hu, Tsinghua University, China

2020-TPC-0408

Mitigation of Flow-Induced Pulsations in Flexibles at Field Conditions with Liquid Injection

Pieter van Beek, Néstor González Díez, TNO, Netherlands; Peter Aardal, Equinor ASA, Norway

114. MECHANICS, IMPACT, RISK IV: Risk & Safety 1 (V. 4)
Thursday October 15 ~~10:30~~ Room 5

Chair:

2020-TPC-0498

Preliminary Analysis on Beach Safety Accidents in Mainland China's Coasts

Xu Lu, Chi Zhang, Jian Shi, Hohai University; Yao Zhang, Ministry of Natural Resources, China

2020-TPC-0499

A Modified Monte Carlo Homogeneity Test for Hydrologic Extremum Series

Shuguang Liu, Jiyu Liang, Guihui Zhong, Hong Zhang, Sha Lou, Qi Fang, Tongji University, China

2020-TPC-0512

A Co-Simulation Method for Ejection Process of the Independent Escape Capsule

Shuyan Zou, Lei Zhang, Jianglong Sun, Huazhong University of Science and Technology, China

2020-TPC-0281

Adaptive Leader-Follower Formation Control of Unmanned Surface Vessels with Obstacle Avoidance

Quan Shi, Tieshan Li, Shun Yang, Dalian Maritime University; Jingqi Li, Shanghai Jiao Tong University; Yue Wu, Dalian Maritime University, China

2020-TPC-0925

LASH FIRE – Legislative Assessment for Safety Hazards of Fire and Innovations in Ro-Ro Ship Environment

Matthias Krause, Center of Maritime Technologies e.V, Germany; Franz Evegren, RISE Research Institutes of Sweden, Sweden; Vito Radolovic, FLOW Ship Design, Croatia; Jérôme Leroux, Bureau Veritas, France; Grit Ladage, Santiago Ferrer Mur, Center of Maritime Technologies e.V, Germany

2020-TPC-0703

Risk-based, Sensor-fused Emergency Response in Flooding Casualties

Kristian Bertheussen Karolius, DNV GL, Norway; Jakub Cichowicz, AqualisBraemar; Donald Paterson, Dracos Vassalos, Maritime Safety Research Center, UK

115. COASTAL IX: Coastal Management (V. 3)
Thursday October 15 ~~10:30~~ Room 6

Chair:

2020-TPC-0551

Long-term Observation of Coastal Evolution with Google Earth Engine: A Case Study of the Jiangsu Coast, China

Fangming Li, Chi Zhang, Jinhai Zheng, Hohai University, China

2020-TPC-0298

Study on Risk Assessment of Multi-channel Sea Dikes

Qian Lu, Xincheng Liu, Yongxing Ji, Shanghai Water Engineering Design and Research Institute Co; Jie Xie, Shanghai Waterway Engineering Design and Consulting Co. China

2020-TPC-0602

Risk Analysis of Flood Inundation by Storm Surge in Maozhou River

Peng Hou, Qisong Wang, Pearl River Hydraulic Research Inst; Xiejun Shu, South China Sea Marine Engineering and Environment Inst, China

2020-TPC-0643

Multi-Disaster Risk Assessment and Spatial Management of Coastal Area

Lien-Kwei Chien, Po-Yun Chuang, Ming-Yan Tsai, Wei-Po Huang, Cheng-Yu Ku, National Taiwan Ocean University; C H Chang, National Science and Technology Center for Disaster Reduction, Taiwan China

2020-TPC-0644

The Application of Nearshore Risk Assessment of Marine Resources Area for National Spatial Plan

Lien-Kwei Chien, Chi-Wen Huang, Po-Yun Chuang, Ming-Yan Tsai, National Taiwan Ocean University; Chih-Hsin Chang, National Science and Technology Center for Disaster Reduction, Taiwan China

2020-TPC-0559

Reinforced Breakwater Foundation against Earthquake and Tsunami Induced Failure

Jie Liu, Hemantna Hazarika, Kyushu University, Japan

116. OMGH III: Gas Hydrates (V. 1)
Thursday October 15 ~~10:30~~ Room 7

Chair:

2020-TPC-0444

Dynamic Risk Analysis on Offshore Natural Gas Hydrate Production Test Based on DBN-GO Method

Chuan Wang, Yupeng Liu, Southwest Petroleum University; Wen Hou, Chao Liu, Baoji Oilfield Machinery Co; Yuyan Zheng, Guorong Wang, Southwest Petroleum University, China

2020-TPC-0848

Experimental Study on Natural Gas Hydrate Induction Time in the High-Pressure Flow Loop

Jin Zhang, Chen An, Menglan Duan, China University of Petroleum (Beijing), China

2020-TPC-0865

Shear Rate-Dependent Behaviors on Natural Gas Hydrate-Bearing Sediments under Plane Strain Shear Test

Qi Wu, Norimasa Yoshimoto, Naoki Nakano, Shintaro Kajiyama, Jialin Xu, Yukio Nakata, Yamaguchi University, Japan

2020-TPC-1091

The Establishment of the Hydrate Survey Prediction Model in the Plateau Permafrost Area Based on the Characteristic Analysis Method

Yan Peng, Hui Fang, Inst of Geophysical and Geochemical Exploration, CAGS; Xueqiang Zhang, China Univeresity of Geosciences (Wuhan), China

2020-TPC-1104

Comprehensive Analysis of the Audio Magnetotelluric 3D Inversion Results of the Muli Natural Gas Hydrate Region in the Qilian Mountain, China

Meixing He, Dashuang He, Hui Fang, Penghui Zhang, Fageng Pei, Qinyin Lv, Genggeng Qiu, Bingrui Du, Inst of Geophysical and Geochemical Exploration, CAGS, China

2020-TPC-0753

Changes of k_0 of Hydrate-Bearing Sand during Hydrate formation [Oral presentation]

Haitao Zhang, Xianqi Luo, Shanghai Jiao Tong University, China

117. ADVANCED SHIP TECH XIII: Propulsion 1 (V. 4)

Thursday October 15 ~~10:30~~ Room 8

Chair:

Merged to Session 63.

118. ARCTIC VII: Ice Conditions 1 (V. 1)

Thursday October 15 ~~10:30~~ Room 9

Chair:

2020-TPC-0374

Study on the Characteristics of Sea ice and Storm Waves in Waters off Mackenzie Delta

Fumin Xu, Xinwei Zhou, Qi Miao, Hong Wu, Hao Wang, Hohai University, China

2020-TPC-0359

Complex Study of Large Ice Features and Assessment of Morphometric, Physical-Strength and Age Characteristics of a Composite Ice Ridge

Roman B. Guzenko, Yevgeny U. Mironov, Victor V. Kharitonov, Ruslan I. May, Viktor S. Porubaev, Stepan V. Khotchenkov, Sergey M. Kovalev, Arctic and Antarctic Research Institute; Konstantin A. Kornishin, Rosneft Oil Co; Yaroslav O. Efimov, Arctic Research Centre, Russia

2020-TPC-0249

Comparative Analysis of the Hummock Keel Drafts in the Kara Sea, Laptev Sea and Chukchi Sea According to the Data Obtained from Bottom Sonars

Alexey K. Naumov, Elena A. Skutina, Nikolay Kubyshekin, Arctic and Antarctic Research Institute; Konstantin A. Kornishin, Petr A. Tarasov, Rosneft Oil Company; Yaroslav O. Efimov, Arctic Research Centre, Russia

2020-TPC-0533

Challenges and Opportunities for Arctic Transportation Caused by the Shrinking Arctic Ice Cover

Ove Tobias Gudmestad, University of Stavanger, Norway; Yong Bai, Zhejiang University, China

119. HYDRODYNAMICS XIII: Ship Hydrodynamics 2 (V. 3)
Thursday October 15 ~~14:00~~ ~~Room 1~~

Chair:

2020-TPC-0698

Identification of Characteristic Wave Groups Causing Parametric Rolling for C11 Container Ship in Irregular Head Seas

Sixin Feng, Shan Ma, Wenyang Duan, Binbin Zhao, Harbin Engineering University, China

2020-TPC-0152

Hydrodynamic Coefficients Identification of Nonlinear Ship Roll Motion Based on Hilbert Transform

Weihao Sun, Yingchao Li, Yanqing Han, Haiying Mao, Ludong University, China

2020-DCW-0026

The Research of Roll Damping Characteristics of Round Bilge, Angle and Mixed Ship Types Based on CFD and Model Test

Yihan Zhang, Jingfeng Hu, Marine Design & Research Inst of China, China

2020-TPC-1116

Experimental Study on Pitching Reduction of Ship Model with Controllable Interceptor in Wave

Chen Gang, Wang Wei, Huo Cong, Naval University of Engineering, China

120. GEOTECH IV: Offshore Foundation 4 (V. 2)

Thursday October 15 ~~14:00~~ Room 2

Chair:

2020-TPC-0323

Evaluation on Excavation Resistance in Bored Pile Method

Hikaru Yoshida, Shohei Ishida, Daiken Sekkei, Inc.; Tomoya Yamazaki, Nippon Concrete Industries; Tomihisa Yamada, Nobi society for Place name; Yukihiko Kani, Eiton Co, Japan

2020-TPC-0275

Investigation for Foot Protection Diameter of Bored Pile by Resistivity Exploration Method

Masahide Niina, Ken Watanabe, Mamoru Fuji, Tokai University; Takayuki Kodama, Nobuyuki Chikusa, Mitsuru Kodera, Nippon Concrete Industries, Japan

2020-TPC-0470

The Footing Size Effect on Punch-through Bearing Capacity Assessment of Jack-Up Barges in Western Taiwan Offshore Layered Soils

Chao-Ming Chi, Zheng-Shan Lin, Feng Chia University, Taiwan
China

2020-TPC-0837

2D Finite Element Method Analysis for Deepening of Existing Gravity Quay Walls

Anh-Dan Nguyen, Young-Sang Kim, Gyeong-O Kang, Hui-Jin Kim, Chonnam National University, Korea

2020-TPC-0176

Research on Deformation Characteristics of New Type of Cofferdams Structure

Aimin Liu, Bin Li, CCCC Tianjin Port Engineering Institute; Xinyao Tong, Tianjin University, China

121. RENEWABLE ENERGY XIV: Offshore Wind 8: General (V.1)

Thursday October 15 ~~14:00~~ Room 3

Chair:

2020-TPC-0361

Long-term Structural Vibration Monitoring of a Metrology Mast in Taiwan – An Investigation of Marine Structures

Kung-Chun Lu, James Chang, National Center for Research on Earthquake Engineering; Wei-Chen Tseng, Feng Chia University; Yu-Shu Kuo, National Chengkung University; Chiou-Fong Chung, Taiwan Power Co, Taiwan China

2020-TPC-1041

A Review of Available Tropical Cyclone Measurements, Existing Standards and Methods for Seismic Design for Wind Farms

Marcus Klose, Lars Klett, Kai Freudenreich, DNV GL, Germany; Junkan Wang, DNV GL, UK

122. SUBSEA, PIPELINES, RISERS X: Pipeline, Scouring (V.

Thursday October 15 14:00 Room 4

Chair:

2020-TPC-0334

Field Observations of Pipeline Free Span on Soft Clay Seabed

Thiam Chuan Teh, Teik Tian Seah, Intecsea, Worley Group, Singapore; Joshua Altmann, Advisian, Worley Group, Australia

2020-TPC-0934

Effects of Wave-Induced Two-Dimensional Seepage Flow on Sediment Incipient Motion

Hualing Zhai, Southwest Jiao Tong University, China; Dong-Sheng Jeng, Griffith University, Australia; Junwei Liu, Qingdao University of Technology, China

2020-TPC-0126

Numerical Study on the Local Scour around Submarine Pipeline under Solitary Wave

Enjin Zhao, Jiaying Wang, Junkai Sun, Youkou Dong, China University of Geosciences, China

2020-TPC-0783

Prediction Model of Pipeline Scour Depth Based on BP Neural Network Optimized by Genetic Algorithm

Ke Hu, Xinglan Bai, Zhaode Zhang, Zhejiang Ocean University, China

2020-TPC-0834

Three-phase Flow Simulation of Local Scour around a Submerged Horizontal Cylinder

Shijie Huang, Zhenhua Huang, University of Hawaii at Manoa, USA

2020-TPC-0458

Research on Scouring Identification Model of Jack-Up's Pile Legs and Boots

Chunmei Li, Renjun Yan, Ruyi Wang, Wei Shen, Wuhan University of Technology, China

123. MECHANICS, IMPACT, RISK V: Risk & Safety 2 (V. 4)
Thursday October 15 ~~14:00~~ Room 5

Chair:

2020-TPC-0747

A Novel Dropped Object Risk Assessment Method for Offshore Operations

Ali Sari, Omega Advanced Engineering and Risk Consulting;
Sachin Mathakari, TechnipFMC, USA

2020-TPC-1017

Experimental and Numerical Investigation on the Quasi-Static Perforation of Aluminum-Alloy Plates

Anrui Dong, Bin Liu, Wuhan University of Technology; Lin Chen, China Ship Development and Design Center; Kun Liu, Jiangsu University of Science and Technology, China

2020-TPC-1018

Numerical Comparison of Structural Crashworthiness of Ship Engine Room and Cargo Hold in Collisions

Gang Wang, Bin Liu, Wuhan University of Technology; Lin Chen, Xianting Liao, China Ship Development and Design Center, China

2020-TPC-0642

Flammable Gas Dispersion Behavior to Adjacent Vessels from FPSO Leakage Accident

Yu Cao, Qiaojiao Jia, Shanghai Ocean University; Miao Chen, Harbin Engineering University; Ziyang Liu, Shanghai Merchant Ship Design & Research Institute, China

124. COASTAL X: Coastal Hydrodynamics 1 (V. 3)
Thursday October 15 ~~14:00~~ Room 6

Chair:

2020-TPC-0793

Spatiotemporal Measurement for Strong Current Fields in a Ferry Route Using Coastal Acoustic Tomography

Aruni Dinan Hanifa, Hidemi Mutsuda, Hiroshima University, Japan; Fadli Syamsudin, The Agency for the Assessment and Application of Technology, Indonesia; Naokazu Taniguchi, Takuji Nakashima, Yasuaki Doi, Arata Kaneko, Hiroshima University, Japan

2020-TPC-0186

Experimental Investigation on Flow Patterns Induced by a Twin-Block Perforated Artificial Reef

Yuhua Zheng, Cuiping Kuang, Tongji University; Jie Gu, Shanghai Ocean University; Xuejian Han, Yue Ma, Tongji University, China

2020-TPC-0650

Responses of Tides in the Pearl River Estuary to Sea Level Rise

Cuiping Kuang, Guangwei Huang, Xu Liu, Hongcheng Huang,
Honglin Song, Tongji University, China

2020-TPC-0402

**Typhoon Risk Analysis Model Based on Poisson-P-III Compound
Extreme Value Distribution**

Yuanxin Li, Guilin Liu, Ocean University of China, China

125. OMGH IV: Ocean Drilling 1 (V.1)

Thursday October 15 ~~14:00~~ ~~Room 7~~

Chair :

2020-TPC-0714

**Design of Experiment (DOE) Approach to Sensitivity Analysis of
Hydraulic Fracturing**

Juliana Souza Baioco, Breno P Jacob, LAMCSO/PEC/COPPE/
UFRJ, Brazil; Luis Felipe Mazadiego, Polytechnic University of
Madrid, Spain

2020-DCW-0084

**A BHA with Integrated Casing Cutting and Fishing Tools Applied
in Offshore of Well Abandonment**

Dechen Kong, Gang Liu, China University of Petroleum; Minghui
Cao, Dehua Hu, Dawei Zheng, Jianhua Mu, SINOPEC Shanghai
Offshore Oil & Gas Company, China

2020-TPC-1085

**Development of Controllable Pre-Swirl Fins Adapted to Different
Operation Conditions**

Wei Jin, Jens Ring Nielsen, MAN Energy Solutions, Denmark

2020-TPC-0112

**New Model for Prediction of Sustained Casing Pressure of
Deepwater Wells**

Yanbin Wang, Deli Gao, Jinduo Wang, China University of Petroleum
Beijing, China

126. ADVANCED SHIP TECH XIV: Propulsion 2(V. 4)

Thursday October 15 ~~14:00~~ ~~Room 8~~

Chair:

2020-TPC-0806

The Fast Prediction of Ship Speed and Trim/Sinkage by TEBEM

Wenyang Duan, Shixin Tang, Jikang Chen, Harbin Engineering
University, China

2020-DCW-0072

**Numerical Investigation of Propeller-Rudder Interaction Based
on Body Force Approach**

Zhen Ren, Jianhua Wang, Decheng Wan, Shanghai Jiao Tong University, China; Moustafa Abdel-Maksoud, Hamburg University of Technology, Germany

2020-TPC-0869

Analysis of Hydrodynamic Performance of Tip Loaded Propellers
Duwen Zhang, Wei He, Ziru Li, Wuhan University of Technology, China

2020-TPC-1047

Numerical Simulation of Propeller Flows Based on OpenFoam and Application to Body-Force Method
Shuguang Wang, Yonghwan Kim, Seoul National University, Korea

127. ARCTIC VIII: Ice Conditions 2 (V. 1)

Thursday October 15 14:00 Room 9

Chair:

2020-TPC-0365

Regional Differences and General Patterns of Ridges Morphometric Characteristics Distribution in the Kara and Laptev Seas

Roman B. Guzenko, Yevgeny U. Mironov, Victor V. Kharitonov, Ruslan I. May, Viktor S. Porubaev, Stepan V. Khotchenkov, Arctic and Antarctic Research Institute; Konstantin A Kornishin, Rosneft Oil Co; Yaroslav O. Efimov, Arctic Research Centre, Russia

2020-TPC-0413

Preliminary Results of the Ice Cover Drift Studies Performed in the 2013-2017 Winter Surveys in the Russian Arctic Seas

Nesterov A.V., Buzin I.V, Gudoshnikov Yu.P., Arctic and Antarctic Research Institute; Kornishin K.A, Rosneft Oil Co; Efimov Ya.O., Arctic Research Centre, Russia

2020-TPC-0379

Stability of Icebergs and Period of Natural Oscillations in the the Barents, Kara and Laptev Seas

Konstantin A. Kornishin, Rosneft Oil Co; Yaroslav O Efimov, Arctic Research Centre; Peter A. Tarasov, Rosneft Oil Co; Teymur E Mamedov, Arctic Research Centre; Konstantin G. Smirnov, Andrey A. Skutin, Elena A. Skutina, Aleksey K. Naumov, Arctic and Antarctic Research Institute, Russia; Ove T. Gudmestad, University of Stavanger, Norway

2020-TPC-0293

Interdecadal Changes of the Solar-Arctic Oscillation Relationship and Their Effects on the Arctic Climate Change during Boreal Winter

Qun Zhou, National Marine Environmental Forecasting Center; Wen Chen, Institute of Atmospheric Physics, China

2020-TPC-0890

Seasonal Variability Ice Strength Properties on the Russian Continental Shelf

Alexander T. Bekker, Tatyana E Uvarova, Egor E Pomnikov, Anton A Zverev, Aleksey A Smykov, Far Eastern Federal University; Konstantin A Kornishin, Rosneft; Yaroslav O Efimov, Arctic Research Cenrer, Russia

128. HYDRODYNAMICS XIV: Ship Hydrodynamics 3 (V. 3)
Thursday October 15 ~~16:20~~ ~~Room 1~~

Chair:

2020-TPC-0669

CFD Uncertainty Analysis of a Calibration Ship Model Simulations at Different Y+ Values

Zhang Li, Chen Weimin, Yang Yilin, Chen Jianting, Shanghai Ship and Shipping Research Institute, China

2020-DCW-0008

A Parallel Coupled Method of CFD and Overset Grid Solver for Simulating Ship Hydrodynamics

Juntao Huang, OHMUGA Fluid Dynamics Inc., Canada

2020-TPC-0163

Comparative Study on Ship Motions in Uni- and Bi-Directional Waves by CFD

Songxing Huang, Jialong Jiao, Chaohe Chen, South China University of Technology, China

2020-TPC-0161

A CFD Simulation Study of Ship Motions in Cross Sea Waves

Jialong Jiao, Songxing Huang, Yuefu Yang, Chaohe Chen, South China University of Technology, China

2020-TPC-0679

Analysis on Variation Sensitivity for the Second Generation Intact Stability Criteria

Tianhua Wang, Min Gu, Ke Zeng, Jilong Chu, Jiang Lu, China Ship Scientific Research Center, China

129. GEOTECH V: Soil Property & Liquefaction (V. 2)

Thursday October 15 ~~16:20~~ ~~Room 2~~

Chair:

2020-TPC-0116

Permeation of Ultra-fine Particle Cement to Sandy Ground and Cement Stabilization

Yasuyuki Nabeshima, Akashi College, Japan

2020-TPC-0476

Study on Countermeasure Method for Liquefaction of Fishing Port Against the Nankai Trough Earthquake

Kojiro Okabayashi, Genki Hashimura, Akari Okubo, Hyo Ogasawara, Kosen Institute of Technology, Japan

2020-TPC-0591

Development of National Institute of Technology, Kochi College Type Cyclic Box Shear Apparatus Capable of Conducting Liquefaction Strength Test

Kojiro Okabayashi, Kei Futagami, Wakana Tanimoto, Kochi College; Mitsuhiro Mukaitani, Kagawa College, Japan

2020-TPC-0543

The Primary Compression Ratio of Normally Consolidated Clays

Takahiro Yoshidomi, Ohba Co; Pisith Hong, Tokai University; Koichi Iinuma, Ohba Co; Motohiro Sugiyama, Tokai University, Japan

130. OCEAN TECHNOLOGY VIII: Subsea, Drilling (V. 1)
Thursday October 15 ~~16:20~~ Room 3

Chair:

2020-TPC-0407

Effect of Subsea Bolt Tightening on Bolt Preload and Slip Factor

Benjamin Ripsch, Fraunhofer Institute for Large Structures in Production Engineering IGP; Knuth-Michael Henkel, University of Rostock, Germany

2020-TPC-0396

Zigzag Maneuvering Test of Submarine by CFD

Qiufeng Liang, Changrun Xiao, Zhijun Cao, Naval University of Engineering, China

2020-TPC-0125

A Study on Process System Design for Offshore Oil Field with High CO₂ Content

Hualei Yi, Chunsheng Wang, CNOOC Research Institute, China

2020-TPC-0139

Optimization Design and Performance Evaluation of New Type Low Temperature Early Strength Cement Slurry

Fangzhu Xi, Fuquan Sun, Jianyao Wang, Kunpeng Yang, CNPC Tianjin Boxing Engineering Science & Technology Co., China

131. SUBSEA, PIPELINES, RISERS XI: Panel
Thursday October 15 ~~16:20~~ Room 4

Chair:

132. MECHANICS, IMPACT, RISK VI; Structure, Strength

Thursday October 15 (V. 4)
~~16:20~~ Room 5

Chair:

2020-TPC-0265

An Efficient Method for Prediction of the Tail of Probability of Exceedance of Vertical Bending Moment in a Ship Based on Nonlinear Time-Domain Simulations

Sumit Kumar Pal, Tomoki Ono, Iijima Kazuhiro, Osaka University, Japan

2020-TPC-0776

Optimal Sensor Placement based on QR Decomposition and Genetic Algorithm

Peng Yu, Qin Yang, Mengxiong Ye, Xiaozou Chen, Wenchao Jia, Wuhan 2nd Ship Design and Research Institute, China

2020-TPC-0689

Test on the Tooth Spacing Coefficient for Locking Mechanism of Full Structure Clamp

Xiang Shi, Ocean University of China; Xia Yu Ai, PLA, Navy Submarine Academy; Zhen Zhang, Ocean University of China, China

2020-TPC-0976

Optimization Design of Hatch Corners in a Container Ship Based on the Neural Network and Multi-Objective Particle Swarm Optimization

Li Sun, Xiaoping Huang, Shanghai Jiao Tong University, China

133. COASTAL XI: Coastal Hydrodynamics 2 (V. 3)

Thursday October 15 ~~16:20~~ Room 6

Chair:

2020-TPC-0489

Feature Analysis of Super Storm Surge Due to Typhoon "Saomai"

Xiang Lin, Hohai University; Bo Yang, Power China Hubei Electric Engineering; Jun Chen, Hohai University, China

2020-TPC-0461

Combined Wall and Trench Systems at Onshore to Suppress Tsunami Impact on Coast

Akalanka Silva, Susumu Araki, Osaka University, Japan

2020-TPC-0560

Benchmark Tests of Hydrodynamic Simulation of Coastal Waters Using Delft3D-FM

Hao Cao, Saiyu Yuan, Hongwu Tang, Hohai University; Joseph Hun-wei Lee, The Hong Kong University of Science and Technology, Hong Kong, China

2020-TPC-0486

Wave-Induced Sediment Transport Along the Abandoned Yellow River Delta in Jiangsu Coast, China

Li Ni, Jianfeng Tao, Hohai University, China

2020-TPC-0206

Experimental Study on Mechanical Characteristics of FRP Pipe in Seabed Water Intake and Drainage Engineering of Coastal Power Plant

Ge Longzai, Guan Ning, Chen Hanbao, Zhao Xu, Tianjin Research Institute for Water Transport Eng., China

134. OMGH V: Ocean Drilling 2 (V.1)

Thursday October 15 ~~16:20~~ Room 7

Chair:

2020-TPC-0129

Research and Application of Multiscale Fiber Toughener BCE-230S

Shuang Zou, Jian-Long Zou, Tian-Yi Zhang, Jian-Guo Zeng, Kun-Peng Yang, Kang-Wei Ao, Bao-Hui Zhao, CNPC Tianjin Bo-Xing Engineering Science & Technology Co., China

2020-TPC-0446

Study on the Effect of Platform Motion Control on Downhole Pressure in Riserless Dual Gradient Drilling

Chuan Wang, Jing Liu, Southwest Petroleum University; Wen Hou, Anyi Wang, Peng Zhang, Baoji Oilfield Machinery Co, China

2020-TPC-1086

What Is the Horizontal Section's Maximum Allowable Length during Tripping or Running Casing in the Horizontal Extended-Reach Well?

Jie Xu, CNOOC; Yuqun Hong, Xuyue Chen, Yiqi Zou, China University of Petroleum (Beijing); Lianpo Sun, Tao Xie, Wen Wang, CNOOC, China

135. ADVANCED SHIP TECH XV: Propulsion 3; Hybrid (V.

Thursday October 15 ~~16:20~~ Room 8

Chair:

2020-TPC-0646

Modeling and Optimization of Green Ships Using Diesel/Natural Gas/Fuel Cell Hybrid or Pure Electric Propulsions

Zuomin Dong, University of Victoria, Canada

2020-TPC-0327

BOG Recovery and CO₂ Zero Emission Thermal Cycle Using Cold Energy of LNG

Qian Xue, Xiaolin Wang, Zunzhao Li, Mingrui Liu, Sinopec Dalian Research Institute of Petroleum and Petrochemicals; Shuanshi Fan, Xuemei Lang, South China University of Technology, China

2020-TPC-0481

Optimal Sizing of Sail-Assisted PV/Shore Power Hybrid Propulsion Systems

Wenyang Wang, Li Chen, Xiaofeng Liang, Shanghai Jiao Tong University, China

2020-TPC-0245

Optimization of PV-Hybrid Electric Propulsion System with Environment Uncertainty

Jiayun Zhu, Li Chen, Shanghai Jiao Tong University, China

2020-TPC-0263

Optimal Dispatch for Ship Power Generation Comprising Energy Storage through Generated Load Profiles

Chalermkiat Nuchtaree, Tie Li, Hongpu Xia, Sichen Wu, Shanghai Jiao Tong University, China

136. ARCTIC IX: Floaters in Ice (V. 1)

Thursday

October 15

~~16:20~~

Room 9

2020-TPC-0809

Quantification Icebreaker Performance in Ice Management Operations by High-Fidelity Numerical Simulations

Jon Bjørnø, Marnix van den Berg, Wenjun Lu, Roger Skjetne, Raed Lubbad, Sveinung Løset, Norwegian University of Science and Technology, Norway

2020-TPC-0362

Evaluation of Exploration Drilling Scenarios in the Southwestern Part of the Kara Sea

Yaroslav O. Efimov, Arctic Research Centre; Konstantin A Kornishin, Oleg Ya. Sochnev, Rosneft Oil Co; Yevegeny U Mironov, Victor S Porubaev, Arctic and Antarctic Research Institute, Russia

2020-TPC-0720

Conceptual Design of Single Column Drilling Unit for Arctic Climate and Harsh Environment

Mingyuan Sun, Fan Zhang, Siming Wang, Yuanyuan Wang, Lixin Xu, China Merchants Industry R&D Center, China

2020-TPC-1109

Ice Load Calculation on Four Columns Semi-Submersible Platform

Longwei Huang, Haining Lu, Jiadong Yang, Shanghai Jiao Tong University, China; Marc Cahay, TechnipFMC; Cyril Septseault, CERVAL; Claudie Benoit, Bureau Veritas Marine & Offshore, France;

2020-TPC-0991

**Effect of Sea Ice on the Soft Yoke Mooring System of Floating
Production Storage and Offloading (FPSO)**

Yebin Zhao, Shandong Electric Power Engineering Consulting
Institute Co; Qixin Lv, Dayong Zhang, Zheliang Fan, Dalian
University of Technology, China

2020-TPC-0301

**Methodology for Managing the Timing of Drilling Exploration in
Ice Conditions Based on the Management of the Geometric
Parameters of Ice Formations**

Aleksey A Shmykov, Egor E Pomnikov, Alexander T Bekker,
Tatyana E Uvarova, Anton A Zverev, Far Eastern Federal
University, Russia

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