

TECHNICAL PROGRAM

The Twelfth (2002) International Offshore and Polar Engineering Conference Kitakyushu, Japan, May 26-31, 2002

The number at end of the session title indicates the tentative number of the proceedings volume. Only the changes on titles or authors the ISOPE-2002 Technical Program Committee (TPC) received in writing before January 7, 2002 are reflected in this program. Final corrections will be updated in the Conference Proceedings and . Proceedings CD-ROM will be available as a set of 4 volumes (3,000 pp. est.) from ISOPE during and after the Conference.

SUNDAY

Kyushu University Reception 19:00 Sunday, May 26	Event Hall (1F)
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MONDAY 09:00

08:20
Author Briefing

Event Hall (1F)

Conference Opening **09:00** Main Hall (1F)

1. TECHNOLOGY REVIEW (V. 1)
Monday May 27 09:00 Main Hall (1F)

Chair: Koterayama, W, Kyushu Univ, Japan
Co-Chair: Knapp, R H, Univ. of Hawaii, USA

Mega-Float: Results of Phase II Research
Sasajima, H, Ishikawajima-Harima Heavy Industries, Japan

Matching Structures to Developments – Shell's Experience in Deepwater [Oral Presentation Only]
Balint, S W, Shell International Exploration and Production Inc, USA

Challenges for Offshore Energy Around Japan: Sakhalin and Methane Hydrates
Tezuka, N, Japan National Oil, Japan

The North Caspian Project
Kuehnlein, W L, Hamburg Ship Model Basin (HSVA), Germany

MONDAY 13:20

Plenary Presentation I (V.2)

Monday May 27 13:20 Int Conf Room, 2F

Dynamics of Finned Bodies: From VI to FPSO

Yeung, Ronald W., University of California at Berkeley, USA
Introduction by Jin S Chung, ISOPE

2. OFFSHORE I: Design Challenges (V. 1)

Monday May 27 14:00 Int Conf Room, 2F

Chair: Capanoglu, C C, Intl Design, Eng & Analysis Services, USA
Co-Chair: Shin, Y S, American Bureau of Shipping, USA

Terra Nova Design Challenges and Operational Integrity Strategy
Ahmed, E, Lever, G V, Power, S, Petro-Canada, Canada

Accident with P-36 Platform: The Emergency Drainage Tank Rupture
Cyranka, C, Videiro, P M, Nunes, G C, Melo, A P, Petrobras, Brazil

Comparative Assessment of Design Based on Revised API Bulletin 2U and Other Recommendations

Capanoglu, C C, International Design, Engineering & Analysis Services;
Balint, S W, Shell International Exploration and Production, USA

Model Test of a Sub-Surface Buoy: Design and Results

Fernandes, A C, Jacob, B P, Vardaro, E, Rodrigues, M, COPPE/UFRJ;
Silva, R M C, Almeida, J C L, Franciss, R, Petrobras, Brazil

Single Column Buoyant Leg Structure Preliminary Design and Model Test Results

Cermelli, C A, Shell E&P Technology, USA; Hirayama, H, Sao, K, Japan National Oil, Japan; Capanoglu, C C, International Design, Engineering & Analysis Services, USA

Articulated Stable Ocean Platform (ASOP) Conceptual Development and Model Test Results

Grinius, V, ElGamiel, H, Offshore Model Basin; Capanoglu, C C, International Design, Engineering & Analysis Services, USA

Experience-Based Assessment of Field Development Options and Costs

Hirayama, H, Japan National Oil; Sao, K, Ocean Engineering & Research, Japan; Capanoglu, C C, International Design, Engineering & Analysis Services, USA

3. TMCP STEEL: Review of Advantages (V. 4)

Monday May 27 14:00 Int Conf Room, 2F

Chair: Tomita, Y, Osaka Univ, Japan

Fatigue Strength of Thermo Mechanical Control Processed Steel and Its Weld Joint

Kawano, H, National Maritime Research Inst, Japan

Mismatching and transferability with Reference to Fracture Performance of Steel Weldments

Toyoda, M, Osaka Univ, Japan

Characteristics of TMCP Steels and Their Welded Joints Used for Hull Structures

Toyosada, M, Kyushu Univ, Japan

General Properties of TMCP Steel
Imai, S, Nippon Steel Corp, Japan

Session 4 starts at 15:45

4. OFFSHORE II: DESIGN & OPERATIONS 1 (V. 1)

Monday May 27 15:45 Room 32, 3F

Chair: Park, R-S, Univ of Ulsan, Korea
Co-Chair: Fernandes, A C, COPPE/UFRJ, Brazil

Pipeline Plugging in Ultradeep Water
Aleksandersen, J, Tveit, E, Plugging Specialists International, Norway

Technical Condition Assessment of Offshore Structures Operating in the Vietnam Continental Shelf
Khiem, N T, Son, D, Inst of Mechanics; Thu, N V, NCNST of Vietnam, Vietnam

The Vibration Properties of Jacket Platforms Embedded in Layered Soil
Wang, T, Li, H J, Ocean Univ of Qingdao, China

Computational Tools for the Reassessment of Fixed Offshore Platforms
Rodrigues, P F N, Universidade Iguacu; Jacob, B P, COPPE/UFRJ, Brazil

Integrated Optimization Design of the Offshore Jacket Platform
Song, Y P, Wang, L C, Dalian Univ of Technology, China

5. GEOTECH I: Soil Improvement (V. 2)

Monday May 27 14:00 Room 10, 1F

Chair: Chien, L K, National Taiwan Ocean Univ., Taiwan, China
Co-Chair: Yamazaki, T, National Inst of AIST, Japan

Construction and Monitoring of Geotubes
Shin, E C, Oh, Y I, Univ of Incheon, Korea; Das, B M, California State Univ at Sacramento, USA

Improvement of Surface Layer in Dredged Soft Ground by Progressive Trenching Method at Yulchon Site in Korea
Lee, Y N, Hyundai Engineering & Construction; Chung, H I, Oh, I K, Korea Inst of Construction Technology; Lee, S W, Park, K H, Hyundai Engineering & Construction, Korea

Application and Effectiveness of Horizontal Vacuum-Drain Method: Influence Factors on the Horizontal Drain Method
Kim, S S, Hanyang Univ; Chae, Y S, Univ of Suwon; Jung, S Y, Expert Group for Earth & Environmental Engineering, Korea

Acceleration of Self-Weight Consolidation Settlement by Use of the Vertical Drain Board
Kim, S S, Hanyang Univ; Koh, K W, Samsung Heavy Industries; Han, S J, Chung-Ang Univ, Korea

Soft Dredged Clayey Soils Improvement with Lateral Drains
Park, Y M, Yeungnam Univ; Kim, S S, Hanyang Univ; Chae, J G, Yeungnam Univ, Korea

Engineering Characteristics of Horizontal Plastic Board Drains for Improvement of Weak Dredged Fill
Park, J Y, Jang, Y S, Park, C S, Dongguk Univ; Kim, S S, Hanyang Univ, Korea

Improvement of Soft Marine Clays by Deep Mixing Technique

Horpibulsuk, S, Miura, N, Saga Univ; Nagaraj, T S, Indian Inst of Technology, India

The Displacement and Discharge Capacity of Vertical-Plastic Drain Board from Field Model Test

Chung, H I, Jin, H S, Korea Inst of Construction Technology, Korea

Improvement in Adobe Material for Earthquake Resistance

Islam, M S, Watanabe, H, Saitama Univ, Japan

6. HYDRODYNAMICS V-I: Vortex & Vibration (V. 3)

Monday May 27 14:00 Room 11, 1F

Chair: Yeung, R W, Univ of California at Berkeley, USA

Vortex Induced Vibrations Experiments with an Elastically Mounted Cylinder in Water

Fujarra, A L C, Pesce, S P, Univ of Sao Paulo, Brazil

Study of the Cross-Flow Vortex-Induced Vibrations of a Circular Cylinder by Parallel Computation of the 3-D Navier-Stokes Equations

Hernandez, J E R, Univ of Oriente, Venezuela; Sphaier, S H, COPPE/UFRJ, Brazil

Viscous Forces on an 8-Shaped Oscillating Cylinder

Bando, A, Otsuka, K, Ikeda, Y, Osaka Prefecture Univ, Japan

Vortex-Excited Vibration of a Circular Cylinder in Planar Oscillating Flow

Hayashi, K, Higaki, F, Shigemura, T, National Defense Academy, Japan; Chaplin, J R, Southampton Univ, UK

Analytical and Numerical Modeling of Two Cylinders in Tandem Arrangement

Facchinetti, M L, Fontaine, E, Bonnet, P A, Institut Français du Pétrole, France

Flow Patterns and Interactions Around Vertical Cylinders

Jo, C H, Inha Univ; Jeong, U C, Inha Technical College; Shin, Y S, Halla Univ; Kim, D H, Inha Univ, Korea

On Identification of VIV Modes

Kaasen, K E, MARINTEK, Norway

Control of Vortex Shedding at Moderate Reynolds Numbers

Shao, C P, E, X Q, Inst of Mechanics, CAS; Wei, Q D, Zhu, F R, Peking Univ, China

7. HYDRODYNAMICS DF-I: Dynamics & Forces 1 (V. 3)

Monday May 27 14:00 Room 21A, 2F

Chair: Naito, S, Osaka Univ., Japan

Co-chair: Kinoshita, T, Univ of Tokyo, Japan

Interaction of Coupled Floating Structures in Waves

Clauss, G F, Stutz, K, Technical Univ of Berlin, Germany

A Study on Responses of Floating Structures under Tsunami: Motion and Mooring Tension Responses with Floating Body

Masuda, K, Miyazaki, T, Uchida, M, Nihon Univ, Japan

On the Coupling of Roll Motion with Other Motions in Beam Waves

Francescutto, A, Univ of Trieste, Italy

On Estimation Method of Ship Rolling Motion with Flooding Water on Deck

Fujiwara, T, National Maritime Research Inst, Japan

Coupling Effects of Surge, Heave and Pitch Motions on Viscous Fluid in a Tank

Chen, B F, National Sun Yat-sen Univ, Taiwan, China

Drag Reduction of a Barge-Like Structure Through Boundary-Layer Control

Modi, V J, Akinturk, A, Deshpande, V S, Univ of British Columbia, Canada

An Analysis of Hydrodynamic Interaction of Floating Multi-Body Using Higher-Order Boundary Element Method

Cho, Y R, Hong, S Y, Korea Research Inst of Ships & Ocean Engineering, Korea

Experimental Investigation on the Effect of Waves upon Roll Damping of Ships

Wu, J M, Li, Y L, Wang, D J, Wu, X R, South China Univ of Technology, China

8. RELIABILITY, RISK & SAFETY I (V. 4)

Monday May 27 14:00 Room 21B, 2F

Chair: Langen, I, Stavanger University College, Norway

Blast Loading from Gas Explosions onto Nearby Structures

Louca, L A, Friis, J, Imperial College; Bailey, P, Shell Expro; Shirvill, L, Shell Global Solutions; Martland, R, Health and Safety Executive, UK

Uncertainty Analysis in Fatigue Damages of Offshore Structures

Karadeniz, H, Delft Univ of Technology, The Netherlands

The Effects of Local Joint Flexibility on the Reliability of Fatigue Life Estimates, Inspection Planning and Platform Life Extension

Nichols, N W, Low, E C, Surjatin, T, Petronas Carigali, Malaysia

Numerical Method to Estimate Ship Longitudinal Ultimate Strength and Its Structural Reliability Using Numerical Database

Masaoka, K, Okada, H, Osaka Prefecture Univ, Japan

Probabilistic Analysis and Design in Relation to Riser-Riser Collision

Lera, B J, Holmås, T, Herfjord, K, NTNU, Norway

Find additional papers on Reliability in sessions of Pipelines and Risers.

9. AUV & UNDERWATER CONTROL I (V. 2)

Monday May 27 14:00 Room 22, 2F

Chair: Momma, H, Nippon Marine Enterprises, Japan

MODUS — Remotely Operated Carrier for Abyssal Research in the Mediterranean Sea

Gerber, H W, TFH Berlin; Clauss, G F, Technical Univ Berlin, Germany

Operation of Ocean Bottom Seismometers for Multi-Channel Seismic Survey

Ito, M, Baba, K, Tanaka, H, No, T, Momma, H, Nippon Marine Enterprises; Kodaira, S, JAMSTEC, Japan

Geophysical Database in JAMSTEC

Kodera, T, Toizumi, M, Ishii, R, Nippon Marine Enterprises; Naoi, J, Sono, K, JAMSTEC, Japan

Development of a Dynamic Analysis Scheme of Cable for ROV Operation

Cho, K N, Hong-Ik Univ; Yi, W S, Hyundai Heavy Industries, Korea

Dynamic Simulation and Field Experiment of Submarine Cable During Laying and Recovery

Nagatomi, O, OCC Corp; Nakamura, M, Koterayama, W, Kyushu Univ, Japan

Development of a Roll Control Fin for Observation Towed Vehicles

Yamaguchi, S, Matsui, H, Koterayama, W, Kyushu Univ, Japan

Biology-Inspired Precision Maneuvering of Underwater Vehicles

Kato, N, Tokai Univ; Liu, H, RIKEN; Morikawa, H, Shinshu Univ, Japan

10. POLAR I: Ridge and Pack Ice (V. 2)

Monday May 27 14:00 Room 33, 3F

Chair: Frederkig, RMW, National Research Council, Canada

Co-Chair: Kato, K, Kinki Univ, Japan

Measuring Ice Thickness and Surface Roughness with a Fixed-Mounted Helicopter Electromagnetic-Laser System

Prinsenber, S, Bedford Inst of Oceanography; Holladay, S, GeoSensors Inc, Canada

Simplified Ice Ridge–Seabed Interaction Model for Determination of Ice Scour Depth

Choi, K S, Lee, J H, Korea Maritime Univ, Korea

Ice Condition at the Confederation Bridge – Winter 2000

Belliveau, D J, Hayden, H, Prinsenber, S, Bedford Inst of Oceanography, Canada

Some Applications of Computerized Tomography Scanner on Sea Ice

Li, Z J, Dalian Univ of Technology; Pu, Y B, State Key Lab of Frozen Soil Engineering, China

Near Real Time Radarsat-Based Sea-Ice Monitoring in the Sea of Okhotsk

Hill, M C, Canatec Consultants; Brovin, A, ABIC Service, Canada

Ice Failure Mode and Ice Load Observed in Medium-Scale Field Ice Indentation Test

Takeuchi, T, Hachinohe Inst of Technology; Akagawa, S, Hokkaido Univ; Nakazawa, N, Systems Engineering Associates; Sakai, M, Taisei Corp; Terashima, T, Kumashiro System Frontier; Saeki, H, Hokkaido Univ, Japan

Analysis of Structure Design of Condensate Storage for Deep Arctic Seas

Toropov, E E, Gintovt, A R, CDB ME «Rubin»; Mirzoev, D A, VNIIGAS, Russia

11. TUBULAR STRUCTURES I: Static Strength (V. 4)

Monday May 27 14:00 Room 31, 3F

Chair: Wardenier, J, Delft Univ of Technology, The Netherlands

Co-Chair: Puthli, R, Univ of Karlsruhe, Germany

The Effect of Chord Pre-Load on the Static Strength of Uniplanar Tubular K-Joints

Van der Vegte, G J, Makino, Y, Kumamoto Univ, Japan; Wardenier, J, Delft Univ of Technology, The Netherlands

An Automatic FE Mesh Generator for CHS Tubular Joints

Qian, X D, National Univ of Singapore, Singapore; Romeijn, A, Wardenier, J, Delft Univ of Technology, The Netherlands; Choo, Y S, National Univ of Singapore, Singapore

Static Analysis of Frame by Localized Representation of Tubular Joint

Pan, W, Lee, S B, Hyde, T H, Univ of Nottingham, UK

Initial Study on the Static Strength of Thin-Walled Rectangular Hollow Section (RHS) K-Joints with Gap

Sarada, S, IIT, India; Fleischer, O, Puthli, R, Univ of Karlsruhe, Germany

The Strength of Multiplanar Overlap KK-Joints of Rectangular Hollow Sections under Axial Loading

Liu, D K, Wardenier, J, Delft Univ of Technology, The Netherlands

Differences Between the Theoretical and Experimentally Measured Torsional Behaviour of Rectangular Hollow Sections

Ridley-Ellis, D J, Owen, J S, Davies, G, Univ of Nottingham, UK

Tubular Column to H-Beam Connections without Diaphragms

Kamba, T, Taclendo, C, Namba, H, Kobe, Univ, Japan

Static Strength of Plate Reinforced X-Joint Subjected to In-Plane Moment Loading

Choo, Y S, Liang, J X, Liew, J Y R, National Univ of Singapore, Singapore

TUESDAY 08:00

12. EARTHQUAKE ENGINEERING (V. 4)

Tuesday May 28 08:00 Int Conf Room , 2F

Chair: Kawano, K, Kagoshima Univ, Japan

Co-Chair: Kawata, Y, Kyoto Univ, Japan

Estimation of Fault Movement and Tsunami Generation in Izmit Bay

Han, S, Kawata, Y, Kyoto Univ; Okamura, M, Matsuoka, H, Kochi Univ, Japan

Damage Investigation and Structural Analysis of Piled Berthing Structures During 1995 Hyogoken-Nambu Earthquake

Yokota, H, Port and Airport Research Inst; Minami, K, Osaka Port Corp; Sugano, T, Port and Airport Research Inst; Kawabata, N, Nippon Steel Corp, Japan

Numerical Simulation of Meiwa-Yaeyama Earthquake Tsunami in Submarine Landslide Model with Circular Rupture

Hara, N, Hiraishi, T, Port and Airport Research Inst, Japan

A Study on Sequake Forces Acting on Floating Body Considered with the Interaction Between Compression Waves and the Free Surface Wave Elevation Caused by Earthquake

Jang, R D, Higo, Y, Hiroshima Univ, Japan

Numerical Analysis of the Earth Pressure During Earthquake on the Gravity Type Quay Wall

Inoue, K, Public Works Research Inst; Miura, K, Toyohashi Univ of Technology; Otsuka, N, North Japan Port and Harbor Consultants; Nakajima, K, Hokkaido Univ; Yoshida, N, Hokkaido Development Bureau; Sasajima, T, Satokogyo Co, Japan

In-Situ Observation System for Seismic Behavior of Gravity Type Quay Wall

Sasajima, T, Hokkaido Development Bureau; Umezawa, N, Civil Engineering Research Inst of Hokkaido; Sugano, T, Port and Airport Research Inst; Miura, K, Toyohashi Univ of Technology; Otsuka, N, North Japan Port and Harbor Consultants, Japan

13. HYDRODYNAMICS W-I: Num Wave Tank 1 (V. 3)

Tuesday May 28 08:00 Room 32, 3F

Chair: Powers, E J, Univ of Texas at Austin, USA

Numerical Simulation of Breaking Waves in Extreme Wave Sequences
Steinhagen, U, AEA Technology, Germany

A Fully Nonlinear Boussinesq-Type Model
Ou, S H, Hsu, T W, Yang, B D, National Cheng Kung Univ, Taiwan, China

On the Effects of Spilling Breaking in a RANS Simulation
Muscarì, S, Di Mascio, A, INSEAN, Italy

Wave Transformation in Multi-Face Current Generation Basin
Hiraishi, T, Port and Airport Research Inst, Japan

14. GEOTECH II: Soil Liquefaction 1 (V. 2)

Tuesday May 28 08:00 Room 10, 1F

Chair: Das, B M, California State Univ at Sacramento, USA

Co-Chair: Fakharian, K, Amirkabir Univ of Technology, Iran

Impact of Liquefaction on Coastal Structures in the 1999 Turkey Earthquake
Kaya, A, Technical Univ of Denmark; Ottesen Hansen, N-E, LIC Engineering; Sumer, B M, Technical Univ of Denmark, Denmark

Liquefaction Strength of Coarse Fill Material Based on Large Hollow Cylinder Test
Tanaka, Y, Kobe Univ; Matsumoto, M, Asanuma Corp; Sugimoto, S, Kobe Univ, Japan

Effect of Non-Plastic Fines on Liquefaction Characteristics of Sandy Soils under Cyclic Loading
Nabeshima, Y, El Mesmary, M A, Matsui, T, Osaka Univ, Japan

A Study of Liquefaction Potential for a New Reclaimed Land in Taiwan
Lee, D H, Chen, J W, National Cheng Kung Univ, Taiwan, China; Juang, C H, Clemson Univ, USA; Ku, C S, National Cheng Kung Univ, Taiwan, China

Effect of Fines and Crushability on Liquefaction of Volcanic Soil 'Shirasu'
Hyodo, M, Nakata, Y, Yamaguchi Univ; Kuwajima, K, Yoshimoto, N, Kato, Y, Tokuyama Technical College, Japan

Simplified Prediction Method for Behavior of Sheet Pile Structures on Liquefied Area During Earthquakes
Hayashi, K, Chuo Fukken Consultants; Matsui, T, Oda, K, Osaka Univ, Japan

15. COASTAL ENG I: Port and Harbor (V. 3)

Tuesday May 28 08:00 Room 11, 1F

Chair: Ueda, S, Tottori University, Japan

Simulation-Based Analysis of a Port Container Terminal

Sgouridis, S P, Hellenic Army; Angelides, D C, Aristotle Univ of Thessaloniki, Greece

Distinguishing Appearance of Small Waves by Critical Value of Entrance to a Harbor

Mizui, S, Hiroshima National College of Maritime Technology; Kubo, M, Kobe Univ of Mercantile Marine, Japan

Study of Siltation Protection in Asian Ports

Irie, I, Hidayat, R, Morimoto, K, Ono, N, Kyushu Univ, Japan

Statistical Design of Fender for Berthing Ship

Ueda, S, Hirano, T, Tottori Univ; Shiraishi, S, Yamamoto, S, Port and Airport Research Inst; Yamase, S, Bridgestone Corp, Japan

The Bearing Capacity Analysis with Consideration of Buckling for a Open-Type Pier of Vertical Steel Pipe Piles

Ishida, M, Ueda, S, Ikeuchi, T, Tottori Univ; Suzuki, T, Japan Port Consultants, Japan

The Establishment of the Steel-Piling Method to the Rock by Vibro-Hammer: The Rock-Vibro Method

Tomono, K, Nippon Steel, Japan

16. HYDRODYNAMICS DF-II: Dynamics & Forces 2 (V. 3)

Tuesday May 28 08:00 Room 21A, 2F

Chair: Clauss, G F, Technical Univ Berlin, Germany

A Study on Factors Related to the Capsizing Accident of Fishing Vessel “Ryuhō Maru No. 5”

Taguchi, H, Ishida, S, Watanabe, I, Sawada, H, Tsujimoto, M, National Maritime Research Inst; Yamakoshi, Y, Ma, N, National Research Inst of Fisheries Engineering, Japan

Capsizing Characteristics of Pontoon Barges

Huang, E T, Naval Facilities Engineering Service Center; Chen, H C, Texas A&M Univ, USA

Time-Domain Simulation of Barge Capsizing by a Chimera Domain Decomposition Approach

Chen, H C, Liu, T, Chang, K A, Texas A&M Univ; Huang, E T, Naval Facilities Engineering Service Center, USA

Towline Tension and Unstable Motion of Damaged and Capsized Geometric Ship During Towing

Hara, S, Yamakawa, K, Hoshino, K, Yukawa, K, National Maritime Research Inst, Japan

Application of Chimera RANS Method for Multiple-Ship Interactions in a Navigation Channel

Chen, H C, Texas A&M Univ; Lin, W M, Science Applications International, USA

Motion Analysis by Free-Running Model Test

Shin, H K, Park, H S, Lee, H L, Yang, C S, Univ of Ulsan, Korea

17. RELIABILITY, RISK & SAFETY II (V. 4)

Tuesday May 28 08:00 Room 21B, 2F

Chair: Karadeniz, H, Delft Univ. of Technology, The Netherlands

Co-Chair: Louca, L A, Imperial College, UK

On Assessment of Existing Offshore Structures

Ersdal, G, Stavanger University College/Norwegian Petroleum Directorate;
Langen, I, Stavanger University College, Norway

Nonlinear Dynamic Responses of a Large Offshore Structure with Uncertain Parameters

Kawano, K, Kagoshima Univ; Hashimoto, T, NEWJEC Ltd, Japan

Reliability Analysis of Maximum Wind Force for Offshore Structure Design

Jang, J J, Lee, C S, National Taiwan Ocean Univ, Taiwan, China

Structural Safeguarding Consideration Against Hazards Scenarios for Offshore Platform Design

Embong, M B, Protek Engineers; Wan Mahmood, W A M, MARA Univ of Technology, Malaysia

A Field Modeling Approach to Predict Smoke Moment for Offshore Compartment Fires

Hu, C H, Fukuchi, N, Kyushu Univ, Japan

Find additional papers on Reliability in the sessions of
Pipelines and Risers.

18. AUV & UNDERWATER CONTROL II (V. 2)

Tuesday May 28 08:00 Room 22, 2F

Chair: Kajiwara, H, Kyushu Univ, Japan

Co-Chair: Cho, K N, Hong-Ik Univ, Korea

3-Dimensional Trajectory Tracking Control of an AUV R-One Robot Considering Current Interaction

Kim, K S, Ura, T, Univ of Tokyo, Japan

A Navigation System for an Underwater Vehicle Using the Self-Organizing Map

Ishii, K, Nishida, S, Yano, K, Kyushu Inst of Technology; Watanabe, K, Tokai Univ; Ura, T, Univ of Tokyo, Japan

A Handy AUV Concept and Its Underwater Global Positioning System for the Observation of the Coastal Sea Environment

Watanabe, K, Tokai Univ; Ishii, K, Kyushu Inst of Technology; Nakamura, A, Tokai Univ; Ura, T, Univ of Tokyo, Japan

Development of a Compact Autonomous Underwater Vehicle Using Variable Vector Propeller

Nagashima, Y, Sasebo National College of Technology; Taguchi, N, Industrial Technology Center of Nagasaki; Ishimatsu, T, Nagasaki Univ; Mizokami, T, Uchu Mokei Co, Japan

Theoretical and Experimental Studies on Iterative Learning Control for Underwater Robots

Sakagami, N, Inoue, M, Kawamura, S, Ritsumeikan Univ, Japan

Depth Control of an Underwater Vehicle Using Linear Parameter-Varying Techniques

Kajiwara, H, Koterayama, W, Nakamura, M, Kyushu Univ, Japan

19. POLAR II: Ice Forces and Properties (V. 2)

Tuesday May 28 08:00 Room 33, 3F

Chair: Squire, V A, Univ of Otago, New Zealand

Co-Chair: Choi, K S, Korea Maritime Univ, Korea

Mechanical Strength of Compound Sea Ice –In Case of First-Year Sea Ice at Notoro Lagoon, Hokkaido

Kamio, Z, Ushikoshi, J, Mitsui Engineering & Shipbuilding; Matsushita, H, Nippon Kaiji Kyokai; Terashima, T, Kumashiro System Design; Saeki, H, Hokkaido Univ, Japan

Friction of Sea Ice on Steel and Concrete for Condition of Varying Speeds

Frederking, R, National Research Council, Canada

Preliminary Study of Triaxial Compressive Strength of Bohai Ice under Dynamic Loading

Ma, W, State Key Lab of Frozen Soil Engineering; Li, Z J, Dalian Univ of Technology, Chang, X X, State Key Lab of Frozen Soil Engineering

Abrasion Effect of Ice Cover on Supports of Offshore Structure in Sakhalin Shelf Conditions

Bekker, A, Kim, S, Far East State Technical Univ, Russia

Hydroelastic Response of Cylindrical Shell Structures During Earthquakes in Ice-Covered Seas

Hamamoto, T, Nojima, T, Musashi Inst of Technology, Japan

Determination of Engineering Elastic Constants for S₂ Ice of Liaodong Gulf with Ultrasonic Method

Li, Z J, Dalian Univ of Technology; Peng, W W, Ma, W, State Key Lab of Frozen Soil Engineering, China

Calculation of Parameters of Local Ice Loads on Data of Full Scale Tests of Ice Belt Structures

Timofeev, O Y, Krupina, N A, Arctic and Antarctic Research Inst, Russia

20. TUBULAR STRUCTURES II: Concrete filled Members (V. 4)

Tuesday May 28 08:00 Room 31, 3F

Chair: Grundy, P, Monash Univ, Australia

Grout Sleeve Connections under Large Deformation Cyclic Loading

Zhao, X L, Grundy, P, Lee, T, Monash Univ, Australia

Push out Strength of Concrete Plugs in Tubular Steel Piles

Nezamian, A, Al-Mahaidi, R, Grundy, P, Monash Univ, Australia

Strength and Deformability in Diaphragm-Stiffened Connections of H-Shaped Beams to Circular CFT Columns

Nakada, K, Kawano, A, Inoue, T, Kyushu Univ, Japan

Numerical Analysis of Concrete-Filled Steel Tubes Subjected to Axial Force

Hu, H-T, Wu, M-H, Wu, Y-M, National Cheng Kung Univ; Huang, C-S, National Chiao Tung Univ, Taiwan, China

An Analytical Approach for Seismic Behavior of Concrete-Filled Tubular Column Bases

Li, T, Kawano, A, Sakai, J, Kyushu Univ; Li, L, Kumamoto Prefectural Univ, Japan

Seismic Resistant System of Multi-Story Frames Using Concrete-Filled Tubular Trusses

Kawano, A, Sakino, K, Kuma, K, Nakata, K, Kyushu Univ, Japan

TUESDAY 10:45

21. OFFSHORE III: DESIGN & OPERATIONS 2 (V. 1)

Tuesday May 28 10:45 Intl Conf Room, 2F

Chair: Aleksandersen, J, Plugging Specialists International, Norway

Dual Drilling Rig Operations

Aleksandersen, J, Jakobsen, O E, Stavanger University College, Norway

Combined Environmental Loads Design Criteria for Marine Structures

Liu, D F, Song, Y, Wang, S Q, Wen, S Q, Ocean Univ of Qingdao, China

Studies on Optimal Vibration Control Using H₂ Method for Offshore Platforms

Li, H J, Ji, C Y, Wang, S Q, Ocean Univ of Qingdao, China

Parametric Investigation of the Stability of Vessels for Integrated Deck Transportation

O'Neill, L A, Shaun, O, Fakas, M, Univ of Western Australia; Christiansen, P-E, Kvaerner, Australia

Influence of Cone Angle on Both Tangential and Axial Velocity Field Distributions of Hydrocyclones

Zhao, L X, Wang, Z, Jiang, M H, Li, F, Daqing Petroleum Inst, China

Influence of Both Structural and Operating Parameters on Separation Characteristics of Hydrocyclones

Wang, Z, Zhao, L X, Li, F, Jiang, M H, Daqing Petroleum Inst, China

22. HYDRODYNAMICS W-II: Num Wave Tank 2 (V. 3)

Tuesday May 28 10:45 Room 32, 3F

Chair: Muscari, S, INSEAN, Italy

Co-Chair: Ferrant, P, Ecole Centrale de Nantes, France

Analysis of Directional Waves in a Three Dimensional Tank: Second Order Time Domain Models Compared to Experiments

Ferrant, P, Pelletier, K, Le Touzé, D, Bonnefoy, F, Ecole Centrale de Nantes, France

On the Estimation of Nonlinear Volterra Models in Offshore Engineering

Birkelund, Y, Univ of Tromso, Norway; Powers, E J, Univ of Texas at Austin, USA; Hanssen, A, Univ of Tromso, Norway

Cross-Bi-Spectral Estimate of Nonlinear Force on Fixed Structure in Nonlinear Random Waves

Kim, N S, Kim, C H, Texas A&M Univ, USA

On the Side Wall Effect on the Non-Linear Wave Loads on a TLP Like Structure in a Wave Tank: Analysis of the Non-Linear Near Trapping

D'Este, F, Codiglia, R, Contento, G, Univ of Trieste, Italy

Experiment of Side-Band Instability for Surface Waves Generated Mechanically – Fine Structure and Bispectrum

Masuda, A, Kyushu Univ; Ueno, K, Meteorological College; Yokomizo, D, Oita Local Meteorological Observatory, Japan

Numerical Simulation of Floating Ship over a Deep Pit in a Wave Tank

Liou, S Y, Chen, D W, Heh, T Y, Chung Cheng Inst of Technology, Taiwan, China

Statistical Modeling of Overtopping on a Deck

Nobuhito, M, CRIEPI, Japan; Cox, D T, Texas A&M Univ, USA

23. GEOTECH III: Soil Liquefaction 2 (V. 2)

Tuesday May 28 10:45 Room 10, 1F

Chair: Tanaka, Y, Kobe Univ, Japan
Co-Chair: Shin, E C, Univ of Inchon, Korea

Influence of Building and Ko Consolidation on the Liquefaction Potential of Reclaimed Soil

Chien, L K, Chang, C H, Chang, H Y, National Taiwan Ocean Univ, Taiwan, China

GPS/GIS Applications on the Evaluation of Soil Liquefaction Located at Fengshan-Pingtung Section of Kaohsiung MRT Systems in Taiwan

Tsai, K J, Wang, H Y, Ln, J B, National Pingtung Univ of Science & Technology; Chen, S C, Construction Mangement, Execute Yuan, Taiwan, China

Liquefaction Resistance and Its Relation to Wave Velocities

Ishibashi, I, Old Dominion Univ, USA; Capar, O F, Zonguldak Karaelmas Univ, Turkey

Time and Space Discretization Issues in Modeling of Seabed Liquefaction Due to Surface Water Waves

Brandes, H G, Riggs, R, Univ of Hawaii, USA

24. COASTAL ENG II: Sedimentation (V. 3)

Tuesday May 28 10:45 Room 11, 1F

Chair: Asano, T, Kagoshima Univ, Japan

Field Observation of Three Dimensional Changes of Artificial Beach and Application of Extended HSU Model: The Example of Kemigawa Beach in Chiba Prefecture, Japan

Kumada, T, Kobayashi, A, Nihon Univ; Uda, T, National Inst for Land and Infrastructure Management; San-Nami, T, Coastal Engineering Laboratory, Japan

Construction of Hybrid-Type Topography Change Model by Adopting Sediment Transport Information from Experiments

Shin, S H, Irie, I, Kyushu Univ, Japan

Mechanism of Stabilization of Beach Profile under Storm Waves

Ono, N, Irie, I, Yokota, M, Kyushu Univ, Japan

Variation of Beach Processes and Harbor Sedimentation in an Area of Large Tide

Lee, J W, Korea Maritime Univ, Korea; Shin, S H, Kyushu Univ, Japan

Bed Load Sediment Movements in Swash Zone

Hoque, M A, Asano, T, Kagoshima Univ, Japan

Prediction of Undertow and Beach Profile Change over Barred Beach

Kuroiwa, M, Tottori Univ; Kuchiishi, T, Kato, K, NIKKEN Consultants; Matsubara, Y, Noda, H, Tottori Univ, Japan

A Study on Dynamic Behavior of Seabed Around a Seawall under Wave Motion Using the VOF-FEM Model

Maeno, S, Bierawski, L G, Fujita, S, Okayama Univ, Japan

25. HYDRODYNAMICS DF-III: Dynamics & Forces 3 (V. 3)

Tuesday May 28 10:45 Room 21A, 2F

Chair: Takagi, K, Osaka Univ, Japan

Experimental Study on Behavior of Tandem and Side-by-Side Moored Vessels

Hong, S Y, Kim, J H, Kim, H J, Choi, Y R, Korea Research Inst of Ships & Ocean Engineering, Korea

On the Numerical Analysis of Dynamic Responses of a Permeable Floating Body in Waves

Kagemoto, H, Kinoshita, T, Univ of Tokyo, Japan

Hydroelastic Behavior of an Aircushion-Type Floating Structure

Tsubogo, T, Okada, H, Osaka Prefecture Univ, Japan

Basic Research on Water Transportation with Large Bag in Ship Hold II— Effect of Water Bag Sloshing Phenomenon

Nishino, Y, Shibata Industrial; Kubo, M, Kobe Univ of Mercantile Marine, Japan

Experimental Study on Wave Interactions with a Fixed Rectangular Barge in a Beam Sea

Jung, K H, Chang, K A, Chen, H C, Texas A&M Univ; Huang, E T, Naval Facilities Engineering Service Center, USA

Coupled Hydrodynamic Analysis of an AHTS and a Box Structure in Waves

Ferreira, M D, Petrobras, Brazil

Motion and Structural Analysis for ECOFLOAT

Adachi, M, Shigemitsu, H, Ishikawajima-Harima Heavy Industries, Japan

Analytical Method of Determining Hydrodynamic Effects on a Reticular Floating Unit

Martins, M R, Nishimoto, K, Univ of Sao Paulo; Donato, M F, Petrobras, Brazil

26. COLLISION/IMPACT/DAMAGE (V. 4)

Tuesday May 28 10:45 Room 21B, 2F

Chair: Ueda, Y, Kinki Univ, Japan

Co-Chair: Huang, T, Univ of Texas at Arlington, USA

The Effects of the Strut Arrangements of Ship Side Structures on the Energy Absorption in Collision

Shibue, T, Abe, A, Fujita, K, Ishikawajima-Harima Heavy Industries, Japan

Crashworthy Design of Bow Structure Considering SOLAS Regulation

Lee, S G, Korea Maritime Univ; Shin, Y S, Hyundai Heavy Industries; Song, M K, Jang, H S, Korea Maritime Univ, Korea

Practical Implications of Hydroelasticity in Ship Design

Breznitski, A, Delft Univ of Technology; Kaminski, M, MARIN, The Netherlands

Experimental Study of Irregular Wave Slamming

Ren, B, Wang, Y X, Dalian Univ of Technology, China

Influence of End Fixity on Post-Yield Behaviors of a Tubular Member

Cho, K N, Hong-Ik Univ, Korea

27. AUV & UNDERWATER CONTROL III (V. 2)

Tuesday May 28 10:45 Room 22, 2F

Chair: Aoki, T, JAMSTEC, Japan

Development and Application of an AUV Maneuvering and Control System Simulator

Kobayashi, E, Maeda, T, Mitsubishi Heavy Industries; Aoki, T, JAMSTEC; Hirokawa, K, Ichikawa, T, Miyamoto, S, Iwasaki, S, Kobayashi, H, Mitsubishi Heavy Industries, Japan

Cruising Autonomous Underwater Vehicle *URASHIMA*

Aoki, T, Murashima, T, Tsukioka, S, Nakajoh, H, Hyakudome, T, Ida, T, JAMSTEC; Maeda, T, Hirokawa, K, Mitsubishi Heavy Industries, Japan

Acoustic Instruments of the Autonomous Underwater Vehicle “*URASHIMA*” and the Sea Trials

Tsukioka, S, Aoki, T, Ochi, H, Murashima, T, Nakajoh, H, Hyakudome, T, Ida, T, JAMSTEC, Japan

Buoyancy Control for Deep and Long Cruising Range AUV

Hyakudome, T, Aoki, T, JAMSTEC; Maeda, T, Mitsubishi Heavy Industries; Murashima, T, Tsukioka, S, Nakajoh, H, Ida, T, JAMSTEC; Ichikawa, T, Mitsubishi Heavy Industries, Japan

Optical Communication System for *URASHIMA*

Murashima, T, Aoki, T, Tsukioka, S, Nakajoh, H, Hyakudome, T, Ida, T, JAMSTEC, Japan

A Real-Time Acoustic Monitoring of Ocean Interiors Using Ocean Acoustic Tomography

Nakano, I, Fujimori, H, Nakamura, T, Japan Marine Science and Technology Center, Japan

28. POLAR III: Ice-Ocean Interactions (V. 2)

Tuesday May 28 10:45 Room 33, 3F

Chair: Bekker, A, Far East State Technical Univ, Russia

Co-Chair: Sayed, M, National Research Council, Canada

An Analytic Model for the Propagation of Oblique Waves Across a Linear Crack in an Ice Sheet

Williams, T, Squire, V A, Univ of Otago, New Zealand

Ice-Coupled Waves at a Deep Water Tide Crack or Ice Jetty

Squire, V A, Williams, T, Univ of Otago, New Zealand

Evaluation of Seismic Load on the Marine Structure in Ice-Covered Water

Kobayashi, H, High Tech Research, Japan

Numerical Simulation on Ice-Structure Interaction During Earthquakes

Yamauchi, Y, Kamesaki, K, NKK Corp; Hyodo, M, Yamaguchi Univ, Japan

Interaction of Water Waves with a Semi-Infinite Elastic Plate

Cheng, L, Univ of Western Australia, Australia; Teng, B, Liu, S X, Dalian Univ of Technology, China; Li, F J, Univ of Western Australia, Australia

29. TUBULAR STRUCTURES III: Fracture and Fatigue (V. 4)

Tuesday May 28 10:45 Room 31, 3F

Chair: Chiew, S P, Nanyang Technological Univ, Singapore

Co-Chair: Makino, Y, Kumamoto Univ, Japan

Finite Element Model for the Fatigue Analysis of Cracked Tubular T-Joints under Complex Loads

Lie, S T, Chiew, S P, Huang, Z W, Nanyang Technological Univ, Singapore

Multi-Axis Fatigue Tests of Tubular T-Joints under Complex Loads

Chiew, S P, Lie, S T, Huang, Z W, Nanyang Technological Univ, Singapore

Stress Intensity Factors for Doubler-Plate Reinforced Connection

Choo, Y S, Jiang, R R, Thevendran, V, National Univ of Singapore, Singapore

Brittle Fracture from Ends of CJP Groove Welds

Iwashita, T, Ariake National College of Technology; Azuma, K, Kurobane, Y, Sojo Univ; Makino, Y, Kumamoto Univ, Japan

TUESDAY 13:20

Plenary Presentation II (V.2)

Tuesday May 28 13:20 Int Conf Room, 2F

IODP (Integrated Ocean Drilling Program) and the Science Drillship "Chikyu"

Takagawa, S, Japan Marine Science and Technology Center, Japan
Introduction by Jin S Chung, ISOPE

30. OFFSHORE IV: VLFS/FPSO/SPAR 1 (V. 1)

Tuesday May 28 14:00 Intl Conf Room, 2F

Chair: Sphaier, S H, COPPE/UFRJ, Brazil

Co-Chair: Kijima, K, Kyushu Univ, Japan

Assessment of the Effectiveness of the Bilge Keel as an Anti-Roll Device in VLCC-Sized FPSOs

Ferrari, J A, Ferreira, M D A, da Silva, A M, Petrobras; da Silva, S, Inst for Technological Research Sao Paulo, Brazil

A Design of Bilge Keels for Harsh Environment FPSOs

Park, I K, Na, J H, Lee, W C, Shin, H S, Hyundai Heavy Industries, Korea

A New Hull Configuration of FPSO for Less Roll Motion in Waves

Takahashi, T, Awashima, Y, Yamashita, S, Ishikawajima-Harima Heavy Industries, Japan

Development of a Novel FPSO Platform for Offshore Production

Castro, G A V, Petrobras; Fernandes, A C, COPPE/UFRJ, Brazil

Wind Shielding Investigations for FPSO Tandem Offloading Simulations

Buchner, B, Bunnik, T, MARIN, The Netherlands

On the Dynamic Positioning System of FPSO

Ahn, Y K, Kijima, K, Furukawa, Y, Kyushu Univ, Japan

Improvement of Position Keeping Performance and Its Effect on the Operation Rate in FPSO Tandem Offloading

Yamamoto, I, Mitsubishi Heavy Industries; Ihara, M, Hirayama, H, Okamoto, N, Japan National Oil; Matuura, M, Kobayashi, E, Mitsubishi Heavy Industries, Japan

Experimental Study on a Spread Catenary Mooring for FPSO

Codiglia, R, Contento, G, D'Este, F, Univ of Trieste; Galeazzi, F, Sole, V, Coan, A, Spezzati, M, FINCANTIERI SpA, Italy

Dynamic Behaviour of a DICAS FPSO and Shuttle Vessel under the Action of Wind, Current and Waves

Morishita, H M, Souza, J R, Univ of Sao Paulo, Brazil

31. HYDRODYNAMICS W-III: Num & Basin Waves 1 (V. 3)

Tuesday May 28 14:00 Room 32, 3F

Chair: Kim, C H, Texas A & M Univ., USA
Co-Chair: Grilli, S T, Univ of Rhode Island, USA

A Coupled Rankine/Kelvin BEM 3D Solver for the Time-Domain Simulation of OWC Wave Power Plants
Josset, C, Clément, A, Ecole Centrale de Nantes, France

Computational Method for Navier-Stokes Equations Accompanied with Free-Surface Deformation
Ushijima, S, Nezu, I, Kyoto Univ, Japan

Application of FLDV to the Flow Characteristics of Standing Wave
Lin, C, National Chung-Hsing Univ, Taiwan, China; Jeng, D S, Griffith Univ, Australia; Jeng, C N, Shieh, S J, National Chung-Hsing Univ, Taiwan, China

PIV Measurements on a Wing under the Free Surface Around the Spilling Breaking Wave Condition
Calcagno, G, Pistani, F, INSEAN, Italy

A Coupled-Mode, Fully-Dispersive, Weakly-Nonlinear Model for Water Waves over a General Bathymetry
Athanasoulis, G A, Belibassakis, K A, National Technical Univ of Athens, Greece

Measurement of Surface-Renewal Turbulence at an Air-Water Interface
Sugihara, Y, Tsumori, H, Kyushu Univ, Japan

32. GEOTECH IV: Soil Properties & Materials 1 (V. 2)

Tuesday May 28 14:00 Room 10, 1F

Chair: Kim, S S, Hanyang Univ, Korea
Co-Chair: Lo, K Y, Univ of Western Ontario, Canada

Method for Determining Degree of Consolidation of Clay Ground Improved by SCP with Low Replacement Area Ratio
You, S K, Oda, K, Matsui, T, Nabeshima, Y, Osaka Univ, Japan

Compaction Grouting and Soil Compressibility
El-Kelesh, A M, Matsui, T, Hidaka, Y, Osaka Univ, Japan

Electro-Cementation of a Marine Clay Induced by Electrokinetics
Micic, S, Shang, J Q, Lo, K Y, Univ of Western Ontario, Canada

Effect of Humic Acid on Lime Stabilized Ariake Clay
Onitsuka, K, Modmoltin, C, Kouno, M, Negami, T, Saga Univ, Japan

Improvement of Soft Marine Clays by Deep Mixing Technique
Miura, N, Horpibulsuk, S, Saga Univ, Japan; Nagaraj, T S, IIT, India

Stress-Strain of Geomembranes in Landfill under Punctiform Loads
Lee, K Y, Dongseo Univ; Chung, C G, Pusan Technical College; Hong, J W, Dongseo Univ, Korea

Considerations for Judging the Suitability of Substitute Filling Materials for Compaction Methods
Tsuboi, H, Harada, K, Tanaka, Y, Fudo Construction; Matsui, T, Osaka Univ, Japan

Influence of Freezing on the Dynamic Properties of a Silty Sand
Chen, Y C, Huang, C C, National Taiwan Univ of Science & Technology, Taiwan, China

Case Study on Ground Improvement by High Pressure Jet Grouting
Hong, W P, Chung-Ang Univ; Lee, M K, Haneol Engineering; Kim, D W,
Kumho Industrial Co; Lee, S J, Doosan Construction & Engineering, Korea

33. COASTAL ENG III: Waves (V. 3)

Tuesday May 28 14:00 Room 11, 1F

Chair: Takayama, T, Kyoto Univ, Japan
Co-Chair: Irie, I, Kyushu Univ, Japan

Wave Transmission over Natural and Artificial Forelands
Von Lieberman, N, Mai, S, Univ of Hannover, Germany

On Anomalous Behavior of Waves on Coral Reef of Okinoerabu Island
Monroy, J, Sato, M, Nishi, R, Kagoshima Univ, Japan

Simulation of Viscous Nonlinear Wave Refraction and Diffraction Over Submerged Coastal Structures
Chen, H C, Liu, T L, Texas A&M Univ, USA

An Improved Time Domain Procedure for Separating Incident and Reflected Water Waves
Matsumoto, A, Tayasu, M, Matsuda, S, TETRA Co, Japan; Hald, T, Burcharth, H F, Aalborg Univ, Denmark

Wave Shoaling on Steep Slopes and Breaking Criteria
Tsai, C P, Chen, H B, Huang, M J, National Chung-Hsing Univ, Taiwan, China

Experimental Study on Resonant Phenomena in a Narrow Open Channel under Waves
Saitoh, T, Kanazawa Univ, Japan; Miao, G P, Shanghai Jiao Tong Univ, China; Ishida, H, Kanazawa Univ, Japan

Characteristics of Partial Reflection Boundary with Porous Layer on the Boussinesq Model
Hirayama, K, Port and Airport Research Inst, Japan

34. HYDRODYNAMICS DF-IV: Dynamics & Forces 4 (V. 3)

Tuesday May 28 14:00 Room 21A, 2F

Chair: Huijsmans, R H M, MARIN, The Netherlands
Co-chair: Suzzuki, H, Univ of Tokyo, Japan

Mean and Low Frequency Roll for Semi-Submersibles in Waves
Voogt, A, MARIN, The Netherlands; Soles, J, Santa Fe International Corp, USA; Dijk, R, MARIN, The Netherlands

Wave Drift Added Mass of Floating Bodies Measured from a Free Decay Test or a Slowly Forced Oscillation Test in Waves
Kinoshita, T, Bao, W, Yoshida, M, Ishibashi, K, Univ of Tokyo, Japan

Motion Analysis for a Ship Considering Slowly Varying Drift Forces and Current Loads with Spread Mooring Systems
Shin, H K, Lee, H Y, Lim, C G, Univ of Ulsan, Korea

On the Drifting Speed of Floating Bodies in Waves
Tanizawa, K, Minami, M, National Maritime Research Inst, Japan

Diffraction Force in Compact Basin with Absorbing Wave Maker
Naito, S, Minoura, M, Okuyama, E, Osaka Univ, Japan

Wave Load Calculation of Structural Strength Analysis for a Semi-Submersible Platform
Wang, Y Y, Qian, K, Dalian Univ of Technology, China

Designer Wave Load for Approximation in Extreme Response of Offshore Structures

Taniguchi, T, Kawasaki Heavy Industries; Kawano, K, Kagoshima Univ, Japan

Shipping Water Load Due to Deck Wetness

Ogawa, Y, National Maritime Research Inst, Japan

35. ADVANCED MATERIALS AND METHODS (V. 4)

Tuesday May 28 14:00 Room 21B, 2F

Chair: Ayer, R, ExxonMobil Research & Engineering Co., USA

Ultra High Strength Linepipe — The Implications for Pipeline Operations

Jones, B L, Jones, D G, PII Ltd, UK

Development of Linepipe for Deepwater Application

Hillenbrand, H-G, Graef, M K, Europipe GmbH; Knauf, G, Mannesmann Forschungsinstitut; Gross-Weege, J, Mannesmann Forschungsinstitut Europipe, Germany

Deepwater Welding for Installation and Repair – A Viable Technology?

Richardson, I M, Delft Univ of Technology, The Netherlands

The Role of Niobium in Linepipe and ERW Steels

Ruiz-Aparicio, L, Tither, G, Reference Metals Co, USA

Development of Super 13CR Martensitic Stainless Steel for Flowline

Kondo, K, Ogawa, K, Amaya, H, Ueda, M, Ohtani, H, Sumitomo Metal Industries, Japan

Improvement of Practical Properties of Eutectoid Steel

Nishida, S, Hattori, N, Sun, W X, Saga Univ, Japan

36. RENEWABLE AND OCEAN ENERGY I (V. 1)

Tuesday May 28 14:00 Room 22, 2F

Chair: Sarmiento, AJNA, Lisbon Technical Univ, Portugal

Co-Chair: Hong, D C, Korea Research Inst of Ships & Ocean Eng, Korea

Offshore Wind Energy – Ready to Power Europe

Henderson, A R, Delft Univ of Technology, The Netherlands; Morgan, C, Garrad Hassan & Partners; Smith, B, Kvaerner Oil & Gas, UK; Sørensen, H C, Energi & Miljø Undersøgelser (EMU); Barthelmie, R, Riso National Laboratory, Denmark; Stubbe, E, Tractebel Energy Engineering, Belgium

A Feasibility Study on a Floating Wind Farm off Japan Coast

Kosugi, A, Kagemoto, H, Akutsu, Y, Kinoshita, T, Univ of Tokyo, Japan

Potential for Floating Offshore Wind Energy in Japanese Waters

Henderson, A R, Delft Univ of Technology, The Netherlands; Leutz, R, Tokyo Univ of Agriculture and Technology, Japan

Development of a Wind Turbine for Outlying Islands

Shimizu, Y, Maeda, T, Kamada, Y, Mie Univ, Japan

Dynamic Response Analysis of Onshore Wind Energy Power Units During Earthquakes and Wind

Kiyomiya, O, van Gelder, P, Rikiji, T, Waseda Univ, Japan

Design Method of Wave Power Generating System with Wells Turbine

Suzuki, M, Arakawa, C, Univ of Tokyo, Japan

Emitted Sound from Inclined Circular Cylinder and Three-Dimensional Flow Structure in Wake

Haramoto, Y, Mitsui Miike Machinery; Matsuzaki, K, Munekata, M, Ohba, H, Kumamoto Univ, Japan

37. POLAR IV: Pack Ice and Oil Spills (V. 2)

Tuesday May 28 14:00 Room 33, 3F

Chair: Saeki, H, Hokkaido Univ, Japan

Co-Chair: Prinsenber, S, Bedford Inst of Oceanography, Canada

A Numerical Model for the Simulation of Oil Spreading Beneath Rough Ice Cover

Sakai, S, Liu, X D, Iwate Univ; Izumiya, K, National Maritime Research Inst, Japan

Experimental Study on Spreading of Oil under Ice Covers

Izumiya, K, Konno, A, National Maritime Research Inst, Japan

Experimental Study on Oil/Water Separating System Using Conduit with Circular Cross-Section

Otsuka, N, North Japan Port Consultants; Okiwara, K, Kanaami, K, Hokkaido Univ; Sato, N, North Japan Port Consultants; Saeki, H, Hokkaido Univ, Japan

Nonlinear Effects in the Response of a Floating Ice Plate to a Moving Load

Dias, F, ENS-Cachan, France

Development of an Operational Ice Dynamics Model for the Canadian Ice Service

Sayed, M, National Research Council; Carrieres, T, Tran, H, Canadian Ice Service; Savage, S B, McGill Univ, Canada

The Wind Influence on Sea-Ice Drift Velocities and Deformations of Ice Cover on the Northeastern Shelf of Sakhalin Island

Tikhonchuk, E, Inst of Marine Geology & Geophysics; Tambovsky, V, Environmental Co of Sakhalin; Shevchenko, G, Inst of Marine Geology & Geophysics, Russia

38. COMPOSITES AND SMART STRUCTURES I (V. 4)

Tuesday May 28 14:00 Room 31, 3F

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

Co-Chair: Knapp, R H, Univ of Hawaii, USA

“State of the Art” Developments and Applications of Composite Materials and Other Advanced Materials in Offshore Oil and Gas Development

Price, J C, Kellogg Brown and Root, USA

Fiber Moorings for Ultra-Deepwater Application

Bhat, S, Cermelli, C, Shell Global Solutions (US), USA

Composite Wrapping as a Means of Corrosion Mitigation

Wheat, H G, Berver, E, Jirsa, J O, Fowler, D W, Univ of Texas at Austin, USA

Behavior of FRP Composite Fender Piles in Cold

Dutta, P K, USACRREL; Lampo, R G, US Army Engineer R&D Center, USA

Dynamic Analysis for the Large Offshore Composite Pipelines Subjected to Waves

Lee, H H, Chung, P Y, National Sun Yat-sen Univ, Taiwan, China

Fatigue Studies of FRP Composite Decks at -30°C and 50°C
Dutta, P K, USACRREL; Lopez-Anido, R, Univ of Maine, USA; Kwon, S C, Korea Maritime Univ, Korea

A Study on Bending Behavior of F.R.P. Bonded Double Lap Joint in Sandwich Beam and Bonded Joint Characteristics
Son, C Y, Inha Univ; Kim, I T, Hong-Ik Univ; Roh, M S, Inha Univ, Korea

Buckling/Fracture Behaviour of GFRP Laminated Plates with Initial Delamination
Yanagihara, D, Fujikubo, M, Hiroshima Univ; Teraue, D, Ishikawajima-Harima Heavy Industries, Japan

WEDNESDAY 08:00

39. OFFSHORE V: VLFS/FPSO/SPAR 2 (V. 1)

Wednesday May 29 08:00 Intl Conf Room, 2F

Chair: Teigen, P, Statoil, Norway
Co-Chair: Suzzuki, H, Univ of Tokyo, Japan

Stabilization of Unstable FPSO-Shuttle Tanker Motions
Lee, D H, Choi, H S, Seoul National Univ, Korea

Spectral Fatigue Analysis for Side Longitudinals and Hopper Knuckle Connection in VLCCs and FPSOs
Kim, Y P, Park, S G, Jun, S H, Heo, J H, Daewoo Shipbuilding & Marine Engineering, Korea

Design of FPSO's Bow Structures Against Wave Impact Loads
Wang, G, Tang, S, Shin, Y S, American Bureau of Shipping, USA

Hull/Riser/Mooring Coupled Dynamic Analysis of a Turret-Moored FPSO and the Effects of Interactions with a Shuttle Tanker
Kim, Y B, Kim, M H, Texas A&M Univ, USA

The Real Time Domain Simulation of Ringing of Heidrun TLP
Kumar, A, Kim, C H, Texas A&M Univ, USA

Prediction of a Truss Spar Motions and Loads During Upending
Prislin, I, Magee, A, Halkyard, J, CSO Aker Engineering, USA

40. HYDRODYNAMICS W-IV: Num & Basin Waves 2 (V. 3)

Wednesday May 29 08:00 Room 32, 3F

Chair: Tanizawa, K, National Maritime Research Inst, Japan
Co-Chair: Teng, B, Dalian Univ of Technology, China

Numerical Simulation of Nearshore TSUNAMI Climbing up a Conical-Shaped Island Using a CFD Simulation Technique
Park, J C, Iwata, A, Miyata, H, Univ of Tokyo, Japan

Potential and Viscous Numerical Wave Tanks for Various Nonlinear Wave-Wave and Wave-Body Interaction Problems
Kim, M H, Koo, W C, Tavassoli, A, Texas A&M Univ, USA; Hong, S Y, KRISO, Korea

Computation of Viscous Flows Around a Wigley Hull Running in Incident Waves by Use of Unstructured Grid Method
Hinatsu, M, Hino, T, National Maritime Research Inst, Japan

Prediction of Surge Motions of a Submerged Body Using a Fully Nonlinear Wave-Structure-Interaction Model

Robinson, D, US Naval Coastal Systems Station, USA; Tanizawa, K, National Maritime Research Inst, Japan; Yim, S C S, Oregon State Univ, USA

Development of Numerical Offshore Tank for Ultra Deep Water Oil Exploration

Nishimoto, K, Univ of Sao Paulo; Donato, M, Petrobras; Martins, M F, Univ of Sao Paulo; Jacob, B, COPPE/UFRJ; Menezes, I, TecGraf-PUC; Luiz, C, Martins, C, Univ of Sao Paulo; Hirata, K, IPT, Brazil

Numerical Wave-Current Interaction

Levi, C, Wanderley, J B V, COPPE/UFRJ, Brazil

41. GEOTECH V: Soil Properties & Materials 2 (V. 2)

Wednesday May 29 08:00 Room 10, 1F

Chair: Chen, J W, National Cheng Kung Univ, Taiwan, China

Co-Chair: Nabeshima, Y, Osaka Univ, Osaka, Japan

Effects of the Fines Content in Soil on the Stress Attenuation During Compaction

Chen, J W, Lin, C Y, National Cheng Kung Univ, Taiwan, China

An Analysis Model for a Hybrid Interactive System Involving Compressible Buffer Material

Hazarika, H, Okuzono, S, Kyushu Sangyo Univ, Japan

Permeability of the Compacted Soil-Bentonite Mixture

Lee, K Y, Dongseo Univ; Chung, C G, Pusan Technical College; Yoon, S H, Dongseo Univ, Korea

Characteristics of Bulking Factor with Increasing Sand-Content for a Dredged Soil

Shim, M B, Lee, S, Univ of Seoul, Korea

Estimation of Proper Strain Rate in the CRSC Test Using a Artificial Neural Network

Chae, J S, Lee, S, Univ of Seoul, Korea

The Cyclic Strength of a Hydraulic Coal Ash

Hwang, J H, National Central Univ, Taiwan, China

Characteristics of Suction and Shear Strength of Unsaturated Inorganic and Organic Silts Soil

Shin, B W, Kang, J B, Chungbuk National Univ; Lee, J D, Semyung Univ; Bang, S T, Chungbuk National Univ, Korea

42. COASTAL ENG IV: Waves and Acoustics (V. 3)

Wednesday May 29 08:00 Room 11, 1F

Chair: Hiraishi, T, Port and Airport Research Inst, Japan

Co-Chair: Von Lieberman, N, Univ of Hannover, Germany

Simulation of Sound Propagation in the Coastal Sea by a PE Model with Application to the Coastal Acoustic Tomography

Yamaguchi, K, Kaneko, A, Gohda, N, Hiroshima Univ, Japan

Observation of a Mean Water Level Fluctuation Inside a Cooling Water Tank of Power Plant Set Inside a Coral Reef System, Okinoerabu, Kagoshima, Japan

Monroy, J, Nishi, R, Sato, M, Nakamura, K, Asazaki, K, Kagoshima Univ; Tsunoue, K, Kyushu Electric Power, Japan

Calibration of Abu Dhabi Tidal Scale Model

Mohamed, K A, Abu Dhabi Water & Electricity Authority, United Arab Emirates

The Flow Field of Long Waves Propagating Around a Circular Island with Weak Currents

Lin, M C, Hsu, C M, Ting, C L, National Taiwan Univ, Taiwan, China

Experimental Study on the Effect in Reducing Tsunami by the Coastal Permeable Structures

Harada, K, Imamura, F, Tohoku Univ; Hiraishi, T, Port and Airport Research Inst, Japan

43. HYDRODYNAMICS DF-V: Dynamics & Forces 5 (V. 3)

Wednesday May 29 08:00 Room 21A, 2F

Chair: Kim, M H, Texas A & M Univ, USA

Model- and Field-Experiments on a Wave Observation Buoy

Koterayama, W, Nakamura, M, Kyushu Univ; Sato, K, Okinawa Subtropical Remote-Sensing Center; Ikebuchi, T, Kawasaki Heavy Industries, Japan

Onboard Ship Motion Analyzer Based on Nonstationary Time Series Analysis

Terada, D, Iseki, T, Tokyo Univ of Mercantile Marine, Japan

A New Device of Pitch Motion Reduction of Floating Structures

Tanigaki, S, Matsuura, M, Yano, S, Kumamoto, H, Mitsubishi Heavy Industries, Japan

Operation of the Hybrid Anti-Rolling System on Board the R/V Mirai in the North Pacific Ocean

Tsukioka, S, JAMSTEC; Momma, H, Nippon Marine Enterprises; Takeuchi, T, UEC; Ueda, S, JAMSTEC, Japan

A Study on the Working Characteristics on Board of Oscillating Ships

Kawamura, Y, Hiroshima National College of Maritime Technology; Shoji, K, Minami, K, Tokyo Univ of Mercantile Marine; Hayashi, J, Tokyo Univ of Mercantile Marine, Japan

Modeling of Hybrid-Fender in Numerical Simulation Method for Ship Motions

Kubo, M, Sakakibara, S, Saito, K, Kobe Univ of Mercantile Marine; Yoshida, T, Toyo Construction; Satou, S, Mitsui Engineering & Shipbuilding; Oki, T, Shibata Industrial, Japan

44. MECHANICS AND ANALYSIS (V. 4)

Wednesday May 29 08:00 Room 21B, 2F

Chair: Boswell, L F, City Univ, UK

Co-Chair: Wan Mahmood, W A M, MARA Univ of Technology, Malaysia

Hydroelastic Response Analysis of a Large Underwater Shell of Revolution

Toyota, K, Yasuzawa, Y, Kagawa, K, Kyushu Univ, Japan

Considerations on Modelling of Stiffener in Buckling/Plastic Collapse Analysis of Stiffened Plating

Mukherjee, S, Hayashi, S, Yao, T, Osaka Univ, Japan

A Concept of Deepwater Axisymmetric Shell Storage Container Equatorially Anchored [Oral Presentation Only]

Huang, T, Univ of Texas at Arlington, USA

Stability of a Floating Cylindrical Shell Structure

Redekop, D, Patel, A S, Univ of Ottawa, Canada

Ultimate Strength Analysis of Ring-Stiffened Cylinders

Park, C M, Lee, S H, Univ of Ulsan, Korea

A Study on the Optimization Method of Vibration Level for the New Standard of ISO6954

Hayashi, S, Sakakida, K, Terada, K, Yao, T, Osaka Univ, Japan

45. RENEWABLE AND OCEAN ENERGY II (V. 1)

Wednesday May 29 08:00 Room 22, 2F

Chair: Maeda, H, Nihon Univ, Japan

Wave Energy Absorption by a Flap-Harbour OWC Device

Hong, D C, Kim, H J, Korea Research Inst of Ships & Ocean Engineering, Korea

Estimation of the Diffraction Flow Time-Series in an OWC Power Plant

Brito-Melo, A, Sarmiento, A J N A, Instituto Superior Tecnico, Portugal

Identification of Non-Linear Flow Characteristics of the IMPET Shoreline OWC

Folley, M, Whittaker, T, Queen's Univ of Belfast, UK

Effects of Submerged Vertical Plates and Air Chamber Units in Hydroelastic Response Reductions

Ikoma, T, Maeda, H, Masuda, K, Nihon Univ; Rheem, C K, Univ of Tokyo; Arita, M, Nihon Univ, Japan

A Rotating Wing for the Extraction of Wave Energy and Determination of Wave Direction

Pinkster, J A, Delft Univ of Technology, The Netherlands

Internal Wave Elevations in the Chamber of the Oscillating Water Column Box

Lee, S M, Dong Yang Univ; Kim, S G, Cheju National Univ, Korea

An Attempt to Make Wave Generation System of High Performance

Hadano, K, Yamaguchi Univ; Hashida, M, Nippon Bunri Univ; Sato, M, Kagoshima Univ, Japan

46. RISERS/CABLES/MOORING I (V. 2)

Wednesday May 29 08:00 Room 33, 3F

Chair: Miksad, R W, Univ of Virginia, USA

Co-Chair: Park, H I, Korea Maritime Univ, Korea

Development of Borehole Re-Entry System

Amitani, Y, Kyo, M, Hashimoto, K, Shimura, T, Sawa, T, JAMSTEC, Japan

Experimental Analysis on Motions of Riser for IODP Deep Water Riser Drillship

Miyazaki, E, Kyo, M, JAMSTEC; Suzuki, H, Univ of Tokyo; Yasukawa, H, Ono, Y, Mitsubishi Heavy Industries; Yamazaki, T, National Inst of AIST, Japan

Sandwich Pipes for Ultra-Deep Waters

Netto, T A, Pasqualino, I P, Estefen, S F, COPPE/UF RJ, Brazil

Incremental Collapse of Tension Legs and Risers

Grundy, P, Hewitt, M, Monash Univ, Australia

Development of Yoke-Spring Mooring System for Floating Structures in Coastal Areas

Kiyomiya, O, Waseda Univ; Yamaya, H, Okumura, Y, Coastal Development Inst of Technology; Matsuura, M, Kihara, K, Tamura, K, Mitsubishi Heavy Industries, Japan

Interaction Between a Riser and a Tubing in CVAR System

Kuroiwa, T, Nishigaki, M, Mitsubishi Heavy Industries; Okamoto, N, Hirayama, H, Ihara, M, Japan National Oil; Ishida, K, Otomo, K, Japan Drilling, Japan

Dynamic Positioning Algorithm Based on Riser Response Criteria

Leira, B J, Sorensen, A J, Larsen, C M, NTNU, Norway

47. COMPOSITES AND SMART STRUCTURES II (V. 4)

Wednesday May 29 08:00 Room 31, 3F

Chair: Dutta, P K, USACRREL, USA

Co-Chair: Son, C Y, Inha Univ, Korea

Cluster Vibration Control of Stiffened and Laminated Composite Plate Using Piezoelectric Sensor and Actuator

Nam, D H, Kikushima, Y, National Inst of AIST, Japan

Microbend Fiber Optic Sensor System for Pressurized Cylinders

Knapp, R H, Univ of Hawaii, USA

Microstructural Study of Stainless Fiber Reinforced Aluminum Composite

Nishida, S, Yue, X L, Hattori, N, Saga Univ, Japan

Mechanical Behavior of Aluminum Alloy Foams

Huang, J S, National Cheng Kung Univ, Taiwan, China

Application of Steel Aggregates to Concrete Structure Operating in Ice and Wave Conditions

Toropov, E E, CDB ME "Rubin"; Bellendir, E N, Kaufman, A D, Kostira, G Z, Vedenev VNIIG, Russia

Gelcoat Blistering and the Use of Glassflakes

Tsuzuki, E K, Empresa Brasuleira de Aeronautica; Taniguchi, C, Escola Politecnica da USP; Carvalho, A, Owens Corning Fiberglass do Brazil, Brasil

WEDNESDAY 10:45

48. OFFSHORE VI: VLFS/FPSO/SPAR 3 (V. 1)

Wednesday May 29 10:45 Intl Conf Room, 2F

Chair: Inoue, Y, Yokohama National Univ, Japan

Co-Chair: Park, I K, Hyundai Heavy Industries, Korea

Investigation of Deep Water Installation Operations in Random Waves and Current

Teigen, P, Statoil, Norway

A Case Study on the Evaluation of Floating Hose Forces in a CALM System

Roveri, F E, Petrobras; Sagrilo, L V S, Cicilia, F B, COPPE/UFRJ, Brazil

Heave and Pitch Motions of a Spar Platform with Damping Plate

Rho, J B, Choi, H S, Seoul National Univ; Lee, W C, Shin, H S, Park, I K, Hyundai Heavy Industries, Korea

A Study on the Stabilities of Cylindrical Spar Buoys

Park, R S, Kim, S D, Univ of Ulsan, Korea

Modelling and Simulation of Offshore Crane Operations on a Floating Production Vessel

Than, T K, Langen, I, Stavanger University College; Birkeland, O, Hydralift ASA; Rølvåg, T, Fedem Technology, Norway

A Simulation Program to Support Decisions in Offloading Operations

Sales, J S, Matter, G B, da Silva, R R M, Sphaier, S H, COPPE/UFRJ, Brazil

Hull/Riser/Mooring Coupled Dynamic Analysis of a Classic Spar and the Effects of Buoyancy Cans on Global Motions

Tahar, A, Kim, M H, Texas A&M Univ, USA

Coupling Effects of Risers/Supporting Guide Frames on Spar Responses

Zhang, X, Zou, J, ABB Lummus Global, USA

49. METOCEAN I: Waves 1 (V. 3)

Wednesday May 29 10:45 Room 32, 3F

Chair: Mitsuyasu, H, Hiroshima Inst of Technology, Japan

Co-Chair: Olagnon, M, IFREMER, France

Frogue Waves: A Suggestion and a Proposition

Liu, P C, Teng, C C, NOAA, USA; Mori, N, Central Research Inst of Electric Power Industry, Japan

Statistical Differences Between Wave-Crest Distributions for Spatial and Temporal Definitions

Rydén, J, Rychlik, I, Lund Univ, Sweden

Height-Length Joint Distributions for Computation of Static Wave Loading on Floating Bodies

Rydén, J, Lund Univ, Sweden; van Iseghem, S, Olagnon, M, IFREMER, France; Rychlik, I, Lund Univ, Sweden

How Fast Are the Two-Dimensional Gaussian Waves?

Podgrski, K, IUPUI, USA; Rychlik, I, Baxevani, A, Lund Univ, Sweden

50. GEOTECH VI: Bearing Capacity 1 (V. 2)

Wednesday May 29 10:45 Room 10, 1F

Chair: Allersma, H G B, Delft Univ of Technology, The Netherlands

Co-Chair: Hyodo, M, Yamaguchi University, Japan

The Failure Behavior of Highway Slope in Ali-San Area of Taiwan

Lee, D H, National Cheng Kung Univ; Lin, H M, Leader Univ; Fang, S C, Nan-Jeon Inst of Technology; Tsai, P H, National Cheng Kung Univ, Taiwan, China

Numerical Simulation of an Experimental Jack-Up Model Test

Vlahos, G, Univ of Western Australia, Australia

Centrifuge Modelling of Drag-In Plate Anchors

Elkhatib, S, Lonnie, B, Randolph, M, Univ of Western Australia, Australia

Discrepancies Between Safety Factors of Slope Stability on the Two Layers Problems Taken by Fellenius and Bishop Methods

Fukuda, M, Suwa, S, Kato, Y, Shimonodan, T, Geo-Research Inst, Japan

Impact of New Tunneling on an Existing Tunnel

Lee, C J, Wu, J R, Wu, B R, Yang, S H, National Central Univ, Taiwan, China

Data Base Establishment in Hua Fan University as Slope Monitoring Test Site

Chen, S, Chao, C P, Jeng, C J, Tsao, S P, Hua Fan Univ, Taiwan, China

Bearing Capacity of Light Weight Soil Used Recycled Styrofoam Beads

Lee, B J, Chungju National Univ; Oh, S W, Lee, J K, Kwon, Y C, Chungbuk National Univ, Korea

Behaviors of Foundation System Improved with Stone Columns

Bae, W S, Shin, B W, Chungbuk National Univ; Kim, J S, Ki-Hwa Construction; An, B C, Chungbuk National Univ, Korea

Penetration Analysis of Spudcan Foundations in NC Clay

Mehryar, Z, Hu, Y, Curtin Univ of Technology; Randolph, M F, Univ of Western Australia, Australia

51. COASTAL ENG V: Wave and Current (V. 3)

Wednesday May 29 10:45 Room 11, 1F

Chair: Li, Y-C, Dalian Univ. of Technology, China

Some Remarks on River Mouth Flow

Lalli, F, Italian Agency for Environmental Protection; Miozzi, M, Romano, G P, Univ Studi di Roma: La Sapienza”, Italy

Effects of a Current Field on the Characteristics of Irregular Waves

Togashi, H, Mohiuddin, M, Hirayama, Y, Nagasaki Univ, Japan

Vertical Distribution of Radiation Stresses and 3-D Nearshore Current Around Coastal Structures

Nobuoka, H, Mimura, N, Ibaraki Univ, Japan

Mass Transport Velocity in a Thin Layer of BiViscous Mud under Progressive Surface Waves

Ng, C O, Fu, S C, Univ of Hong Kong, Hong Kong

Numerical Simulation of Wave and Current to Estimate Sand Lift-Out Through Rubble Mound

Sakakiyama, T, Central Research Inst of Electric Power Industry; Suzuki, K, Tohoku Electric Power, Japan

On Turbulence Estimates in Non-Stationary Periodic Flows

Petti, M, Univ of Udine, Italy

A Basic Study on Turbid Water into a Stratified Field Using the MPS Method

Matsumoto, K, Kobatake, S, Shimizu, Y, Gunma Univ, Japan

Velocity Measurement of Surface Flow by Surface Flow PIV

Kim, B S, Kim, J H, Korea Maritime Univ; Hwang, B Y, Korea Agricultural & Rural Infrastructure Corp; Lee, Y H, Korea Maritime Univ, Korea

52. HYDRODYNAMICS DF-VI: Dynamics & Forces 6 (V. 3)

Wednesday May 29 10:45 Room 21A, 2F

Chair: Chaplin, J R, Southampton Univ, UK

Co-Chair: Ikeda, Y, Osaka Prefecture Univ, Japan

Higher-Order Statistical Moments of Wave-Induced Response of Offshore Structures Via Efficient Sampling Techniques

Najafian, G, Burrow, R, Tickell, R G, Univ of Liverpool, UK; Metcalfe, A V, Univ of Adelaide, Australia

Efficient Derivation of Statistical Properties of Wave-Induced Quasi-Static Response of Offshore Structures Through Simulation of Independent Response Values

Najafian, G, Burrow, R, Tickell, R G, Univ of Liverpool, UK; Metcalfe, A V, Univ of Adelaide, Australia

A Finite-Element Computation for the Sloshing Motion in LNG Tank

Kim, J W, Shin, Y S, American Bureau of Shipping, USA; Bai, K J, Seoul National Univ, Korea

Spatial Distribution of the Wave Around Multiple Floating Bodies

Kashiwagi, M, Ohwatari, Y, Kyushu Univ, Japan

Simulation of Second-Order Radiation of 3D Bodies in Time Domain by a B-Spline Method

Teng, B, Bai, W, Dong, G H, Dalian Univ of Technology, China

Time-Domain Simulation of Nonlinear Free Surface Flow Around Floating Sea Caches Including Wave and Current Effects

Chen, H C, Liu, T, Texas A&M Univ; Huang, E T, Naval Facilities Engineering Service Center, USA

53. MATERIALS/WELDING I: Fatigue 1 (V. 4)

Wednesday May 29 10:45 Room 21B, 2F

Chair: Toyosada, M, Kyushu Univ, Japan

Co-Chair: Koo, J, ExxonMobil Research & Engineering Co, USA

Crack Growth Prediction in Girth Welds of Steel Catenary Risers

Pasqualino, I P, Valeriano, I A, COPPE/UFRJ, Brazil

A New Approach to Fatigue Strength Evaluation of Ship Hull

Wang, Y, Terai, K, Tomita, Y, Hashimoto, K, Osawa, N, Osaka Univ, Japan

Plain Bending Fatigue Properties of Extra-Low Carbon Steels

Nishida, S, Hattori, N, Thammaphornphilas, K, Kawano, T, Saga Univ, Japan

Effect of Compressive Mean Stress and Compressive Residual Stress on Fatigue Properties of Stainless Steel SUS304

Nishida, S, Iswanto, P T, Hattori, N, Saga Univ, Japan

A New Model for the Fatigue Life Prediction Considering Residual Stress Relaxation

Lee, T K, Nam, Y Y, Han, S H, Shin, B C, Korea Inst of Machinery & Materials, Korea

The Effect of Compressive Residual Stresses of Two-Stage Shot Peening for Fatigue Strength of Spring Steel

Park, K D, Jung, C G, Pukyong National Univ, Korea

54. RENEWABLE AND OCEAN ENERGY III (V. 1)

Wednesday May 29 10:45 Room 22, 2F

Chair: Setoguchi, T, Saga Univ, Japan

Co-Chair: Henderson, A R, Delft Univ of Technology, The Netherlands

Performance of a Radial Turbine for Wave Power Conversion

Takao, M, Itakura, K, Matsue National College of Technology; Setoguchi, T, Kim, T H, Kaneko, K, Saga Univ; Inoue, M, Kyushu Univ, Japan

Numerical Trial for Darrieus-Type Alternating Flow Turbine

Ishimatsu, K, Kage, K, Okubayashi, T, Oita Univ, Japan

Output Characteristics of Darrieus Water Turbine with Helical Blades for Tidal Currents Generation

Shiono, M, Suzuki, K, Kiho, S, Nihon Univ, Japan

Floating Buoy Type Energy Collector for Tidal Current Power Generation

Kashiwabara, T, Kochi National College of Technology; Nakanishi, Y, Kanagawa Univ; Uno, M, Kyushu Kyoritsu Univ; Kanemoto, T, Kyushu Inst of Technology, Japan

A Study of Wave Energy Conversion Systems Using Ball Screws – Comparison of Output Characteristics of the Fixed Type and the Floating Type

Matsuoka, T, Omata, K, Kanda, H, Tachi, K, Meiji Univ, Japan

A Study of Air Turbines Transforming Sea Wave Power

Irabu, K, Univ of the Ryukyus, Japan

55. RISERS/CABLES/MOORING II (V. 2)

Wednesday May 29 10:45 Room 33, 3F

Chair: Leira, B J, NTNU, Norway

Co-Chair: Pesce, C P, Univ of São Paulo, Brazil

Partial Reconstruction of Wavelet Transforms for Riser Response Analysis

Jordan, D A, Waller, E E, Pelstring, J A, Miksad, R W, Univ of Virginia, USA

Large Strain Static Analysis of Marine Risers Via Variational Approach

Chucheepsakul, S, Monprapussorn, T, Athisakul, C, King Mongkut's Univ of Technology, Thailand; Huang, T, Univ of Texas at Arlington, USA

Multiple Static Solutions and Stability of a Vertical Riser in the Wake of an Upstream Vertical Riser

Huang, S, Wu, W S, Bartrop, N, Univ of Glasgow and Strathclyde, UK

A Simplified Procedure to Assess the Fatigue-Life of Flexible Risers

Martins, C A, Pesce, C P, Univ of Sao Paulo, Brazil

A Facility for Evaluation of Modal Competition in an Elastic Riser

Marcollo, H, Hinwood, J B, Monash Univ, Australia

Sensitivity Studies on the Fatigue Behavior of Steel Catenary Risers

Senra, S F, Jacob, B P, COPPE/UFRJ; Torres, A L F L, Mourelle, M M, Petrobras, Brazil

56. OCEAN RESOURCES AND ENGINEERING I (V. 1)

Wednesday May 29 10:45 Room 31, 3F

Chair: Komai, T, Natl Inst of Advanced Industrial Sci and Tech, Japan

Triaxial Compressive Strength of Methane Hydrate in Seabed

Hyodo, M, Nanjo, Y, Matsuo, T, Nakata, Y, Yoshimoto, N, Yamaguchi Univ, Japan; Hyde, A F L, Univ of Sheffield, UK

An Experimental Study of Gas Hydrate and Ice Accumulations in Sediments

Chuvilin, E M, Ebinuma, T, Kamata, Y, Uchida, T, Takeya, S, Nagao, J, Narita, H, National Inst of Advanced Industrial Science and Technology, Japan

Fundamental Study on Gas Hydrate Recovery from Marine Sediments
Komai, T, Yamamoto, Y, Haneda, H, Kang, S P, National Inst of Advanced Industrial Science and Technology; Kawamura, T, Ohga, K, Hokkaido Univ, Japan

Dissociation Behavior of Methane-Ethane Mixed Gas Hydrate in Drilling Mud Fluid
Kawamura, T, Yamamoto, Y, Haneda, H, National Inst of Advanced Industrial Science and Technology; Ohga, K, Hokkaido Univ, Japan

Chemical Compositions of Sediment Plume Discharged from the Benthic Disturber
Fukushima, T, Marine Biological Research Inst of Japan; Harada, K, Shibamoto, Y, National Inst of AIST; Kuboki, E, Metal Mining Agency of Japan, Japan

The Impact of Land Reclamation on Red Tides and Oxygen Deficient Water Masses in Mikawa Bay
Aoyama, H, Aichi Fisheries Research Inst, Japan

Numerical and Experimental Simulations of Effect of Purification Apparatus Set in Gokasho-Bay
Sato, T, Tonoki, K, Ebara, K, Tabeta, S, Univ of Tokyo, Japan

WEDNESDAY 13:20

Plenary Presentation III (V.2)

Wednesday May 29 13:20 Int Conf Room, 2F

A Comparative Study on Geotechnical Characteristics of Marine Soil Deposits Worldwide
Tanaka, H, Port and Airport Research Inst, Japan
Introduction by Matsui, T, Osaka Univ, Japan

57. OFFSHORE VII: VLFS/FPSO/SPAR 4 (V. 1)

Wednesday May 29 14:00 Intl Conf Room, 2F

Chair: Watanabe, E, Kyoto Univ, Japan

Dynamic Responses of the Mega-Float Phase-II 1000-m Model
Kobayashi, K, Okada, S, Sumitomo Heavy Industries; Sato, C, Shipbuilding Research Center of Japan, Japan

The Ground Structure of “Mega-Float” and Its Effect on the GP (Glide Path) Course Structure
Yokoyama, H, Electronic Navigation Research Inst; Matayoshi, N, National Aerospace Laboratory, Japan

Airplane-Landing Practice at Mega-Float Airport Model
Kanzawa, M, Sumitomo Heavy Industries; Daiki, K, Technological Research Association of Mega-Float; Tateyama, T, Ishikawajima-Harima Heavy Industries; Horiba, S, Mitsubishi Heavy Industries; Matsubara, N, Akishima Labs (Mitsui Zosen); Tsuchida, M, Sumitomo Metal Industries, Japan

Comparison of Mooring Simulations and Measurement for Mega-Float Phase-II Model
Shimada, K, Miyajima, S, Akishima Laboratories (Mitsui Zosen), Japan

Wind Loads on Multiple Columns of Semisubmersible-Type-Mega float
Suzuki, H, Sawai, T, Oka, N, Univ of Tokyo; Masanobu, S, National Maritime Research Inst; Kobayashi, K, Sumitomo Heavy Industries, Japan

A Study on Progress in Antiwave Performance of Mega-Float
Ohta, M, Ozaki, M, Matsuura, M, Tanigaki, S, Shuku, M, Inoue, S,
Mitsubishi Heavy Industries, Japan

Methods of Stress Analysis for Detailed Mega-Float Structures Subject to Wave Loads
Inoue, K, Hitachi Zosen, Japan

Wet-Mode Superposition for Evaluating the Hydroelastic Response of Irregular-Shaped Floating Structures
Hamamoto, T, Musashi Inst of Technology; Fujita, K, Yokokawa Bridge Corp, Japan

58. METOCEAN II: Waves 2 (V. 3)

Wednesday May 29 14:00 Room 32, 3F

Chair: Jenkins, A D, DNMI, Norway

On the Contribution of Swell to Sea Surface Phenomenon (2)
Mitsuyasu, H, Hiroshima Inst of Technology, Japan

Occurrence Probability of Wave Grouping for Different Shapes of Wave Energy Spectra
Ozbahceci, B O, Takayama, T, Mase, H, Kyoto Univ, Japan; Ergin, A, Middle East Technical Univ, Turkey

Assimilation of Synthetic SWIMSAT Directional Wave Spectra in Wave Model WAM
Aouf, L, Lefevre, J-M, Meteo France; Hauser, D, Univ Versailles Saint-Quentin, France

Wave Groups Induced Low Frequency Waves
Dong, G H, Teng, B, Dalian Univ of Technology, China; Dodd, N, HR Wallingford, UK; Ye, W Y, Dalian Univ of Technology, China

A New Analysis Method of Observed Directional and Infra-Gravity Waves Based on Frequency Banded Spectrum Power
Nagai, T, Hashimoto, N, Kawaguchi, K, Port and Airport Research Inst; Kudaka, M, Ecoh Co; Mitsui, M, Kaijo Co, Japan

Analysis of Various Wave Components on the Relationship Between Non-Dimensional Roughness Length and Wave Age
Suzuki, N, Chiba Univ; Ebuchi, N, Tohoku Univ; Zhao, C F, Chiba Univ/Ocean Univ of Qingdao; Kobayashi, D, Chiba Univ; Watabe, I, Science and Technology Agency; Sugimori, Y, Chiba Univ, Japan

Improved Least Squares Method for Selecting Design Wave Height
Dong, S, Takayama, T, Kyoto Univ, Japan

Multiscale Time Series Modelling of Significant Wave Height
Stefanakos, C N, Athanassoulis, G A, Barstow, S F, National Technical Univ of Athens, Greece

59. GEOTECH VII: Bearing Capacity 2 (V. 2)

Wednesday May 29 14:00 Room 10, 1F

Chair: Matsui, T, Osaka Univ, Japan

Co-Chair: Lee, D H, National Cheng Kung Univ, Taiwan, China

Electrokinetic Enhancement of Skirted Foundation Elements: A Laboratory Study
Shang, J Q, Micic, S, Lo, K Y, Univ of Western Ontario, Canada

Effect of Strength Non-Homogeneity on the Bearing Capacity of Circular Skirted Foundations Subjected to Combined Loading
Gourvenec, S, Randolph, M, Univ of Western Australia, Australia

Application of Small Beam Centrifuge in Offshore Foundation Engineering

Allersma, H G B, Delft Univ of Technology, The Netherlands

Applications of the Scaled Boundary Finite-Element Method to Offshore Geotechnical Problems

Doherty, J P, Univ of Western Australia, Australia

Application of Ground Penetrating Radar on the Void-Detection in Levee

Ni, S H, Chen, C K, Lin, H M, National Cheng Kung Univ, Taiwan, China

Review of skirt Penetration Resistance Based on In-Situ Monitoring

Masui, N, Ito, M, Yoneda, H, Zenda, Y, Iida, Y, Obayashi Corp; Hermstad, J, Aker, Japan

Field Measurements of Pullout Capacity of Mooring Anchors

Maeno, Y, Ishikawa, M, Nihon Univ; Tobita, Y, Kumagai, Y, Japan Sea Pollution Prevention Association, Japan

Quasi-Static Solution, u - p Approximation and Dynamic Solution for the Wave-Induced Seabed Response

Cha, F D H, Jeng, D S, Griffith Univ, Australia; Rahman, M S, North Carolina State Univ, USA

Effects of Wave Non-Linearity on the Wave-Induced Seabed Response

Oh, Y N, Jeng, D S, Griffith Univ, Australia

60. COASTAL ENG VI: Force and Stability (V. 3)

Wednesday May 29 14:00 Room 11, 1F

Chair: Mizutani, N, Nagoya Univ, Japan

Co-Chair: Lin, M C, National Taiwan Univ, Taiwan, China

Behavior Analysis of a Breakwater Caisson with Piles

Tomoki, M, Ishikawajima-Harima Heavy Industries, Japan

Dynamic Wave Pressures on Deeply Embedded Large Cylinder Structures Due to Random Waves

Liu, H X, Tianjin Univ, China

Analytic Solutions of Nonlinear Wave and Structure Interactions

Lee, J F, Tzeng, D C, National Cheng Kung Univ, Taiwan, China

Deformation and Mooring Force of Submerged Net Structure in Flow

Yasui, A, Taiyo Kogyo Corp; Deguchi, I, Osaka Univ, Japan

Numerical Simulation of Deformation of Submerged Breakwater by DEM and VOF

Itoh, K, Higuchi, Y, Toue, T, Katsui, H, Taisei Corp, Japan

Stochastic Estimation of Stability of Rubble Stones for Submerged Breakwater

Araki, S, Deguchi, I, Osaka Univ, Japan

Study on the Resistance Characteristics Inside Large Grain Media

Lee, C P, Chen, J Y, Ker, W K, National Sun Yat-sen Univ, Taiwan, China

61. ENVIRONMENT & REMOTE SENSING I (V. 1)

Wednesday May 29 14:00 Room 21A, 2F

Chair: Sayed, M, National Research Council, Canada

Co-Chair: Tada, A, Nagasaki Univ, Japan

Preliminary Study of the Monitoring for Turbid Coastal Waters Using a New Satellite Sensor “ASTER”

Sakuno, Y, Hiroshima Univ; Matsunaga, T, Tokyo Inst of Technology; Koze, T, Takayasu, K, Shimane Univ, Japan

Mixing Zone Characteristics of Ocean Outfall Plumes in Korean Coastal Waters

Kang, S W, Oh, B C, Kim, S I, Park K S, Korea Ocean Research & Development Inst, Korea

Observation of Floating Objects in Ariake Sea

Hamada, T, Kyushu Univ, Japan

Field Tests of a New Coastal Circulation Observing System Using Lagrangian Drifter with Cellular Phone for GPS Data Retrieval

Manda, A, Nagasaki Univ; Takahashi, T, Minamata Environmental R&D Center; Komori, S, Zeni Lite Buoy; Kyojuka, Y, Kyushu Univ; Nishimura, S, Kumamoto Prefectural Univ, Japan

An Intensive Field Survey of Physical Environments in a Mangrove Forest

Nihei, Y, Tokyo Univ of Science; Nadaoka, K, Tokyo Inst of Technology; Aoki, Y, Tokyo Univ of Science; Wakaki, K, Tokyo Inst of Technology; Yai, H, Aoki Corp; Furukawa, K, National Inst for Land and Infrastructure Management, Japan

Field-Observation Analysis of Sea-Bottom Effects on Thermal Environments in a Coral Reef

Nihei, Y, Tokyo Univ of Science; Nadaoka, K, Tokyo Inst of Technology; Tsunashima, Y, Aoki, Y, Tokyo Univ of Science; Wakaki, K, Tokyo Inst of Technology, Japan

Observation of Coastal Current by Acoustic Doppler Current Profiler 2 km Offshore of Tsuyazaki, Fukuoka in Winter

Kyojuka, Y, Kasa, T, Inada, M, Kyushu Univ, Japan

Field Observations of Tidal Currents & Water Qualities During a Stratified Season in the New Nagasaki Fishery Port

Tada, A, Yano, S, Nakamura, T, Nonaka, H, Nagasaki Univ; Kohashi, N, Kyushu Univ; Nishiokugi, H, Nagasaki Univ; Komatsu, T, Kyushu Univ, Japan

62. MATERIALS/WELDING II: Fatigue 2 (V. 4)

Wednesday May 29 14:00 Room 21B, 2F

Chair: Wegrzyn, T, Univ of Beira Interior, Portugal

Co-Chair: Sim, S B, Pukyong National Univ, Korea

Fatigue Life Extension of Steel Plates with a Through-the-Thickness Crack Using Local Heating

Jang, C D, Song, H C, Seoul National Univ, Korea

Low and High Temperature First Crack Progress Evaluation of Shot Peening Processed Spring Steel

Park, K D, Jung, C G, Ha, K J, Pukyong National Univ, Korea

Development of Practical and Adaptive Progressive Die for Very Thick Marine Part Sheet Metals

Sim, S B, Song, Y S, Lee, S T, Pukyong National Univ, Korea

Micro-Genetic Algorithms (Gas) for Hard Combinatorial Optimisation Problems

Kim, Y Y, Toyosada, M, Gotoh, K, Kyushu Univ; Japan; Park, J W, Chosun Univ, Korea

Evaluation of Tensile Strength and Fatigue of 6061 Aluminum Alloy Friction Welded Joints by Heat Input and Burn-Off Length

Ochi, H, Osaka Inst of Technology; Sawai, T, Osaka Sangyo Univ;
Yamamoto, Y, Setsunan Univ; Ogawa, K, Osaka Prefecture Univ, Japan

Penetration Control by Monitoring Molten Pool Oscillation in TIG Arc Welding

Ju, J B, Suga, Y, Keio Univ, Japan

Study on Combustion Analysis in the Impinging Jet Flame During Line Heating Process

Sawamura, J, Tomita, Y, Osawa, N, Hashimoto, K, Osaka Univ, Japan

Study on the Deposition of ITO Films at Low Temperature by Inclination Opposite Target Type DC Magnetron Sputtering Method

Shin, D H, Kim, Y H, Korea Maritime Univ, Korea; Murakami, R, Minamiguchi, J, Univ of Tokushima, Japan

63. RENEWABLE AND OCEAN ENERGY IV (V. 1)

Wednesday May 29 14:00 Room 22, 2F

Chair: Curran, R, Queen's Univ of Belfast, UK

Co-Chair: Lee, Y W, Pukyong National Univ, Korea

A Review of Wave Power in Scotland

Johnson, B, Heriot-Watt Univ, UK

The First Year of Operational Experience with the LIMPET Wave Energy Plant

Boake, C B, Whittaker, T J T, Folley, M, Queen's Univ of Belfast, UK

The Offshore Floating Type Wave Power Device "Mighty Whale" Open Sea Tests: Performance of the Prototype

Osawa, H, Washio, Y, Ogata, T, Turitani, Y, Nagata, Y, Japan Marine Science & Technology Center, Japan

The Offshore Floating Type Wave Power Device "Mighty Whale" Open Sea Tests: Environmental Conditions

Nagata, Y, Yamashita, S, Ishikawajima-Harima Heavy Industries; Washio, Y, Osawa, H, Ogata, T, Tsuritani, Y, Japan Marine Science and Technology Center, Japan

Prospect of Economical Wave Power Electric Generator by the Terminator Backward Bent Duct Buoy (BBDB)

Masuda, Y, Kuboki, T, Pacific Society, Japan; Thakker, A, Univ of Limerick, Ireland; Lewis, T, Univ of Cork, Ireland; Liang, X G, Guangzhou Inst of Energy Conversion, China.

Autonomous Control System of an Induction Generator for Wave Energy Device

Jeon, B H, Hong, S W, Lim, Y K, Korea Research Inst of Ships and Ocean Engineering, Korea

Cost Analysis of the Wave Power Extraction at Breakwaters

Kondo, H, Muroran Inst of Tech; Watabe, T, T-Wave Consulting; Osanai, S, Taniguchi, F, North Japan Port Consulting, Japan

64. RISERS/CABLES/MOORING III (V. 2)

Wednesday May 29 14:00 Room 33, 3F

Chair: Grosenbaugh, M A, Woods Hole Oceanographic Inst, USA

Co-Chair: Sumer, B M, Technical Univ of Denmark, Denmark

An Experimental Study on In-Line and Transverse Vibration of a Highly Flexible Free Hanging Pipe in Water

Park, H I, Korea Maritime Univ, Korea; Hong, Y P, Nakamura, M, Koterayama, W, Kyushu Univ, Japan

Dynamic Analysis of Loop Formation in Cables under Compression

Gatti, C S, Perkins, N C, Univ of Michigan, USA

A Numerical and Experimental Study on Dynamics of Towed Low-Tension Cables

Jung, D H, Park, H I, Korea Maritime Univ, Korea; Koterayama, W, Kyushu Univ, Japan

Comparison Study on Dynamic Characteristics of Catenary and Taut Mooring Line by Forced Oscillation Experiment

Kim, H J, Hong, S Y, Hong, S, Korea Research Inst of Ships & Ocean Engineering, Korea

Dynamic Tension in Risers and Mooring Lines: A Comparison Between an Algebraic Expression, a Finite Element Method and Experiments

Martins, M R, Nishimoto, K, Univ of Sao Paulo; Donato, M F, Petrobras, Brazil

A Study on the Mooring of Large Floating Structures Inside a Reef

Ookubo, H, Yamane, M, Torii, T, Nippon Steel, Japan

Economical Design of Elastic Chain for Mooring Through the Numerical Simulation

Takayama, T, Kyoto Univ; Tokubuchi, K, Shibata Industrial, Japan

A Formulation of Damping Forces of Submerged Lines Connected to Offshore Structures

Sales, J S, Matter, G B, Sphaier, S H, COPPE/UF RJ, Brazil

65. OCEAN RESOURCES AND ENGINEERING II (V. 1)

Wednesday May 29 14:00 Room 31, 3F

Chair: Otsuka, K, Univ of Osaka Prefecture, Osaka, Japan

Co-Chair: Hong, S, Korea Research Inst of Ships & Ocean Eng, Korea

Development of Technical and Economical Examination Method for Cobalt-Rich Manganese Deposits

Yamazaki, T, Inst for Marine Resources and Environment; Park, S H; Shimada, S, Univ of Tokyo; Yamamoto, T, Metal Mining Agency of Japan, Japan

A Dynamic Simulation of Deep-Seabed Mining System

Hong, S, Kim, H J, Choi, Y R, Korea Research Inst of Ships & Ocean Engineering, Korea

An Experimental Study on Slip Velocity of Solid Particles in Vertical Pipe

Choi, J S, Hong, S, Yang, C K, Korea Research Inst of Ships & Ocean Engineering, Korea

Influence of Sea Sand Mining in the Seto Inland Sea

Takahashi, S, Murakami, K, National Inst of Advanced Industrial Science & Technology, Japan

Experimental and Numerical Analysis on the Flow Characteristics of Solid-Liquid Two-Phase Mixture in a Curvature Pipe

Yoon, C H, Lee, D K, Kwon, K S, Kwon, S K, Korea Inst of Geoscience and Mineral Resources; Kwon, O K, Korea National Oil Cooperation, Korea

A Simplified Dynamic Model of Tracked Vehicle and Transient Analyses on Extremely Soft Cohesive Soil

Hong, S, Choi, J S, Korea Research Inst of Ships & Ocean Engineering, Korea

Assessment of Environmental Effect and Fertilization at Deep Seawater Discharged Area

Ikeda, T, Hayashi, M, Kansai Environmental Engineer Center; Otsuka, K, Osaka Prefecture Univ, Japan

An Experimental Study on Dynamic Characteristics of Deep Seawater Upwelling with Respect to a Floating Structure for Eutrophication

Kobayashi, E, Oe, K, Wada, Y, Mitsubishi Heavy Industries; Miyabe, H, Ishikawajima-Harima Heavy Industries; Ouchi, K, Ouchi Ocean Consultant, Japan

A Preliminary Study on Artificial Upwelling Induced by Air-Bubble Screen

Liang, N K, Peng, H K, National Taiwan Univ, Taiwan, China

WEDNESDAY 19:00

Annual Conference Banquet

19:00

Royal Hall, **Rihga Royal Hotel**

THURSDAY 08:00

66. OFFSHORE VIII: VLFS/FPSO/SPAR 5 (V. 1)

Thursday May 30 08:00 Intl Conf Room, 2F

Chair: Kashiwagi, M, Kyushu Univ, Japan

Co-Chair: Utsunomiya, T, Kyoto Univ, Japan

General-Purpose 3-D Hydroelastic Response Analysis of MEGA-FLOAT in Waves

Seto, H, National Defense Academy; Ochi, M, Ohta, M, Mitsubishi Heavy Industries; Kawakado, S, PAL Cooperation, Japan

An Efficient Numerical Model for the Hydroelastic Analysis of Mat-Type VLFS

Kim, J W, American Bureau of Shipping, USA; Hong, S Y, KRISO, Korea; Ertekin, R C, Univ of Hawaii; Shin, Y S, American Bureau of Shipping, USA

Hydroelastic Responses of the Mega-Float Phase-II Model in Waves

Miyajima, S, Akishima Labs (Mitsui Zosen); Seto, H, National Defense Academy; Ohta, M, Mitsubishi Heavy Industries, Japan

Accelerated Higher Order Boundary Element Method for Wave Diffraction/Radiation Problems and Its Applications

Utsunomiya, T, Watanabe, E, Kyoto Univ, Japan

Analysis of Hydro-Elastic Response of Pontoon-Type VLFS Coupled with Floating Wave Breaker Using a Higher-Order Boundary Element Method

Hong, S Y, Choi, Y R, Hong, S W, Korea Research Inst of Ships & Ocean Engineering, Korea

A Study on Hydroelastic Behavior of Box-Typed Very Large Floating Structure in Waves

Li, R P, Shu, Z, Wang, Z J, Shanghai Jiao Tong Univ, China

67. METOCEAN III: Sea State 1 (V. 3)

Thursday May 30 08:00 Room 32, 3F

Chair: Masuda, A, Kyushu University, Japan

A Note on Wind-Wave State Effects on Sea-Surface Roughness
Zhao, D L, National Space Development Agency of Japan, Japan

The Effect of Wind Waves on Langmuir Circulations
Uzaki, K, Matsunaga, N, Urugami, Y, Kyushu Univ, Japan

Roles of Wind Wave Breakers in Momentum Transfer Processes from Wind to Waves, Currents and Turbulences
Ogasawara, T, Yasuda, T, Takeda, M, Gifu Univ, Japan

A Study on Simulating the Time Series of Significant Wave Heights Near the Keelung Harbor
Yim, J Z, Chou, C R, National Taiwan Ocean Univ; Ho, P C, Keelung Harbor, Taiwan, China

Estimation of Wind at Sea with Land-Sea Coefficient (Roughness, Topography and Contraction) from Wind Observed on Land
Koh, R, Port Hydraulic Research Center, Turkey

68. GEOTECH VIII: Seabed Engineering (V. 2)

Thursday May 30 08:00 Room 10, 1F

Chair: Brandes, H G, Univ of Hawaii, USA
Co-Chair: Hong, W P, Chung-Ang Univ, Korea

Coastal Morphological Evolution and Geo-Technical Investigations on Yunlin Offshore Industrial Estate
Liu, C I, Su, J C, Hsueh. C H, Sinotech Engineering Consultants, Taiwan, China

To Evaluate the Influence of Shear Waves Transmit Properties Under Layer Soils
Chien, L K, Lin, M C, National Taiwan Ocean Univ, Taiwan, China

Dynamic Amplification Property of Microtremors on Reclaimed Lands Along Osaka Bay
Hayakawa, K, Ritsumeikan Univ; Matsui, T, Osaka Univ; Hamada, T, Geo Research Inst, Japan

Prediction of the Reasonable Pumpage by Quasi 3-Dimensional Analysis in Basin Area
Ehi, T, Chuo Fukken Consultants; Matsui, T, Osaka Univ; Hachiya, M, Yang, K H, Adachi, T, Chuo Fukken Consultants, Japan

An Analysis of Containment Transport in the Aquifer of Coastal Area
Lin, C K, China Engineering Consultants, Taiwan, China; Kulasiri, D, Lincoln Univ, New Zealand; Lee, C H, National Cheng Kung, Univ, Taiwan, China

3-D Beach Deformation Around an Offshore Man-Made Island Due to Multi-Directional Random Waves
Ikeno, M, Shimizu, T, Central Research Inst of Electric Power Industry, Japan

Nearshore Profile Change of Niigata Coast
Kuroki, K, ECOH Corp; Chikagawa, K, Niigata Research & Engineering Office for Port and Airport; Asano, T, Sato, M, Kagoshima Univ, Japan

A Comprehensive Experimental Study of Sand-Steel Interfaces Subjected to Various Monotonic and Cyclic Stress Paths
Fakharian, K, Amirkabir Univ of Technology, Iran

69. COASTAL ENG VII: Perforated Structure (V. 3)

Thursday May 30 08:00 Room 11, 1F

Chair: Chwang, A T, Univ of Hong Kong, Hong Kong

The Experimental Study of Regular Wave Acting on Double-Walled Perforated Caisson

Chen, X F, Li, Y C, Sun, D P, Dalian Univ of Technology, China

Three-Dimensional Experimental Study of Wave Induced Flow Around a Pervious Detached Breakwater

Golshani, A, Mizutani, N, Hur, D S, Shimizu, H, Nagoya Univ, Japan

Evaluation of the Reflection Coefficient of Perforated Caissons in Presence of Transient Waves

Panizzo, A, Univ of L'Aquila; Piscopia, R, Univ of Rome "La Sapienza"; De Girolamo, P, Univ of L'Aquila, Italy

Wave Reflection from a Slotted Seawall Having L-Shaped Bulkheads Inside

Fujita, T, Nagata, S, Takeda, S, Hitachi Zosen, Japan

Water Wave Energy Dispersion Induced by a Perforated Breakwater

Rousset, J-M, Univ of Edinburgh, UK; Bêlorgey, M, Univ of Caen, France

Environmental and Safety Considerations for Design of a Perforated Seawall

Yip, T L, Zhang, D H, Chwang, A T, Univ of Hong Kong, Hong Kong

70. ENVIRONMENT & REMOTE SENSING II (V. 1)

Thursday May 30 08:00 Room 21A, 2F

Chair: Lalli, F, Italian Agency for Environmental Protection, Italy

Co-Chair: Nozawa, K, Osaka Univ, Japan

Wave-Jet Interaction: Experimental and Numerical Analysis

Lalli, F, Italian Agency for Environmental Protection, Italy; Marotta, L, Technical Univ of Catalonia, Spain; Vicinanza, D, Seconda Univ di Napoli, Italy

Influence of Hydrostatic Approximation on Coastal Current Simulation

Nihei, Y, Yamasaki, Y, Tokyo Univ of Science; Nadaoka, K, Tokyo Inst of Technology, Japan

Tidal Currents and Tideland Profile Changes in Estuaries in the Inner Ariake Bay

Kakinoki, T, Takikawa, K, Yamada, F, Kumamoto Univ, Japan

A Numerical Simulation of Tidal Exchange by Opening the Floodgate of Embankment in Isahaya Bay

Kyozuka, Y, Furusho, K, Kyushu Univ, Japan

Effect of Width of Bay Mouth on Water Exchange in Stratified Semi-Closed Bay

Asai, K, Yamaguchi Univ; Miyawaki, S, Nihon Kowan Consultants; Yamada, F, Kumamoto Univ; Murakami, K, Miyazaki Univ, Japan

Numerical Simulation of Tidal Current and Substance Dispersion in Osaka Bay

Nozawa, K, Inatani, N, Osaka Univ, Japan

71. MATERIALS/WELDING III: Corrosion & Welding (V. 4)

Thursday May 30 08:00 Room 21B, 2F

Chair: Suga, Y, Keio Univ, Japan

Co-Chair: Jang, C D, Seoul National Univ, Korea

Probabilistic Modeling of Pitting Corrosion Fatigue Life

Wang, Q Y, Kawagoshi, N, Chen, Q, Kagoshima Univ, Japan; Pidaparti, R, Indiana Univ-Purdue Univ, USA

The Protective Effectiveness of Cathodic Protection for Sand Erosion in Sea Waves

Hamada, H, Abe, M, Port and Airport Research Inst; Ueda, S, Tottori Univ, Japan

Mathematical Equations of the Influence of Molybdenum and Nitrogen in Welds

Wegrzyn, T, Univ of Beira Interior, Portugal

An Experimental Investigation for Influence of an Ambient Pressure on Arc-Electrode Behavior

Ogawa, Y, Yang, Z, Matsuta, J, Morita, T, National Inst of AIST, Japan

Development of Underwater One-Sided Full Penetration Welding Method with Super-Water-Repellent Material

Irie, T, Nakatani, T, Ono, Y, Iwasaki, T, Uchiyama, I, Mistsui Engineering & Shipbuilding; Matsushita, H, Nippon Kaiji Kyokai; Ogawa, Y, National Inst of AIST, Japan

Recognition of Seam Deviation Using Artificial Neural Networks for Vision-Based Seam Tracking in Underwater Flux-Cored Arc Welding

Wang, G R, South China Univ of Technology; Shi, Y H, Guangdong Telecommunications Academy of Science and Technology; Liang, M, Zhong, J G, Liao, X, South China Univ of Technology, China

Creation of Technology and Equipment for the Strengthening Heat Treatment of Thick-Walled Welded Fittings and Tubes Cowlings

Deineko, L, National Metallurgical Academy of Ukraine; Atanasov, S, EUVIS E; Lobanov, L, Paton Electric Welding Inst; Litvinenko, E, National Metallurgical Academy of Ukraine, Ukraine

72. RENEWABLE AND OCEAN ENERGY V (V. 1)

Thursday May 30 08:00 Room 22, 2F

Chair: Hong, S W, Korea Research Inst. of Ship & Ocean Eng, Korea

Co-Chair: Suzuki, M, Univ of Tokyo, Japan

Instability and Transition of Effluent Flow from the OTEC Power Plants

Adachi, T, Fujii, T, Ikegami, Y, Uehara, H, Saga Univ, Japan

Hydrogen Production Using OTEC

Ikegami, Y, Saga Univ; Fukumiya, K, Jitsuhara, S, Satomi Industry; Ohokura, K, Uehara, H, Saga Univ, Japan

Extraction Condition of OTEC Using Uehara Cycle

Noda, N, Ikegami, T, Uehara, H, Saga Univ, Japan

Heat Transfer Coefficients of Ammonia/Water Mixture for an OTEC Plant Using Metal-Sprayed Surface

Arima, H, Monde, M, Mitsutake, Y, Uehara, H, Ikegami, Y, Saga Univ, Japan

Simulation and Evaluation of Transient Performance of Ocean Thermal Energy Conversion Plant Using Working Fluid of Binary Mixtures

Bai, O, Nakamura, M, Ikegami, Y, Uehara, H, Saga Univ, Japan

Heave and Pitch Buoy (HPB), a Miniature Wave Energy Converter

Watabe, T, T-Wave Consulting; Yokouchi, H, Gunawardane, S D G S P, Muroran Inst of Technology, Japan

3D Numerical Analysis of the Pendulum Wave-Energy Device
Alves, M A, Brito-Melo, A, Sarmento, A J N A, Instituto Superior Tecnico, Portugal

73. PIPELINES I (V. 2)

Thursday May 30 08:00 Room 33, 3F

Chair: Moshagen, H, Consultant, Norway
Co-Chair: Nesbit, B W, National Energy Board, Canada

Structural Reliability Approach to Engineering Criticality Assessment of Offshore Pipelines

Cimbali, W, Marchesani, F, Zenobi, D, Snamprogetti, Italy

Design for Cyclonic Effects on Exposed Subsea Pipelines

Sriskandarajah, T, Ragupathy, P, Wilkins, R, Kellogg Brown & Root, UK

Assessment of Anchor Dragging on Marine Pipelines

Sriskandarajah, T, Wilkins, R, Kellogg Brown & Root, UK

Stabilisation of Offshore Marine Pipelines by Dumped Stone

Lipski, W, AMOG Consulting; Hinwood, J B, Monash Univ, Australia

Inspection Survey of Submarine Pipelines – A Case Study from Bombay High Oil Field, India

Rath, R, Babu, C C, Reddy, V V, Engineers India, India

Thermal Conductivity of a North Sea Offshore Sediment

Newson, T A, Univ of Dundee; Brunning, P, Stolt Offshore, UK

The Protective Effectiveness of Cathodic Protection for Sand Erosion by Sea Waves

Hamada, H, Abe, M, Port and Airport Research Inst; Ueda, S, Tottori Univ, Japan

74. ADVANCED SHIP & OCEAN TECH I (V. 4)

Thursday May 30 08:00 Room 31, 3F

Chair: Francescutto, A, Univ of Trieste, Italy

Propulsion Systems for Ultra Large Container Vessel

Kim, S E, Choi, S H, Samsung Heavy Industries, Korea

A Feasibility Study on a Podded Propulsion LNG Tanker in Arun, Indonesia-Osaka, Japan Route

Jaswar, Ikeda, Y, Osaka Prefecture Univ, Japan

Comparison Between PIV and LDV Techniques in the Analysis of an Installed Propeller Wake

Felli, M, Di Felice, F, Pereira, F, Calcagno, G, INSEAN, Italy

Direct Calculation and Experimental Validation of Loads and Responses of Planing Craft in Waves

Garne, K, Rosén, A, Royal Inst of Technology, Sweden

Application of a FINFLO-SHIP RANS Solver to Ship-Generated Waves

Li, T Q, Mikkola, T, Matusiak, J, Helsinki Univ of Technology, Finland

Hydrodynamic Forces Acting on the Submerged Control Surfaces of a New WIG Vehicle at High Speeds: An Experimental Approach to Predict Full-Scale Behaviour

Dessi, D, Pistani, F, INSEAN, Italy

Study for the Development on Super High Speed Monohulls of 60-kts as the Maximum Speed

Junh, S H, Naval Sea System; Jun, H H, Pusan National Univ; Koo, J D, Korea Naval Academy, Korea

THURSDAY 10:45

75. OFFSHORE IX: VLFS/FPSO/SPAR 6 (V. 1)

Thursday May 30 10:45 Intl Conf Room, 2F

Chair: Choi, H S, Seoul National Univ, Korea

Co-Chair: Takaki, M, Hiroshima Univ, Japan

Wave Response Analysis of VLFS with an Attached Submerged Plate

Watanabe, E, Utsunomiya, T, Kuramoto, M, Kyoto Univ; Ohta, H, Torii, T, Hayashi, N, Nippon Steel, Japan

Elastic Response of a Very Large Floating Structure in Waves Moored Inside a Coastal Reef

Shiraishi, S, Port and Airport Research Inst; Harasaki, K, Ecoh Corp; Iijima, K, Yonehama, H, Port and Airport Research Inst, Japan

Response Analyses of Large Floating Structures Due to Seaquakes

Inoue, Y, Murai, M, Yokohama National Univ; Noma, Y, Ishikawajima Heavy Industries; Aoki, T, Yokohama National Univ, Japan

Response Analysis Method of VLFS in Coastal Area Considering Topographical Effects on Wave Deformations

Iijima, K, Shiraishi, S, Port and Airport Research Inst, Japan

Variational Principles Related to Motions of an Elastic Floating Plate in Nonlinear Water Waves

Nagata, S, Niizato, H, Hitachi Zosen; Isshiki, H, Inst of Mathematical Analysis, Japan

Wave Drift Force and Moment Acting on a Very Large Floating Structure of Arbitrary Geometry

Takagi, K, Yano, W, Nagayasu, M, Osaka Univ, Japan

Characteristics of Pressure Distribution on a Submerged Plate Built into a Very Large Floating Structure

Takaki, M, Imai, Y, Yanagihara, D, Fujikubo, M, Hiroshima Univ, Japan

Spectral Theory for a Floating Thin Plate on Water of Finite Depth

Meylan, M H, Massey Univ, New Zealand

76. METOCEAN IV: Sea State 2 (V. 3)

Thursday May 30 10:45 Room 32, 3F

Chair: Yim, J Z, National Taiwan Ocean Univ., Taiwan, China

Wave Duration/Persistence Statistics, Recording Interval, and Fractal Dimension

Jenkins, A D, DNMI, Norway

Results from a Coupled Model of Waves and Currents in the Irish Sea

Wolf, J, Wakelin, S L, Proctor, R, Proudman Oceanographic Laboratory, UK

Development of Long Range Ocean Radar System and Preliminary Results

Sato, K, Matsuoka, T, Fujii, S, Okinawa Subtropical Environment Remote-Sensing Center, Japan

Directional Ocean Wave Spectra from Marine Radar

Hirayama, T, Park, S G, Hirakawa, Y, Takayama, T, Yokohama National Univ, Japan

A New Wave Monitoring System on the Ocean Platform “COMPASS”

Ikebuchi, T, Takatsu, N, Kita, T, Okada, N, Kawasaki Heavy Industries; Koterayama, W, Nakamura, M, Kyushu Univ; Fujii, S, Sato, K, Okinawa Subtropical Remote-Sensing Center, Japan

77. GEOTECH IX: Suction Caissons 1 (V. 2)

Thursday May 30 10:45 Room 10, 1F

Chair: Wong, P C, ExxonMobil Upstream Research Co, USA

Co-Chair: Andersen, K H, Norwegian Geotechnical Inst, Norway

Shear Strength Along Outside Wall of Suction Caisson Anchors in Clay After Installation

Andersen, K H, Jostad, H P, Norwegian Geotechnical Inst, Norway

Numerical Analysis of the Behavior of Suction Caissons in Clay

Cao, J, Fugro-McClelland Marine Geosciences, USA; Phillips, R, Pepescu, R, Memorial Univ of Newfoundland, Canada; Audibert, J M E, Al-Khafaji, Z, Fugro-McClelland Marine Geosciences, USA

Penetration Resistance of Suction Caissons in Clay

Cao, J, Fugro-McClelland Marine Geosciences, USA; Phillips, R, Pepescu, R, Memorial Univ of Newfoundland, Canada; Audibert, J M E, Al-Khafaji, Z, Fugro-McClelland Marine Geosciences, USA

Drained and Undrained Behavior of Suction Caissons for Taut Leg Mooring Systems

Sukumaran, B, Rowan Univ; McCarron, W, ASGM Engineering, USA

SAL Suction Anchor in Shallow Water and Layered Soil: A Competitive Alternative

Magne, P, Sparrevik, P, Norwegian Geotechnical Inst; Hysten, S, Advanced Production & Loading, Norway

Response Characteristics of Soft Settled Type of Offshore Structure Subjected to Horizontal Motion at Seabed

Fukusumi, T, Tamura, K, Kobe Univ, Japan

78. COASTAL ENG VIII: Breakwater Dynamics I (V. 3)

Thursday May 30 10:45 Room 11, 1F

Chair: Chen, H C, Texas A&M Univ, USA

The Interaction of Fully Nonlinear Waves with Floating Breakwaters

Chen, B F, Chen, P H, National Sun Yat-sen Univ, Taiwan, China

Wave Absorbing Efficiency of a Steel Floating Breakwater with Truss Structure

Matsunaga, N, Kyushu Univ; Hashida, M, Nippon Bunri Univ; Uzaki, K, Kyushu Univ; Kanzaki, T, Saiki Iron and Steel Industry Cooperation; Uragami, Y, Kyushu Univ, Japan

Study on Performance of Floating Breakwater with Two Boxes

Takaki, M, Hiroshima Univ; Matsuura, M, Kihara, K, Tamura, K, Ikesue, S, Mitsubishi Heavy Industries, Japan

Effect of Submerged Breakwater to Wave Runup

Juang, J T, Foin Inst of Technology; Lin, C F, Fonchia Univ, Taiwan, China

Wave Field Behind a Double-Submerged Breakwater

Yoshida, A, Yan, S, Yamashiro, M, Irie, I, Kyushu Univ, Japan

On the Bragg Reflection of Waves by Multiple Artificial Bars

Hsu, T W, National Cheng Kung Univ; Tsai, L H, Inst of Harbor and Marine Technology; Huang, Y T, National Cheng Kung Univ, Taiwan, China

79. ENVIRONMENT & REMOTE SENSING III (V. 1)

Thursday May 30 10:45 Room 21A, 2F

Chair: Kyojuka, Y, Kyushu Univ, Japan

Co-Chair: Lin, S S, US Naval Facilities Engineering Service Center, USA

State and Quality Indices and Indicators as Support to Integrated Coastal Zone

Marotta, L, Technical Univ of Catalonia, Spain; Cecchi, A, Consiglio Scientifico dell'Associazione Italiana delle Scienze Ambientali; Lalli, F, ANPA; Vicinanza, D, Seconda Univ di Napoli, Italy

Excess ²¹⁰Pb in the Sediment and Benthic Biological Activity in the Western North Pacific

Harada, K, Shibamoto, Y, National Inst of AIST, Japan

Fog & AFFF Removal from Wastewater Using Air-Sparged Hydrocyclone (ASH) Technology

Lee, T R, Naval Facilities Engineering Service Center, USA

Numerical Modeling of Nitrogen Cycling in Suo-Nada, Japan

Hayashi, M, Kobe Univ of Mercantile Marine; Yanagi, T, Kyushu Univ, Japan

Ecosystem Modeling for Assessing Water Purification Capacity of Artificial Lagoon

Otsuka, K, Nakatani, N, Shiotani, A, Osaka Prefecture Univ, Japan

Distribution Analysis of Bivalvia in Sanbans Flats by Cellular Automaton

Yasushi, I, Mikuniya Corp; Yuhei, M, Tottori Univ, Japan

Development of the Planning System for Creating Fishery Grounds by Using Numerical Model

Suenaga, Y, Sasaki, T, Kagawa Univ; Masuda, K, Tanaka, K, Nihon Univ; Hisamura, K, Suenaga, A, Kimigawa, Kuroshio Marine Technology, Japan

80. MATERIALS/WELDING IV: Welding Deform 1 (V. 4)

Thursday May 30 10:45 Room 21B, 2F

Chair: Murakawa, H, Osaka Univ, Japan

Development of Welding Deformation Control Method for Hull Structure of Ro/Ro Passenger Ferry

Kim, S I, Kang, J K, Han, J M, Daewoo Shipbuilding & Marine Engineering, Korea

Development of the Welding Deformation Estimation Method for High Accuracy Production System in Shipbuilding

Nakatani, M, Ohsawa, M, Hitachi Zosen, Japan

Finite Element Analysis Using Interface Element for Predicting Deformation During Butt Welding Considering Root Gap and Tack Welds

Shibahara, M, Serizawa, H, Murakawa, H, Osaka Univ; Ueda, Y, Kinki Univ, Japan

Effect of Welding Conditions on Residual Stress Distributions and Welding Deformations in Welded Structure Materials

Terasaki, T, Kyushu Inst of Technology, Japan

Effects of “Residual Stress Controlled TMCP Steel Plate” on Accuracy Ship Blocks: Influence of Residual Stress of TMCP Steel Plate on Precision of Slit-Slot Cutting

Tani, T, Ueda, T, Ohe, K, Kobe Steel; Miyazaki, T, Kyushu Hitachi Zosen, Japan

Theoretical Prediction of Welding Distortion Considering Positioning and Gap Between Parts

Deng, D, Murakawa, H, Osaka Univ; Ueda, Y, Kinki Univ, Japan

81. RENEWABLE AND OCEAN ENERGY VI (V. 1)

Thursday May 30 10:45 Room 22, 2F

Chair: Kakuno, S, Osaka City Univ, Japan

Co-Chair: Takao, M, Matsue National College of Technology, Japan

Performance Investigations of the LIMPET Counter-Rotating Wells Turbine

Curran, R, Boake, C B, Folley, M, Whittaker, T J T, Queen’s Univ of Belfast, UK

Air Turbine Using the Blades with Setting Angle for Wave Power Conversion

Setoguchi, T, Kim, T H, Kaneko, K, Saga Univ; Takao, M, Matsue National College of Technology, Japan; Lee, Y W, Pukyong National Univ, Korea; Inoue, M, Kyushu Univ, Japan

Air Turbine Using Self-Pitch-Controlled Blades for Wave Energy Conversion

Kinoue, Y, Setoguchi, T, Kim, T H, Kaneko, K, Saga Univ; Takao, M, Matsue National College of Technology, Japan; Lee, Y W, Pukyong National Univ, Korea

Performance Prediction of an Impulse Turbine under Real Sea Conditions Using Numerical Simulation Techniques

Thakker, A, Frawley, P, Khaleeq, H B, Anasari, A R, Univ of Limerick, Ireland; Setoguchi, T, Saga Univ; Takao, M, Matsue National College of Technology, Japan

An Investigation of the Effects of Reynolds Number on the Performance of 0.6m Impulse Turbine for Different Hub to Tip Ratios

Thakker, A, Frawley, P, Khaleeq, H B, Univ of Limerick, Ireland

Hysteretic Characteristics of Wells Turbine for Wave Power Conversion

Kim, T H, Setoguchi, T, Kinoue, Y, Kaneko, K, Saga Univ; Inoue, M, Kyushu Univ, Japan

Numerical Analysis of Unsteady Flow Characteristics of the Wells Turbine

Lee, Y W, Kim, T H, Pukyong National Univ; Park, I K, Research Inst of Industrial Science & Technology, Korea; Setoguchi, T, Saga Univ, Japan

82. PIPELINES II (V. 2)

Thursday May 30 10:45 Room 33, 3F

Chair: Jo, C H, Inha Univ, Korea

Co-Chair: Sriskandarajah, T, Kellogg Brown&Root, UK

Flow and Thermal Modeling in Cryogenic Flexible Pipes

Brac, J, Odru, P, Institut Français du Pétrole; Gerez, J M, Coflexip Stena Offshore, France

Time Scale of Scour Around a Large Vertical Circular Cylinder in Waves

Sumer, B M, Fredsøe, J, Technical Univ of Denmark, Denmark

Three-Dimensional Flow Around a Free-Spanned Pipeline

Chen, B, Dalian Univ of Technology, China; Cheng, L, Univ of Western Australia, Australia

Nonlinear Wave Forces on a Marine Pipeline Buried in a Sand Seabed

Mostafa, A M, Cairo Univ, Egypt; Mizutani, N, Nagoya Univ, Japan

Flow Patterns Around Spaced Subsea Pipelines

Jo, C H, Inha Univ; Jeong, U C, Inha Technical College; Shin, Y S, Halla Univ; Na, I S, Inha Univ, Korea

Numerical Study of Flow-Induced Vibration in the Duet Conveying Oil from Offshore Platform

Li, D Z, Mei, N, Lu, J H, Ocean Univ of Qingdao, China

83. ADVANCED SHIP & OCEAN TECH II (V. 4)

Thursday May 30 10:45 Room 31, 3F

Chair: Kumakura, Y, Kinki Univ, Japan

Wave Drift Force and Drift Motion of the Bow Part of Broken Ship

Hoshino, K, Shoichi Hara, Kenji Yamakawa, Kazuhiro Yukawa, National Maritime Research Institute, Japan

Giving Inherent Directional Stability to a Sailing Vehicle

Sakurai, A, Kyushu Univ; Maeda, N, Mitsubishi Heavy Industries; Makise, Y, Kyushu Univ, Japan

Coupling of Hydrodynamic and Aerodynamic Computations to Predict the Behaviour of a Sailing Boat

Ba, M, ENSMA; Boin, J-P, Guilbaud, M, LEA-CEAT; Roux, Y, Univ Le Havre; Hauville, F, Inst de Recherche de l'Ecole Navale, France

A Study on Ultimate Strength of Submersible Cylindrical Structure under External Hydrostatic Pressure

Kim, K B, Choe, I H, Park J S, Hyundai Heavy Industries, Korea

Methods to Estimate Internal Fluid Pressure in Tanks Induced by Ship Motions

Toyama, Y, Akashi, T, Mitsui Engineering and Shipbuilding, Japan

Fatigue Life Calculation for a Ship Subjected to Hull Girder Vibration at Sea

Park, J S, Kim, P Y, Choi, B K, Kim, O H, Hyundai Heavy Industries, Korea

Fatigue Strength Tests of Side Longitudinal Frames under Variable Amplitude Loading

Kumakura, Y, Kinki Univ; Tomita, Y, Hashimoto, K, Osaka Univ; Fukuoka, T, Mitsui Shipbuilding & Engineering, Japan

Optimization of Ship Structure Based on Zoomed Finite Element Analysis with Sensitivities

Kitamura, M, Hiroshima Univ; Uedera, T, Kure National College of Technology, Japan

THURSDAY 13:00

84. OFFSHORE X: VLFS/FPSO/SPAR 7 (V. 1)

Thursday May 30 13:00 Intl Conf Room, 2F

Chair: Yasuzawa, Y, Kyushu Univ, Japan

Co-Chair: Chucheepsakul, S, King Mongkut's Univ of Techn, Thailand

Fundamental Study on the Collapse Analysis of VLFS in Waves

Yanagihara, D, Fujikubo, M, Takaki, M, Kawaguchi, A, Setoyama, Hiroshima Univ; Nakagawa, H, Akishima Labs (Mitsui Zosen); Nado, K, MEC Engineering Service, Japan

Assessment of Structural Safety and Functional Quality of a Floating Airport Model

Fukuoka, T, Mitsui Engineering & Shipbuilding; Miyajima, S, Akishima Labs (Mitsui Zosen); Sato, C, Shipbuilding Research Center of Japan; Ohta, M, Mitsubishi Heavy Industries, Japan

Structural Optimization of a Very Large Floating Structure at Initial Design Stage

Yasuzawa, Y, Kagawa, K, Kyushu Univ; Ishimizu, S, Mitsubishi Heavy Industries, Japan

Damage Identification on Unit-Linked Floating Structure by Parametric Projection Filtering Algorithm

Kawakami, Y, Nihon Univ; Endo, R, Shiota, S, Polytechnic Univ; Tosaka, N, Nihon Univ, Japan

Reduction Effect of a Submerged-Plate Toward Wave Exciting Forces Acting on a Very Large Floating Structure

Takaki, M, Imai, Y, Lee, S M, Hiroshima Univ, Japan

Statistical Analysis on Reaction Forces of VLFS Multiple Dolphins

Namba, Y, Kato, S, National Maritime Research Inst, Japan

Response Optimization of Semisubmersible Type VLFS

Yoshida, K, Tokai Univ; Iijima, K, Port and Airport Research Inst; Suzuki, H, Univ of Tokyo; Kobayashi, K, Sumitomo Heavy Industries; Motoi, T, Kawasaki Heavy Industries, Japan

Structural Response and Strength of a New-Type VLFS Using Submerged Plate

Xiao, T Y, Fujikubo, M, Yanagihara, D, Takakia, M, Ogasawara, T, Matsuda, I, Hiroshima Univ; Kanda, M, Akishima Labs (Mitsui Zosen); Imai, Y, Hiroshima Univ, Japan

85. METOCEAN V: Climatology and Waves (V. 3)

Thursday May 30 13:00 Room 32, 3F

Chair: Prevosto, M, Ifremer, France

Direct Computation of Design Waves for the Analysis of Compliant Offshore Structures

Chaplin, J R, Retzler, C H, Southampton Univ; Subbiah, K, City Univ, UK; Tromans, P S, Peter Tromans Engineering, The Netherlands

Compound Multivariate Extreme Distribution of Typhoon Induced Sea Environments and Its Application

Liu, D F, Wen S Q, Wang, L P, Qiu, X Y, Ocean Univ of Qingdao, China

Accurate Simulation of Metocean Parameter for Design of Deep Water Offshore Constructions

Huijsmans, R H M, Voogt, A, MARIN; Margaretha, H, Univ of Twente, The Netherlands

On the Spectral Properties of Wind Waves in Central Mediterranean Sea

Piscopia, R, Univ di Roma "La Sapienza", Italy

Effects of Climate Change on Wave Height at the Coast

Wolf, J, Wakelin, S L, Flather, R A, Proudman Oceanographic Laboratory, UK

Analysis of Wave Characteristics Over Hsin-Chu Water

Lee, B C, Fan, Y M, Huafan Univ, Taiwan, China

Sea Waves and Ship Safety – State of the Arts in Current Regulations

Francescutto, A, Univ of Trieste, Italy

86. GEOTECH X: Suction Caissons 2 (V. 2)

Thursday May 30 13:00 Room 10, 1F

Chair: Bang, S C, South Dakota School of Mines and Technology, USA

Co-Chair: Sukumaran, B, Rowan Univ, USA

Discrete Optimization of Raft-Pile Foundations Using Genetic Algorithm

Juang, D S, Wu, M S, Tien, Y M, National Central Univ, Taiwan, China

Measured Axial Capacity of Model Suction Caissons Installed in a Normally Consolidated Clay

Rauch, A F, Mecham, E C, Olson, R E, Luke, A M, Univ of Texas at Austin, USA

Three Dimensional Modelling of Jack-Up Structures on Sand

Cassidy, M J, Univ of Western Australia, Australia; Bienen, B, Aachen Univ of Technology, Germany

Field Validation of Suction Pile Installation in Clay

Cho, Y, Chung, E S, Kim, J H, Daewoo E&C, Korea

The Use of Piles to Stabilize a Cut slope in Soft Grounds

Hong, W P, Song, Y S, Chung-Ang Univ; Yeo, G G, Sambu Construction; Shin, D S, E&G Construction Engineering, Korea

Inclined Loading Capacity of Suction Piles

Bang, S, Cho, Y, South Dakota School of Mines and Technology, USA

87. COASTAL ENG IX: Breakwater Dynamics II (V. 3)

Thursday May 30 13:00 Room 11, 1F

Chair: Kojima, H, Kyushu-Kyoritsu Univ, Japan

Co-Chair: Liu, DF, Ocean Univ of Qingdao

Spatial and Temporal Variability of Benthic Artificial Reefs off Yung-An, Southwestern Coast of Taiwan

Tian, W M, National Sun Yat-sen Univ, Taiwan, China

Hydraulic Characteristics of a Vertically Motioned Wave Attenuation Device with a Floating Body and Submerged Horizontal Plate

Kojima, H, Yan S, Yoshida, A and Sekimoto, T, Kyushu Kyoritsu Univ, Japan

Performance Evaluation of the Submerged Dual Buoy/Porous-Membrane Breakwaters in Oblique Seas

Kee, S T, Seoul National Univ of Technology; Cho, I H, Cheju National Univ, Korea; Kim, M H, Texas A&M Univ, USA

Submerged Membrane Breakwaters I: A Rahmen Type System Composed of Horizontal and Vertical Membranes

Kee, S T, Seoul National Univ of Technology, Korea

A Simple Method for Analysis of the Water Wave Scattering from Structures Composed of Immersed Thin Walls

Kakuno, S, Nakakihara, H, Osaka City Univ; Shiozaki, Y, NKK, Japan

Experimental Study on Plate-Type Breakwater

Kang, H G, Wang, K, Dalian Univ of Technology, China

Transportation of Water Spray on None-Wave Overtopping Type Seawall

Kamikubo, Y, Yatsushiro National College of Technology; Murakami, K, Miyazaki Univ; Irie, I, Kyushu Univ; Hamasaki, Y, Kobe Steel, Japan

88. ENVIRONMENT & REMOTE SENSING IV (V. 1)

Thursday May 30 13:00 Room 21A, 2F

Chair: Yanagi, T, Kyushu Univ, Japan

Co-Chair: Montani, S, Kagawa Univ, Japan

Studies on the Distribution of Antibiotics in Semi-Enclosed Sea and Its Accumulation in Planktons

Le, T X, Ehime Univ; Munekage, Y, Gamoh, K, Iwasaki, N, Kochi Univ, Japan

The Usage of Tree Analysis in the Context of a Strategic Approach Concerning Incidents of Oil Marine Pollution: Introduction of the Event-Decision Network

Ventikos, N P, Psarafitis, H N, National Technical Univ of Athens, Greece

Success Story from Industrial Pollution and Research on Present Environmental Problems in Dokai Bay, Kitakyushu City, Japan

Yamada, M, Suzuki, M, Kitakyushu City Inst of Environment Sciences, Japan

Pollution of Coastal Water by Man-Made Chemicals

Kadokami, K, Jinya, D, Iwamura, T, Kitakyushu City Inst of Environment Sciences, Japan

Ecological Approach for Improving Marine Environment in a Hyper Eutrophic Enclosed bay, Japan

Montani, S, Kagawa Univ, Japan

Environmental Recovery Project in Dokai Bay, Kitakyushu, Japan: Bioremediation of the Organically Enriched Sediments with a Polychaete, Capitella Sp.1

Tsutsumi, H, Kumamoto Prefecture Univ, Japan

Management of Eutrophic Condition with Numerical Ecosystem Model

Yanagi, T, Kyushu Univ, Japan

89. MATERIALS/WELDING V: Welding Deform 2 (V. 4)

Thursday May 30 13:00 Room 21B, 2F

Chair: Choo, Y S, National Univ of Singapore, Singapore

Development of Finite Element Method for Seam Welding and Its Application to Optimization of Welding Condition

Murakawa, H, Minami, H, Osaka Univ; Kato, T, Mitsui Engineering & Shipbuilding, Japan

Three Dimensional Coordinate Measuring Methods for Production of Ship Hull Blocks

Shimizu, H, Kawasaki Heavy Industries, Japan

Virtual Manufacturing System Based on Product Modeling (Development of Computer-Aided Geometry Accuracy Management System for Steel Structures)

Takechi, S, Aoyama, K, Nomoto, T, Univ of Tokyo, Japan

Geometrical Accuracy Management of Very Large Floating Structures

Yamashita, Y, Kawachi, S, Okada, S, Sumitomo Heavy Industries; Konoshita, Y, Shipbuilding Research Center, Japan

Factors on Dimensional Inaccuracy of Steel Block Assembly

Okumoto, Y, Kinki Univ, Japan

90. RENEWABLE AND OCEAN ENERGY VII (V. 1)

Thursday May 30 13:00 Room 22, 2F

Chair: Washio, Y, JAMSTEC, Japan

Co-Chair: Thakker, A, Univ of Limerick, Ireland

A Novel Turbine for Offshore Wind Energy: Design and Energy Conversion

Cheboxarov, V V, Cheboxarov, V V, Anokhin, P V, Far Eastern State Technical Univ, Russia

Efficient Wave Energy Amplification with Wave Reflectors

Kramer, M, Frigaard, P, Aalborg Univ, Denmark

Piezoelectric Eels for Energy Harvesting in the Ocean

Techet, A H, Allen, J J, Smits, A J, Princeton Univ, USA

Motion of a Liquid Drop Exposed to an Airstream

Yoshida, T, Teikyo Univ, Japan

A Study on the Hydrodynamic Behavior of Fisheries Cages in Waves

Yang, C K, Choi, Y R, Kim, H J, Hong, K Y, Korea Research Inst of Ships & Ocean Engineering, Korea

Ocean Fertilization by the Man-Made Sea-Mountains Made of Coal Ash Concrete Blocks

Suzuki, T, HAZAMA Corp, Japan

91. PIPELINES III (V. 2)

Thursday May 30 13:00 Room 33, 3F

Chair: Gresnigt, A M, Delft Univ of Technology, The Netherlands

Co-Chair: Price, J C, Kellogg Brown & Root, USA

Finite Element Analysis of Local Buckling in Offshore Pipelines

Karamanos, S A, Univ of Thessaly, Greece

Plastic Design of Mitred Bends

Gresnigt, A M, Delft Univ of Technology, The Netherlands

Non-Linear Effects in Upheaval Buckling

Rundsag, J O, Tørnes, K, Nystrom, P R, ABB Offshore Systems, Norway

Centrifuge Modelling of the Upheaval Buckling Resistance of Small Diameter Buried Offshore Pipelines

Bransby, M F, Newson, T A, Univ of Dundee; Brunning, P, Stolt Offshore, UK

Dynamic Positioning of a Pipeline Launching Barge

Tannuri, E A, Pesce, C P, Univ of Sao Paulo; Alves, G S, Masetti, I Q, Petrobras, Brazil

92. ADVANCED SHIP & OCEAN TECH III (V. 4)

Thursday May 30 13:00 Room 31, 3F

Chair: Yao, T, Osaka Univ, Japan

Submodeling Analysis of Ship Structure with Superconvergent Patch Recovery Method

Kitamura, M, Hiroshima Univ; Ohtsubo, H, Univ of Tokyo; Akiyama, A, ABS Pacific; Bandho, H, Takara Standard, Japan

Strength Analysis of Ship Structure Using Simplified Multiple Loads

Hashimoto, K, Sato, K, Shirakihara, H, Sueoka, H, Mitsubishi Heavy Industries, Japan

A Study on Simplified Evaluations of Buckling Strength and Natural Frequency for Stiffened Panel

Furuno, H, Namura Shipbuilding; Kitamura, M, Hiroshima Univ, Japan

Practical Evaluation System for Post-Buckling Strength of Ship Double-Hull Structures

Abe, A, Niihara, Y, Shibue, T, Nakayama, E, Ishikawajima-Harima Heavy Industries; Nagashima, M, IEM Co, Japan

Estimation of Buckling and Ultimate Strength of Rectangular Plate with Cutout

Harada, M, Nippon Kaiji Kyokai; Fujikubo, M, Hiroshima Univ, Japan

Buckling/Plastic Collapse Behaviour and Estimation of Ultimate Strength of Aluminum Stiffened Plate

Setta, K, Mitsubishi Heavy Industries; Yanagihara, D, Fujikubo, M, Hiroshima Univ, Japan

ISUM Approach for Collapse Analysis of Double-Bottom Structures in Ships

Fujikubo, M, Olaru, V D, Yanagihara, D, Hiroshima Univ, Japan

Application of the p-Version Finite Element Method to Stress Singularity Field Problems

Kumamoto, H, Kawaju Techno Service; Yoshikawa, T, Yamaji, S, Kawasaki Heavy Industries, Japan

FRIDAY, June 22

09:00 – 15:00

CONFERENCE TOUR – Kitakyushu Industry Tour (Use JTB Reservation Form)

OPTIONAL TOURS

See *Tour Information* in General Information and contact JTB (ISOPE-2002).