

TECHNICAL PROGRAM

The Sixteenth (2006) International Offshore and Polar Engineering Conference San Francisco, California, USA, May 28–June 24, 2006

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-2006 Technical Program Committee (TPC) received in writing before January 30, 2006 are reflected in this program. Paper titles in blue color are additions to the printed version of the technical program. Final corrections will be updated in the Conference Proceedings and the Final Program. Proceedings CD-ROM (ISBN 1-880653-66-04) will be available as a set of 4 volumes (3,000 pp. est.) from ISOPE during and after the Conference.

SUNDAY, May 28

18:00	Conference Reception Grand Hyatt San Francisco Hotel
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MONDAY 09:00

1. OCEAN INDUSTRY REVIEW (V. 1)

Monday May 29 09:00 Plaza Ballroom

Chair: Langen, I, University of Stavanger, Norway
Co-Chair: Capanoglu, C, I.D.E.A.S., Inc, USA

Opening Address

Knapp, Ronald H, ISOPE President, USA.

Sakhalin LNG: An Energy Source for USA

Meehan, D, Sakhalin Energy Investment Company, Yuzhno Sakhalinsk, Russia

Europe's Wave Energy Development: Technological, Economical and Political Viewpoints

Sarmento, A, IST/Wave Energy Center, La Regina, V, Neumann, F, Wave Energy Center, Lisbon, Portugal

Materials Technology Application to Optimized Oil and Gas Field Developments

Wright, E J, ExxonMobil Development Company, Houston, USA

Development of International Pipeline Standards – History, Present Status and the Future

Eriksson, K, Collberg, L, Det Norske Veritas, Høvik, Norway

MONDAY 13:30

Plenary Presentation I (V. 3)

Monday May 29 13:30 Dolores

The 26-12-2004 Indian Ocean Tsunami: Latest Modeling, Case Studies, and Perspectives for Tsunami Forecasting and Mitigation
Grilli, S, Univ of Rhode Island, USA; Ioualalen, M, IRD-Geosciences Azur, France; Asavanant, J, Chulalongkorn Univ, Thailand
Introduction by Chung, Jin S, ISOPE, USA

Plenary Presentation II (V. 3)

Monday May 29 13:30 Butron

Recent Developments in Welding Technology
Threadgill, P, TWI, UK
Introduction by Ayer, R, ExxonMobil Research & Engineering Co., USA

2. FPSO/TLP/Compliant Structures I (V. 1)

Monday May 29 14:30 Farallon

Chair: Roddier, D, Marine Innovation & Technology, USA
Co-Chair: Yang, J M, Shanghai Jiao Tong Univ, China

Extreme Response Analyses of Marlin TLP Tendon Tension Based on Full-scale Field Data

Li, G, Perego, R L, BP; Garrett, D L, Stress Engineering Services, USA

Coupled Mini-TLP Barge Response in Random Seas

Niedzwecki, J M, Xie, C, Texas A&M Univ, USA; Teigen, P, Statoil, Norway

Hydroelastic Analysis of Cantilever Plate Using Time Domain Calculation

Kara, F, Univ of Glasgow and Strathclyde, UK

Design Optimization of Plating Structures in Deepwater Platform Application

Zhang, D G, Sea Engineering, USA

MonoBr: A Conception of Monocolumn Platform

Masetti, I Q, Costa, A P, Petrobras; Sphaier, S H, COPPE/UFRJ; Nishimoto, K, Univ of Sao Paulo, Brazil

Nonlinear Dynamic Response of Tension Leg Platform

Zeng, X H, Liu, Y, Shen, X P, Wu, Y X, Inst of Mechanics, CAS, China

Effects of Short Crestedness in Designing a TLP Type Platform

Helvacioğlu, I H, Soylemez, M, Istanbul Technical Univ; Yilmaz, O, Izmir Inst of Technology, Turkey

3. HYDRO I. METOCEAN 1 (V. 3)

Monday May 29 14:30 Dolores

Chair: Krogstad, H E, NTNU, Norway

Co-Chair: Aouf, L, Meteo, France

Extreme Value Analysis Methods Used for Wave Prediction

Soukissian, T, Kalantzi, G, Hellenic Centre for Marine Research, Greece

An Assessment of the Peak-over-threshold Method

Soukissian, T, Kalantzi, G, Karagali, I, Hellenic Centre for Marine Research, Greece

Extreme Wave Height and Wind Speed Combination for Maritime Structure Design

Dong, S, Ning, M, Wang, L, Ocean Univ of China, China

Method of Definition of Design Wave Heights in Storm for Maritime Structures

Mironov, M E, The B.E. Vedeneev VNIIG, Russia

On the Breaking of Sea States

Gentile, R, Rebaudengo Lando, L, Scarsi, G, Univ of Genova, Italy

Typhoon Swell Observed by Data Buoy

Yeh, S P, National Cheng Kung Univ; Tseng, C M, Ministry of Economic Affairs; Lee, B C, Fuafan Univ; Doong, D J, National Cheng Kung Univ, Taiwan, China

A Comparison of Two Methods for Spectral Analysis of Waves

Ortega, J, CIMAT, AC, Mexico; Hernandez, J B, Univ Central de Venezuela, Venezuela

4. GEOTECH I: Liquefaction (V. 2)

Monday

May 29

14:30

Merced

Chair : Chen, J-W, National Cheng Kung Univ., TAIWAN, China

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

Evaluation System of Building Damage due to Liquefaction by Data Mining and Web-GIS

Chen, Y R, Hsieh, S C, Chang Jung Christian Univ; Wu, C Y, Origo Co, Taiwan, China

The Study of Using GIS on Taiwan Local Simplified Model for Soil Liquefaction Evaluation

Chien, L K, Feng, T S, Chen, C Y, National Taiwan Ocean Univ, Taiwan, China

Experimental Study on Durability of Liquefied Stabilized Soil Blocks Containing PVA Fiber

Hashimoto, Y, Fujii, M, Tokai Univ, Japan

Role of Fines on Liquefaction of Sand

Hyodo, M, Chikashi, K, Kim, U G, Orense, R, Yamaguchi Univ, Japan

Stone Column Remediation of Liquefiable Silty Marine Foundation Deposits

Adalier, K, Florida State Univ; Elgamal, A, Univ of California at San Diego, USA

Neural Network Modeling and Sensitivity Analysis on Recognizing Liquefaction Cases

Lee, C J, Hsiung, T K, National Central Univ, Taiwan, China

Numerical Analysis of Pore Pressure Response and Liquefaction Potential beneath Breakwaters under Wave Loading

Luan, M, Liu, Z, Dalian Univ of Technology, China; Jeng, D S, Univ of Sydney, Australia; He, Y, Wang, Z T, Dalian Univ of Technology, China

5. International Standards for Offshore Structures (V. 1)

Monday May 29 14:30 San Miguel

Chair: Marshall, P W, MHP Systems Engineering, USA
Co-Chair: Wong, P C, ExxonMobil Development Co., USA

Experience with the Canadian Standards Association Offshore Structures

Masterson, D M, Sandwell Engineering; Frederking, R, Canadian Hydraulics Centre, NRC, Canada

International Standards for Offshore Structures

Mangiavacchi, A, EXPERIA Consulting, USA

Material Selection and Fracture Control for Offshore Platforms

Marshall, P W, MHP Systems Engineering, USA

The Use of ISO 19902 in the Fabrication and Inspection of Fixed Steel Offshore Structures

Campbell III, H, Pazuru Engineering, USA

Jack-up Assessment — Past, Present and ISO

Stiff, J, ABS Consulting, USA; Hoyle, M, Noble Denton Consultants, UK; Morandi, A, Global Maritime, USA; Hung, R J, Shell UK, UK

New DNV Recommended Practice DNV-RP-C205 on Environmental Conditions and Environmental Loads

Nestegård, A, Ronaess, M, Hagen, Ø, Ronold, K O, Det Norske Veritas, Norway

6. FLOW-INDUCED VIBRATIONS I (V. 3)

Monday May 29 14:30 Potrero

Chair: Miksad, R W, Univ. of Virginia, USA
Co-Chair: Kim, W J, Shell International E&P, Houston, TX, USA

Assessment of Flow-induced Jumper Interference for Hybrid Riser Tower

Blevins, R D, Vortech; Jacob, P, MMI Engineering; Saint-Marcoux, J-F, Wu, M, Stolt Offshore, USA

Experimental Investigation into the Effect of Vortex Induced Vibrations Flow around Circular Cylinders in Tandem Using 3-D PIV Techniques

De Wilde, J J, Huijsmans, R H M, Tukker, J, Marin, The Netherlands

A Study on Stability of Vortex Induced Vibration of a Flexible Riser

Senga, H, Koterayama, W, Kyushu Univ, Japan

Numerical Simulations of Circular Cylinders Outfitted with Vortex-induced Vibrations Suppressors

Pontaza, J P, Chen, H C, Texas A&M Univ, USA

Experimental Study on Vortex-induced Vibration of Risers Transporting Fluid

Guo, H Y, Lou, M, Dong, X L, Ocean Univ of China, China

Identification and Analysis of Vortex-induced Vibrations of a Drilling Riser Using Empirical and Spectral Procedures

Srivilairit, T, Manuel, L, Univ of Texas at Austin, USA

7. HPM I: Residual Stress & NDE 1 (V. 4)

Monday May 29 14:30 Butron

Chair: Tsakalakos, T, Rutgers University, USA
Co-Chair: Kwon, D I, Seoul National Univ, Korea

Introductory Remarks
Ayer, R, ExxonMobil Research & Engineering, USA

Neutron Diffraction Residual Stress Mapping for Industry
Rogge, R B, National Research Council, Canada

Measurement of Residual Stress Distributions in Welded Joints
Hill, M R, Univ of California, Davis, USA

Measurement of Residual Strain and Stress in Fiber-reinforced Composite by Electron Moiré Method
Kishimoto, S, National Inst for Materials Science, Japan; Xing, Y M, Inner Mongolia Univ of Technology; Xie, H M, Tsinghua Univ, China

Residual Stress and Microstructure Analysis with X-ray Diffraction
He, B P, Bruker Advanced X-ray Solutions, USA

Coupled Analyses of Heat Transfer, Microstructure Evolution and Residual Stress in HSLA Pipeline Steel Welds
Li, M V, Portland State Univ, USA

Evaluation of the Residual Strength of Corroded Steel Tubular Members in Marine Environments
Yamane, M, Nippon Steel; Tanaka, K, Matsuda, B, Fujikubo, M, Yanagihara, D, Hiroshima Univ; Iwao, N, Nippon Steel, Japan

X-ray Elastic Constant Determination and Residual Stress Estimation of Spherical Carbon in JIS SK3
Che, L, Gotoh, M, Kanazawa Univ; Takago, S, Industrial Research Inst of Ishikawa; Hirose, Y, Kanazawa Univ, Japan

8. ENVIRONMENT I: Oil Pollution (V. 1)

Monday May 29 14:30 San Francisco A

Chair: Sayed, M, National Research Council, Canada
Co-Chair: Jones, A, Oases Global Systems, USA

Numerical Simulation of Maritime Oil-spill Recovery by MHD Method
Zhang, G Y, Peng, Y, Zhao, L Z, Li, R, Inst of Electrical Engineering, CAS, China

Numerical Simulation of Two-phase Flow in MHD Oil-spill Recovery from Oil-contaminated Seawater
Zhang, G Y, Peng, Y, Zhao, L Z, Li, R, Sha, C W, Inst of Electrical Engineering, CAS, China

Numerical and Experimental Optimization of a Seaway Independent Oil Skimming System – SOS
Clauss, G F, Abu-Amro, M, Sascha, K, Technical Univ of Berlin, Germany

De-oiling of Produced Water from Offshore Oil Platforms Using a Recent Commercialized Technology Which Combines Adsorption, Coalescence and Gravity Separation

Plebon, M J, Saad, M A, Chen, X J, Fraser, S, TORR Canada Inc, Canada

Numerical Simulation of the Spread of Oil Slick and Its Application on the Northwestern Coastal Water of Taiwan

Shiau, B S, National Taiwan Ocean Univ, Taiwan, China

The Design of Three Cubed Curve Hydrocyclone Tube

Jiang, M H, Li, F, Zhao, L X, Zhang, Y, Daqing Petroleum Inst, China

Effect of Different Air-injection Means on the Separating Performance of De-oil Hydrocyclones

Zhao, L X, Jiang, M H, Li, F, Zhang, Y, Daqing Petroleum Inst, China

9. ARCTIC & ICE I: Forecasting (V. 1)

Monday May 29 14:30 San Francisco B

Chair: Coon, M, NorthWest Research Associates, USA

Co-Chair: Izumiya, K, National Maritime Research Inst, Japan

An Elastic-decohesion Pack Ice Model Including an Ice Edge Model

Coon, M, Pruis, M J, NorthWest Research Associates, USA

Numerical MPM Solution of Sea Ice Dynamics

Peterson, K J, Sulsky, D, Univ of New Mexico, USA

Flow of Ice through Converging Channels

Kubat, I, Sayed, M, Canadian Hydraulics Centre, NRC; Carrieres, T, Environment Canada; Savage, S B, McGill Univ, Canada

Semi-Lagrangian Sea Ice Model for High Resolution Simulation

Sagawa, G, Yamaguchi, H, Univ of Tokyo, Japan

Forecasting the Ice Edge and Ice Types in the Marginal Ice Zone

Pruis, M J, Coon, M, NorthWest Research Associates, USA

Improvement of Short-term Numerical Sea Ice Forecasting in Southern Okhotsk Sea

Fujisaki, A, Yamaguchi, H, Duan, F J, Sagawa, G, Univ of Tokyo, Japan

Mechanics and Dynamics of Ice in Arctic Ocean

Victor, S, Arctic and Antarctic Research Inst, Russia

10. AQUABIOMECHANICS (V. 2)

Monday May 29 14:30 San Francisco C

Chair : Triantafyllou, M S, MIT, USA

Co-Chair: Kato, N, Osaka Univ, Japan

Open Loop Performance Results for a Biologically Inspired Flapping Foil Vehicle

Wolf, M I, Licht, S, Hover, F, Triantafyllou, M, MIT, USA

A Study on Control Method for a Fish Type Robot by Artificial Muscle

Yamaguchi, S, Terada, M, Kyushu Univ, Japan

Elastic Pectoral Fin Actuators for Biomimetic Underwater Vehicle

Ando, Y, Kato, N, Suzuki, H, Osaka Univ; Suzumori, K, Kanda, T, Endo, S, Okayama Univ, Japan

Suspension Control of a Robot Fish in Given Depth

Wang, L, Cao, Z Q, Tan, M, Wang, S, Zhou, C, Shen, Z Z, Inst of Automation, CAS, China

Computation of Unsteady Flow around an Underwater Vehicle with Mechanical Pectoral Fins

Suzuki, H, Kato, N, Osaka Univ, Japan

TUESDAY 08:00

11. FPSO/TLP/Compliant Structures II (V. 1)

Tuesday May 30 08:00 Farallon

Chair: Teigen, P, Statoil, Norway

Co-Chair: Wu, Y X, Inst of Mechanics, CAS, China

A Study on an Optimal Arrangement of Upper Facilities on a Very Large Floating Structure Considering with the Hydroelastic Response in Waves

Murai, M, Inoue, Y, Yokohama National Univ; Mori, K, DNV, Japan

Mooring Method of Very Large Floating Structure

Nagai, B M, Ameku, K, Nagai, Y, Izumikawa, T, Univ of the Ryukyus, Japan

Wave Response Analysis for a VLFS by Accelerated Green's Function Method in Infinite Water Depth

Utsunomiya, T, Okafuji, T, Kyoto Univ, Japan

Finite Element Method for Time Domain Analysis on Hydroelastic Response of VLFS with Fully Nonlinear Free Surface Conditions

Kyoung, J H, Hong, S Y, Kim, B W, Maritime and Ocean Engineering Research Inst, Korea

Fatigue Strength Analysis of Pontoon Type VLFS Using Spectral Method

Park, S W, Han, J W, Han, S H, Korea Inst of Machinery & Materials; Ha, T B, Lee, H G, Korean Register of Shipping; Hong, S Y, Kim, B W, Maritime and Ocean Engineering Research Inst, Korea, Korea

Performance Evaluation of Loading/offloading Operability from Floating Quay to Super Container Ship

Kim, M H, Kumar, B, Texas A&M Univ; Chae, J W, KORDI, Korea

12. HYDRO II. METOCEAN 2 (V. 3)

Tuesday May 30 08:00 Dolores

Chair: Rychlik, I, Lund Univ, Sweden

Co-Chair: Yuksel, Y, Yildiz Technical Univ, Turkey

The Combined Assimilation of RA-2 Altimeter Data and ASAR Directional Wave Spectra over 6 Months: Towards Improvement of Wave Forecast

Aouf, L, Lefevre, J-M, Meteo France; Hauser, D, CETP/IPSL/CNRS; Chapron, B, Ifremer, France

Comparative Research on Wave Direction between MUSIC Method and Simple Method

Yoo, Y J, Hou, D J, Kouguchi, N, Kobe Univ, Japan

Limiting Waves in Broad-banded, Directionally Spread Seas

Hague, C H, Swan, C, Imperial College London, UK

Wave Direction Estimate Based on Ship Motions and Relative Motions

Waals, O J, MARIN, The Netherlands

Wavelet and Local Directional Analysis of Ocean Waves

Krogstad, H E, NTNU, Norway; Donelan, M A, Univ of Miami, USA; Magnusson, A K, Norwegian Meteorological Inst, Norway

13. GEOTECH II: Seismic & Cyclic Loading (V. 2)

Tuesday May 30 08:00 Merced

Chair : Budkowska, B B, Univ of Windsor, Canada

Co-Chair: Chung, H C, ESCO Engineering & Consultants, Korea *

Mechanical Behavior of Marine Clay under Cyclic Loading

Ding, J W, Tsinghua Univ; Liu, H X, Tianjin Univ; Hu, L M, Tsinghua Univ, China

The Porosity Dynamics Study of Seabed

Lin, C K, China Engineering Consultants, Taiwan, China; Kulasiri, D, Lincoln Univ, New Zealand; Lin, J G, National Taiwan Univ, TAIWAN, China

On the Mechanics of Flowslides Triggered by Post-seismic Void Redistribution

Munachen, S E, Geohazard Research Centre, UK

Model Shaking Table Test on Seismic Performance of Caisson Quay Wall Reinforced with Protective Cushion

Hazarika, H, Sugano, T, Port and Airport Research Inst; Yasuhara, K, Ibaraki Univ; Takeichi, H, Karmokar, A K, Bridgestone Corp; Kishida, T, Mitarai, Y, Toa Corp, Japan

Damage of Building Foundation and Building Lots by Mid Niigata Prefecture Earthquake 2005

Tamura, M, Building Research Inst; Hayashi, K, OYO Corp; Wakai, A, Gunma Univ; Matsushita, K, Misawa Homes Co; Wakame, Y, Soil Design Co; Suemasa, N, Musashi Technical Univ; Kikuchi, Y, Polus R&D Center of Life-Style, Japan

14. COASTAL I: Wave-Structure Interactions (V. 3)

Tuesday May 30 08:00 San Miguel

Chair: Kee, S T, Seoul National Univ of Technology, Korea

Co-Chair:

Load-settlement Characteristics of offshore Drilled Shafts Using the Static Bi-directional Loading Tests

Seol, H I, Jeong, S S, Yonsei Univ; Kim, Y K, Kim, Z C, Samsung Corp, Korea

An Experimental Investigation of Flow Pattern around Vertical Pile due to a Turbulent Jet

Yuksel, A, Celikoglu, Y, Yuksel, Y, Yildiz Technical Univ, Turkey

Numerical Simulation of wave-moving Structure Interaction Using VOF Method

Kawasaki, K, Shima, T, Nagoya Univ, Japan

Numerical Prediction of Impulsive Uplift Force Produced by the Cnoidal Wave Impacting on the Coastal Structures

Li, L, American Bureau of Shipping, USA; Watanabe, R, Martec Limited, Canada

Influence of Wave Reflection to Rumup on Stepped Dike

Juang, J T, Chienkuo Technology Univ; Link C F, Chiang, S C, Feng Chia Univ, Taiwan, China

Vertical Hydrodynamic Force on Circular Slab near Free Surface by Water Waves

Lan, Y M, Liu, H, Shanghai Jiao Tong Univ, China

A New Technique for Estimating the Stable Weight of Armor on a Submerged Breakwater in Wave-current Coexisting Field

Mostafa, A M, Hasan, M, Marmoush, Y, Cairo Univ, Egypt

15. FLOW-INDUCED VIBRATIONS II (V. 3)

Tuesday May 30 08:00 Potrero

Chair: Blevins, R D, Vortech, USA

Co-Chair: Fontaine, E, Institut Français du Petrole, France

Computation of Injected Flows through Circular Cylinder in Tip Vortex Region

Kim, M H, Chungnam National Univ; Jung, R T, Sung, H G, Korea Ocean R&D Inst; Lew, J M, Chungnam National Univ, Korea

Vortex Flow Study on the Non-Newtonian Fluid in Concentric Annulus with Rotating of the Inner Cylinder

Kim, Y J, Yoon, C H, Park, Y C, Lee, D K, Kwon, S K, Korea inst of Geoscience and Mineral Resources, Korea

Flow-induced Vibration Damping in High-rise Structures

Ostroumov, B V, Larionov, V V, Lazoutine, V N, Melnikov Central Research & Design Inst of Steel Structures, Russia

Using VIM against the VIM

Markov, N, Elgamiel, H, Grinius, V, Offshore Model Basin, USA

Flutter Instability of Plates

Eloy, C, Souilliez, C, Schouveiler, IRPHE, Univ of Marseille, France

Numerical Prediction of the Response of a Structure to Vortex Induced Vibrations in Shear Current

Szydlowski, J, Institut Francais du Petrole, France; Le Cunff, C, Principia R&D/BRS USA, USA

16. HPM II: Residual Stress & NDE 2 (V. 4)

Tuesday May 30 08:00 Butron

Chair: Rogge, R B, National Research Council, Canada

Co-Chair Hill, M R, Univ of California, Davis, USA

Measurement of Residual Stress Distributions by Energy Dispersive X-ray Diffraction Synchrotron Radiation

Tsakalakos, T, Rutgers Univ, USA

Residual Stress Measurement by X-ray and Neutron Diffractions

Hanabusa, T, Univ of Tokushima; Nishida, M, Kobe City Technical College; Kusaka, K, Univ of Tokushima; Ikeuchi, Y, Niihama Technical College, Japan; Jing, T, Harbin Inst of Technology, China

Residual Stress Evaluation for Weldment of Structural Components Using Instrumented Indentation Technique

Lee, J S, Han, J H, Seoul National Univ; Kim, K H, Frontics, Korea; Jin, H W, ExxonMobil Research & Engineering, USA; Kwon, D I, Seoul National Univ, Korea

Automated User Interface for Temperature Profile and Residual Stress Prediction

Khurana, S, Zhang, W, Edison Welding Institute, USA

Evaluation of Fracture Toughness Using Indentation Method Based on Continuum Damage Mechanics

Lee, J S, Seoul National Univ; Kim, K H, Frontics, Korea; Kim, D S, Shell Oil, USA; Kwon, D I, Seoul National Univ, Korea

Research on Development of a Non-destructive Crack Inspection System by Using Magnetic Properties

Hashimoto, K, Osawa, N, Osaka Univ; Tanaka, Y, National Maritime Research Inst; Sawamura, J, Wada, H, Mori, H, Osaka Univ, Japan

17. ENVIRONMENT II: Assessment (V. 1)

Tuesday May 30 08:00 San Francisco A

Chair: Kyozyuka, Y, Kyushu Univ, Japan

Co-Chair: Kim, K H, Kwandong Univ, Korea

Economic Evaluation for CO₂ Ocean Sequestration in Korea

Park, S H, Oh, W Y, Park, S W, Kwon, S J, Korea Ocean Research & Development Inst, Korea

Model Examinations of Methane Plume Behavior in Ocean Water Column

Yamazaki, T, Nakano, Y, National Inst of AIST; Monoe, D, Oomi, T, Chuden CTI; Nakata, K, Tokai Univ; Fukushima, T, Ocean Policy Research Foundation, Japan

Tidal Flats on Coastal Environment in Semi-enclosed Bay

Liang, S X, Wang, S P, Sun, Z C, Dalian Univ of Technology, China

Influence on Migration of Sand Waves

Zou, S, Lin, M, Inst of Mechanics, CAS, China

Analysis of Change of Red Tide Species in Yodo River Estuary by the Numerical Ecosystem Model

Hayashi, M, Kobe Univ; Yanagi, T, Kyushu Univ, Japan

Numerical Flow Simulation for the Deployment Analysis of Artificial Reefs

Liu, S Y, Liu, T L, Chung-Cheng Inst of Technology; Su, D T, Ming Hsin Univ of Science & Technology; Chen, D W, Chung-Cheng Inst of Technology, Taiwan, China

18. ARCTIC & ICE II: Ice-Structure Interactions (V. 1)

Tuesday May 30 08:00 San Francisco B

Chair: Kubat, I, National Research Council, Canada

Co-Chair: Yamaguchi, H, Univ of Tokyo, Japan

Effects of Ice Load on Ship Performance

Izumiyama, K, Wako, D, Uto, S, National Maritime Research Inst, Japan

Blocked Flow Cavitation during Ice Milling

Sampson, R, Atlar, M, Univ of Newcastle upon Tyne, UK; Sasaki, N, Sumitomo Heavy Industries, Japan

Tanker Propulsion Plant Transient Behavior during Ice Breaking Conditions

Simotas, G, Livanos, G, Kyrtatos, N P, National Technical Univ of Athens, Greece

A Development of Icebreaking Hull Form for Antarctic Research Vessel

Lee, C J, Koh, C D, Lee, Y Y, Park, I R, Maritime and Ocean Engineering Research Inst, Korea

Global Simulation Model of Extreme Ice Loads on Ice-resistant Marine Offshore Structures

Bekker, A T, Sabodash, O A, Shubin, O A, Far-Eastern State Technical Univ, Russia

Ice-resistant Spar-type Platform for Middle Sea Depth

Chernetsov, V A, Karlinsky, S L, "Rubin" Central Design Bureau for Marine Engineering, Russia

19. WAVE IMPACT & COLLISION I (V. 4)

Tuesday May 30 08:00 San Francisco C

Chair: Kashiwagi, M, Kyushu Univ, Japan

Co-Chair: Qiu, W, Memorial Univ of Newfoundland, Canada

Unstable Variation of Plunging Breaking Wave Impact on Inclined Cylinder

Hong, K Y, Shin, S H, Maritime and Ocean Engineering Research Inst, Korea; Liu, S X, Dalian Univ of Technology, China

Hydroelasticity Vibration of a Rectangular Tank Wall with Stiffeners

Lee, Y B, Kim, D W, Kim, K S, Kim, S Y, Choi, S H, Daewoo Shipbuilding and Marine Engineering, Korea

A Numerical Simulation of Transient Response of a Passenger's Head and Neck at a Ship Collision

Shibue, T, Hayami, T, Kinki Univ, Japan

Earthquake Damage Evaluation of Offshore Platform Using MSP Method

Feng, Q M, Guan, Y H, Wei, W, Ocean Univ of China, China

TUESDAY 10:45

20. FPSO/TLP/Compliant Structures III (V. 1)

Tuesday May 30 10:45 Farallon

Chair: Niedzwecki, J M, Texas A&M Univ., USA

Co-Chair: Murai, M, Inoue, Yokohama National Univ, Japan

Hydrodynamic Interaction and Dynamic Behavior of Two Ships in Tandem under Wind and Current

Souza Junior, J R, Morishita, H M, Ragazzo, C G, Univ of Sao Paulo, Brazil

Hydrodynamics of Two Side-by-side Vessels Experiments and Numerical Simulations

Fournier, J-R, Naciri, M, van der Meyden, H, Single Buoy Moorings, Monaco; Chen, X, Bureau Veritas, France

Global Dynamic Responses of FPSOs in Shallow Waters

Zou, J, Houston Offshore Engineering, USA

Disconnectible Turret Mooring Systems for Deep Water

Duggal, A, Ryu, S, Heyl, C, FMC Technologies Floating Systems, USA

Shallow Water Effects on Surge Motion and Load of Soft Yoke Moored FPSO

Xiao, L F, Yang, J M, Li, X, Peng, T, Shanghai Jiao Tong Univ, China

Advanced Evacuation Simulation of Emergency Preparedness for FPSO Conversion

Kim, H, Univ of Glasgow & Strathclyde, UK; Zhou, Y, Ngee Ann Polytechnic, Singapore; Vassalos, D, Univ of Glasgow & Strathclyde, UK

Research on Motion Response of Tower Yoke Mooring FPSO System

Li, X, Yang, J M, Xiao, L F, Shanghai Jiao Tong Univ, China

21. HYDRO III. METOCEAN 3 (V. 3)

Tuesday May 30 10:45 Dolores

Chair: Soukissian, T, Hellenic Centre for Marine Research, Greece

Probability Analysis of Hurricane Katrina and Rita 2005

Liu, D F, Fu, G, Pang, L, Ocean Univ of China; Fan, W, Planning Bureau of Qingdao, China

Aspects on Estimation of Return Values for Extreme Wind Speeds

Ryden, J, Malmö Univ, Sweden

Stochastic Models for Individual Lagrange Sea Waves

Lindgren, G, Lund Univ, Sweden

Stochastic Sea Climate Simulation Based on Hindcast Data

Minoura, M, Naito, S, Osaka Univ, Japan

22. GEOTECH III: In-situ and Field Tests (V. 2)

Tuesday May 30 10:45 Merced

Chair : Uchida, K, Kobe Univ, Japan

Evaluation of In-situ Shear Strength of Natural Masado Slopes by Mean of Light Weight Dynamic Cone Penetrometer

Athapaththu, R G, Tsuchida, T, Sato, T, Suga, K, Hiroshima Univ, Japan

Field Measurements of the Vibration Isolation Wall Using Gas-filled Cushions

Hioki, K, Tsuboi, H, Tanaka, Y, Kushihara, S, Nozu, M, Fudo Construction, Japan

Centrifuge Tests to Design Pipeline Rock Protection

Gaudin, C, Vlahos, G, Randolph, M F, Univ of Western Australia, Australia; Colwill, R D, BMT Asia Pacific, Hong Kong, China

The Interpretation of the Flat Dilatometer Tests in Ariake Clay, Southwest Japan

Tanaka, M, Port and Airport Research Inst; Kamei, T, Shimane Univ, Japan

Design, Buildup and Control of a Large Scale Experimental Set-up for Laterally and Vertically Loaded Piles in Dry Sand

Charue, N, Holeyman, O, Univ Catholique de Louvain, Belgium; Hübner, A, Univ of Karlsruhe, Germany

Study on the Behavior of Pile and Soft Soil in Pier Structure by Field Measurement

Kim, D K, Sangmyung Univ; Chae, Y S, Univ of Suwon; Moon, H J, Laboratory Testing & Surveying, Korea

Comparison between Shear Strength Measurements from Different In-situ Tests in Normally Consolidated Clay

El-Sherbiny, R M, Olson, R E, Gilbert, R B, Univ of Texas at Austin, USA

Influence of Sample Quality on Shear Wave Velocity and Residual Effective Stress

Nishida, K, Tanaka, H, Mitachi, T, Hokkaido Univ, Japan

23. COASTAL II: Coastal Waves (V. 3)

Tuesday May 30 10:45 San Miguel

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

Co-Chair: Vicinanza, D, Second Univ of Naples, Italy

Wave Energy Transformation Processes in the Surf Zone

Caleffi, S, Ciavola, P, Univ di Ferrara, Italy

Spectral Method Applied to Mass Transport due to Standing Waves in Water over Non-Newtonian Mud

Huang, L Y, Ng, C O, Chwang, A T, Univ of Hong Kong, Hong Kong, China

Resonant Interaction of Waves in a Beach Zone

Shugan, I V, Lee, K J, An, J S, Chosun Univ, Korea

Wave-jet Interaction: Model Development and Experimental Validation

Di Natale, M, Greco, R, Vicinanza, D, Second Univ of Naples, Italy

The Wave Field in the Coastal Area of Taipei Harbour

Yim, J Z, Chou, C R, Wong, W K, Chen, T H, National Taiwan Ocean Univ, Taiwan, China

Measurement of Water Surface Using Stereo Matching

Arita, M, Deguchi, I, Osaka Univ, Japan

An Analytic Study on Weather Parameters Related Restricted Visibility due to Heavy Fog at Geiyo District in Seto Inland Sea

Sasa, K, Hiroshima National College of Maritime Technology; Hibino, T, Hiroshima Univ, Japan

24. SUBSEA SYSTEMS (V. 1)

Tuesday May 30 10:45 Potrero

Chair: Paulsen, G, Reinertsen Engineering, Norway

Hydrodynamic Properties of Ventilated Subsea Structures

Sandvik, P C, Solaas, F, MARINTEK; Nielsen, F G, Norsk Hydro Produksjon, Norway

Deployment of Subsea Hardware in Ultra-deep Water by Utilization of the Pendulous Motion

Roveri, F E, Vardaro, E, Cerqueira, M B, Petrobras, Brazil

Experimental Investigation and Calculation of Multiphase Pumping with Twin Screw Pumps of Conventional and New Improved Design

Aleksieva, G K, Rausch, T, Scharf, A, Vauth, T, Univ of Hannover; Reichwage, M, Bornemann Pumps; Mewes, D, Univ of Hannover, Germany

Retrofit Installation of Direct Electrical Heating for Deep Water Flow Assurance

Lervik, J K, Kulbotten, H, SINTEF Energy Research; Iversen, Ø; Karlsen, J E, Nexans Norway; Børnes, A H, Lund, K M, STATOIL, Norway

25. HPM III: Fatigue & Fracture 1 (V. 4)

Tuesday May 30 10:45 Butron

Chair: Ames, N, EWI, USA

Transportable Laser Peening System for Field Application for Improving Fatigue and SCC Resistance of Offshore Components and Structures

Hackel, L, Dane, C B, Harris, F, Metal Improvement Co, USA

Extension of Life Time of Welded Fatigue Loaded Structures

Weich, I C, Ummenhofer, T, Nitschke-Pagel, T, Technical Univ of Braunschweig, Germany

A Study on the Fatigue Characteristics at the Weldment by Spot Heating

Park, Y K, Shin, S B, Kim, H S, Kim, K K, Hyundai Heavy Industries, Korea

Improved Fatigue Life Through the Use of SAF 2507 Super Duplex Stainless Steel

Nystrom, M, RSA, Norway

26. ENVIRONMENT III: Water Purification (V. 1)

Tuesday May 30 10:45 San Francisco A

Chair: Otsuka, K, Osaka Prefecture Univ, Japan

Co-Chair: Shiau, B S, National Taiwan Ocean Univ, TAIWAN, China

Field Investigation of Water Purification Technique in Lagoon

Kim, K H, Lee, K H, Kwandong Univ, Korea; Adachi, Y, Tetra Co, Japan

Experiment on Purification for Water Quality by Using of Cohesion Powder

Okamoto, K, Hotta, K, Nihon Univ, Japan

The Evaluation of Water Quality in Shallow Water Using the 3D Physical-biochemical Coupling Model

Shin, B S, Kim, K H, Kwandong Univ; Pyun, C K, Myongji Univ, Korea

Estimation of Water Purification Efficiency of Plural Environmental Restoration Technologies for Enclosed Coastal Seas

Otsuka, K, Nakatani, N, Yao, M, Osaka Prefecture Univ, Japan

Seawater Intakes for Desalination

Jones, A, Oases Global Systems, USA

27. ARCTIC & ICE III: Ice & Environment 1 (V. 1)

Tuesday May 30 10:45 San Francisco B

Chair: Bekker, A T, Far-Eastern State Technical Univ, Russia

Co-Chair: Bercha, F G, Bercha Group, Canada

Recent Developments in Arctic EER

Bercha, F G, Bercha Group, Canada

Slip Line Field Solutions as an Approach to Understand Subgouge Deformation Patterns Observed in Ice Scouring

Schoonbeek, I S S, Delft Univ of Technology, The Netherlands; Xin, M, Golder Associates, USA; van Kesteren, W G M, Been, K, Golder Associates, USA

On Determination of Formation Area of the Big Icebergs in the Barents Sea: Temperature Distribution Analysis

Kubishkin, N V, Buzin, I V, Arctic and Antarctic Research Inst; Glazovsky, A F, State Inst. of Geography, RAS; Skutin, A A, Arctic and Antarctic Research Inst, Russia

Recent Trend in Design Parameters of Icebreaking Vessels

Choi, K S, Korea Maritime Univ, Korea

28. WAVE IMPACT & COLLISION II (V. 4)

Tuesday May 30 10:45 San Francisco C

Chair: Shibue, T, Kinki Univ, Japan

Response Evaluations of an Offshore Structure Foundation System due to Wave and Seismic Forces with Uncertainties

Kawano, K, Kimura, Y, Kagoshima Univ; Iida, T, Osakasangyou Univ, Japan

Numerical Solutions of 2-D Water Entry Problem and Bow-flare Impulsive Loads

Chuang, J M, Zhu, W, Dalhousie Univ; Qiu, W, Memorial Univ of Newfoundland, Canada

Investigation of Wave Impact Load Guidelines for Ship Appendages

Pence, A M, Fu, T C, Jiang, M, Hong, Y, Naval Surface Warfare Center, USA

An Analysis of Spray for a Small High-speed Craft by Jet of Water
Shin, S J, Yamaguchi, S, Shinkai, A, Kyushu Univ, Japan

Measurement and Analysis of Ship Motion of a High-speed Passenger Craft
Tamura, Y, Arima, M, Osaka Prefecture Univ, Japan

TUESDAY 13:30

Plenary Presentation III

Tuesday May 30 13:30 Farallon

Jin S Chung Award Lecture

Fatigue Reliability of Marine Structures – From the Alexander Kielland Accident to Life Cycle Assessment of Safety

Moan, Torgeir, Norwegian Univ of Science and Technology, Norway
Introduction by Ron Knapp, ISOPE President, Univ of Hawaii, USA

Student Forum

Tuesday May 30 12:00 Conf Theater, 1B

All Student Participants Are Invited

E-mail by May 5 your intention of attending this meeting to meetings@isope.org.

Advisors: Prof. Harovel G. Wheat, USA; Dr. Sung Tai Kee, Korea; and Dr. Stefan Herion, Germany

29. FPSO/TLP/Compliant Structures IV (V. 1)

Tuesday May 30 14:30 Farallon

Chair: Utsunomiya, T, Kyoto Univ, Japan

Co-Chair: Kwon, S H, Pusan National Univ, Korea

Structural Design of a Novel Semi-submersible Type Using Finite-elements Coupled with Time-domain Hydrodynamic Simulations
Cermelli, C, Aubault, A, Roddier, D, Marine Innovation & Technology, USA

Buoyant Leg Structure (BLS) Multi-cylinder Configuration Model Test Results

Copple, R W, Capanoglu, C, International Design, Engineering and Analysis Services; Elgamiel, H, Offshore Model Basin, USA

Coupled Dynamic Analysis of a Truss Spar and the Comparison with the Field Measurements

Theckumpurath, B, Ding, Y, Zhang, J, Texas A&M Univ, USA

Time Domain Analysis of the Mooring/riser-coupled Motion of a SPAR with the Buoyancy Can Effect: Comparison with Model Test

Yang, C K, Chen, C Y, J. Ray McDermott, USA

Model Strain Energy for Damage Detection of Offshore Jacket Structures from Partial Modal Information: Experimental Validation

Wang, S Q, Li, H J, Ocean Univ of China, China

Experimental and Numerical Study on TLDs Passive Control for Offshore Platforms with Storage Tank

Zhou, J, Jin, Q, Li, X, Zhu, T, Dalian Univ of Technology, China

A System Design Study on High Performance Container Cranes

Kim, K S, Inha Univ; Hong, K S, Inha Technical College; Tae, J C, Inha Univ, Korea

A Compact Combined Oil/gas/water Separator for Offshore Oil Industry

Wu, Y X, Zheng, Z C, Inst of Mechanics, CAS; Li, Q P, CNOOC, China

An Introduction of Design, Construction and Installation of Compliant Piled Tower at West Africa

Cho, H W, Woo, W K, Kim, J G, Nam, H S, Shin, Y G, Daewoo Shipbuilding & Marine Engineering, Korea

30. HYDRO IV. METOCEAN 4 (V. 3)

Tuesday May 30 14:30 Dolores

Chair: Liu, D F, Ocean Univ of China, China

Co-Chair: Gentile, R, Univ of Genova, Italy

Wave Climate Study in the Southwest Coast of the Black Sea

Ari, H A, Yuksel, Y, Ozkan Cevik, E, Ayat, B, Yildiz Technical Univ, Turkey

Analysis of the Duration and Intensity of Sea States Using Segmentation of Significant Wave Height Time Series

Soukissian, T, Samalekos, P, Hellenic Centre for Marine Research, Greece

Estimations of Some Elements of Ice Regime of North-eastern Part of the Barents Sea

Buzin, I V, Arctic and Antarctic Research Inst, Russia

Role of Wave Velocity for Encountered Wave Statistics

Aberg, S, Rychlik, I, Lund Univ, Sweden

Internal Wave Observed by Shipboard Marine Radar

Wu, L C, Doong, D J, National Cheng Kung Univ; Kuo, C L, Ministry of Economic Affairs; Liu, C T, National Taiwan Univ; Kao, C C, National Cheng Kung Univ, Taiwan, China

The Use of Empirical Orthogonal Decomposition of Current Measurements to Study Deepwater Current Profiles

Srivilairit, T, Manuel, L, Saranyasontorn, K, Univ of Texas at Austin, USA

31. GEOTECH IV: Soil Improvement (V. 2)

Tuesday May 30 14:30 Merced

Chair : Kim, S S, Hanyang Univ, Korea

Co-Chair: Shang, J Q, Univ of Western Ontario, Canada

Prevention of Dry Shrinkage Cracks in Ready-Mixed Soil Materials

Chen, J W, Chang, C F, National Cheng Kung Univ, Taiwan, China

Improvement of Plastic Board Drain Method Applied at the Pusan New Port Project Site in Korea

Lee, H J, Jung, J B, Byun, G J, Yang, S Y, Samsung Engineering & Construction, Korea

A System for Treating Discharged Soils in Deep Mixing Method with High-pressure Injection

Tsuboi, H, Fudo Construction; Matsui, T, Fukui Univ of Technology; Ootsuka, M, Ganiguchi, T, Fukada, H, Nitao, H, Fudo Construction; Sato, S, TELNITE, Japan

Discharging Characteristics by Screw Auger of Gravel Drain Pile as a Reinforcing Measure against Earthquakes

Fukada, H, Ootsuka, M, Tanaka, Y, Fudo Construction; Shioi, Y, Hachinohe Inst of Technology, Japan

A Comparison of the Pullout Resistances of Reinforcements for Effective Design of Reinforced Soil Structures

Hossain, M Z, Sakai, T, Narioka, H, Mie Univ, Japan

Effect of Electrode Configuration in Electro-cementation of Caissons in Calcareous Sand

Rittirong, A, Shang, J Q, Univ of Western Ontario, Canada; Ismail, M, Randolph, M F, Univ of Western Australia, Australia

Influential Factors of Suction Drain Method on the Clayey Soil

Kim, K N, Kim, S S, Han, S J, Hanyang Univ; Shim, S H, Samsung Engineering & Construction, Korea

Study on an Improved Area due to SCP for the Spread Foundation of Buildings

Yoshitomi, H, Fudo Construction; Adachi, T, Yamada, M, Kurasaki, M, Nihon Univ; Harada, K, Fudo Construction, Japan

Execution Control System of Deep Mixing Method for House Construction in Japan

Sato, H, Nihon Univ; Mizutani, Y, Kanematsu - NKK Corp; Narita, Y, Alive Co; Tamura, M, Building Research Inst; Kawamura, M, Kouda, M, Nihon Univ, Japan

32. COASTAL III: Tidal Current & Storm Surge (V. 3)

Tuesday May 30 14:30 San Miguel

Chair: Lalli, F, APAT, Italy

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

Application of Artificial Neural Network in Short-term Storm Surge Forecasting

Lee, T L, Shao, C C, Leader Univ; Hsu, Y J, Central Weather Bureau, Taiwan, China

A Prevention of Overtopping Volume Due to an Experiment against Storm Surge (Typhoon 14)

Park, S K, Pusan National Univ, Korea

Application of an Unstructured-grid Model to a Complex Estuarine System

Wang, B, Fringer, O B, Street, R L, Stanford Univ, USA

Laboratory Observations on Internal Solitary Wave Revolution on Steep Uniform Slopes

Chen, P C Y, National Sun Yat-sen Univ, Taiwan, China; Hsu, J R C, Univ of Western Australia, Australia

Applications of High Order Boussinesq Equations in Surf Zone Hydrodynamics

Wang, B L, Liu, H, He, Y S, Shanghai Jiao Tong Univ, China

The Effect of Wave Radiation Stress on Tidal Current

Wang, S P, Liang, S X, Sun, Z C, Dalian Univ of Technology, China

Three Dimensional Numerical Modeling of Tidal Currents in Intertidal Zone

Abualtayef, M T, Kuroiwa, M, Yamashita Y, Tanaka, K, Matsubara, Y, Tottori Univ; Nakahira, J, Yachiyo Engineering, Japan

Modeling of Coupled Waves and Tidal Currents

Zhu, Z X, Shanghai Jiao Tong Univ; Hang, Q W, China Inst of Water Resources & Hydropower Research, China

Experimental Study on Wave-Current Interaction

Lee, K H, Mizutani, N, Nagoya Univ; Komatsu, K, Nagoya City Waterworks & Sewerage Bureau, Japan; Hur, D S, Gyeongsang National Univ, Korea

33. PIPELINES, RISERS AND MOORING I: Caspian Sea and North Sea (V. 2)

Tuesday May 30 14:30 Potrero

Chair: Moshagen, H, Statoil, Trondheim,, Norway

Co-Chair: Price, J C, INTEC Engineering, Houston, USA

Offshore Ice-resistant Fixed Platforms for Construction of the Korchagin Field in the North Caspian Sea

Blagovidov, L B, Potapov, V M, OJSC "CDB" Corall", Ukraine

Impact of Baku-Tiblisi-Ceyhan (BTC) and the Caspian Sea Transit Pipelines (CSTP) on European Energy Consumption

Kerimli, S A, Universal Engineering Services, USA

Ormen Lange Pipelines – Expansion Control Design

Foss, P, Soreide, T H, Paulsen, G, Reinertsen Engineering; Marthinsen, T, Nork Hydro, Norway

Ormen Lange Pipelines – Seabed Intervention Design in Deep Water

Holden, O M, Paulsen, G, Reinertsen Engineering; Marthinsen, T, Norsk Hydro, Norway

34. HPM IV: Fatigue & Fracture 2 (V. 4)

Tuesday May 30 14:30 Butron

Chair: Tsuru, E, Nippon Steel Co., Japan

Co-Chair: Threadgill, P, TWI, UK

Influence of Longitudinal Attachments on the Fatigue Behaviour of high Strength Steel

Puthli, R, Herion, S, Bergers, J, Univ of Karlsruhe, Germany

A Study on the Fatigue Strength Behavior of Tendon Porth in Offshore Structures

Im, S W, Chang, I H, RIST; Jo, C H, Inha Univ; Lee, J S, Ulsan Univ; Kim, K Y, POSCO, Korea

Long Crack Arrestability of Heavy-thick Ship Building Steels

Inoue, T, Ishikawa, T, Imai, S, Koseki, T, Nippon Steel; Hirota, K, Tada, M, Mitsubishi Heavy Industry; Kitada, H, Yamaguchi, K, Nippon Kaiji Kyokai; Yajima, H, Nagasaki Inst of Applied Science, Japan

Fatigue Testing of Structural Welds for Titanium Alloy Structures

Mohr, W, Lawmon, J, EWI, USA

Influence of Wall Thickness and Steel Grade on the Fatigue Strength of Towers of Offshore Wind Energy Converters

Puthli, R, Herion, S, Bergers, J, Univ of Karlsruhe, Germany

35. GAS HYDRATES (V. 1)

Tuesday May 30 14:30 San Francisco A

Chair: Dr. T. Komai, AIST, Tsukuba, Japan

Field Scale Simulation for Permeability Characteristics and Gas Production Behavior during Dissociation Process of Methane Hydrate in Marine Sediments

Sakamoto, Y, Komai, T, Kawamura, T, Tenma, N, Yamaguchi, T, National Inst of AIST, Japan

Factors Prompting Seafloor Experiments to Investigate Microbial/hydrate Relationships

Rogers, R E, Sassen, R, Dearman, J S, Zhang, G, Texas A&M Univ, Korea

Measurement of Relative Permeability in Artificial Hydrate-bearing Sediments

Ahn, T W, Seoul National Univ; Lee, J H, Huh, D G, Korea Inst of Geoscience & Mineral Resources; Kang, J M, Seoul National Univ, Korea

A Mathematical Model for Dissociation of Gas Hydrate

Lu, X B, Xiong, J, Wang, S Y, Cheng, C M, Inst of Mechanics, CAS; Zhang, J H, Tsinghua Univ, China

Dissociation Behavior of Hydrate Core Sample Using Experimental Apparatus Equipped with Long Core Holder

Kawamura, T, Ohtake, M, Sakamoto, Y, Yamamoto, Y, Haneda, H, National Inst of AIST, Japan

Gas Hydrate Induced Seafloor Stability Problems in the Blake Ridge

Siriwardane, H J, West Virginia Univ; Smith, D H, NETL/USDOE, USA

Numerical Simulation of the Laboratory Experiment Using by FEHM Code

Temma, N, Sakamoto, Y, Komai, T, Yamaguchi, T, National Inst of AIST, Japan; Pawar, R, Zvoloski, G, Los Alamos National Laboratory, USA

36. RENEWABLE ENERGY I: Tidal Energy & OTEC (V. 1)

Tuesday May 30 14:30 San Francisco B

Chair: Serrahn, C S, Winzler & Kelly Consulting Engineers, USA

Co-Chair: Suzuki, M, Univ of Tokyo, Japan

Tidal Current Energy Bridge in Ice-infested Waters

Campbell, S, North Atlantic Energy Structures, Canada

Tidal Current Power Generation Making Use of a Bridge Pier

Kyozuka, Y, Gunji, T, Kyushu Univ, Japan

Experimental and Numerical Investigation of an Innovative Technology for Marine Current Exploitation: The Kobold Turbine

Calcagno, G, Salvatore, F, Greco, L, INSEAN; Moroso, A, Eriksson, H, Ponte di Archimede, Italy

Development of a MH Actuator-driven Seawater Exchange System Using Thermal Energy

Hase, K, Kubouchi, A, Youichi, A, Civil Engineering Research Inst of Hokkaido; Miyajima, K, Matsumura, K, Hokkaido Industrial Technology Center; Yoshida, S, Hokkaido Univ, Japan

Antifouling Technology for Seawater Intake Pipe of OTEC Using Ozonation

Ikegami, Y, Urata, K, Saga Univ; Hirata, M, Toshiba Corp, Japan

Characteristics of Temperature and Velocity Distribution of Horizontal Buoyant Jet

Umeki, M, Bando, A, Ikegami, Y, Saga Univ, Japan

Scheme Design and Economical Analyses of Seawater Resource Heat Pump in Dalian

Zhen, L, Lin, D M, Haiwen, S, Shuang, J, Dalian Univ of Technology, China

Motions of Floating Circle Collar of Gravity Fish Cage

Zheng, Y N, Dong, G H, Gui, F K, Teng, B, Li, Y C, Dalian Univ of Technology; Guan, C T, Lin, D F, Yellow Sea Fisheries Research Inst, China

37. DESIGN & ANALYSES (V. 4)

Tuesday May 30 14:30 San Francisco C

Chair: Wu, J-F, American Bureau of Shipping, USA

Co-Chair: Jang, C D, Jang, Seoul National Univ, Korea

An Investigation on the Initial Structural Design of Ultra Large Container Ships

Choi, B K, Choe, I H, Ryu, H R, Lee, S S, Hyundai Heavy Industries, Korea

A Scale Model Rapidly Deployable Stable Craneship for for SeaBased Cargo Transfer

Driscoll, F R, Anthony, V, Alsenas, G, Florida Atlantic Univ; Radanovic, B, American Bureau of Shipping; Selfridge, M, Naval Surface Warfare Center-Cardeck, USA

Numerical Estimation of Torsional Deformation of a Ship Longitudinal Frame Produced by Line Heating

Osawa, N, Osaka Univ; Onoe, M, Universal Shipbuilding; Tani, K, Hitachi Zosen; Kaminaga, H, Mitsui Engineering & Shipbuilding; Murakawa, H, Osaka Univ, Japan

Calculating the Torque Vibration of the Ship Dynamics

Tran, H T, Vietnam National Univ-Hochiminh City, Vietnam

On the Vibration Analysis of Large Commercial Vessels

Wu, J F, Wang, S, Liao, M, Chavda, D, Basu, R, American Bureau of Shipping, USA

Experimental Analysis on Evolutionary Algorithm for Spatial Arrangements of Shipbuilding Block in Pre-erection Area

Varghese, R, Yoon, D Y, Chosun Univ, Korea

Forward Scheduling Approach Applied in Pre-erection Area of a Shipyard

Varghese, R, Yoon, D Y, Chosun Univ, Korea

WEDNESDAY 08:00

38. LNG & TERMINAL (V. 1)

Wednesday May 31 08:00 Farallon

Chair: Lee, H S, ABS, Korea

A Computational Study of Wave Effects Related to Side by Side LNG Offloading

Teigen, P, Statoil, Norway; Niedzwecki, J M, Texas A&M Univ, USA

Seismic Analysis of an SPB Tank Installed in the Offshore GBS LNG Terminal

Aoki, E, Abe, A, Manabe, H, IHI Marine United; Sakurai, T, Ishikawajima-Harima Heavy Industries, Japan

Production and Properties of 9% Nickel Steel for LNG Applications

Hickmann, K, Kern, A, Schriever, U, Stumpfe, J, ThyssenKrupp Stahl AG, Germany

Qualification of Transfer Systems for LNG Offloading at Offshore Terminals

Skramstad, E, Fore, M J, Det norske Veritas, Norway

Responses of a LNG Offloading Terminal to Hurricane in Shallow Water

Liu, Y H, Boatman, T, FMC Technology Energy System, USA

39. HYDRO V: Roll & Numerical (V. 3)

Wednesday May 31 08:00 Dolores

Chair: Huijsmans, R H M, MARIN, The Netherlands

Co-Chair: Walker, D A G, Univ of Oxford, UK

A New Solution for Roll Motion Reduction with a Simple Board: Applications to Floating Piers and Experiences in Japan

Tanigaki, S, Ikesue, S, Matsuura, M, Kihara, K, Yano, S, Mitsubishi Heavy Industries, Japan

Nonlinear DLA Analysis Procedure for Large Container Carriers Based on Nonlinear Seakeeping Analysis

Kim, S, Shin, Y S, Liu, D, American Bureau of Shipping, USA

Numerical Simulation of the Motions of a Modified SWATH Hull Form in Waves

Peng, H, Doucet, M, Oceanic Consulting, Canada; Bailey, S, Lockheed Martin Littoral Ships and Systems, USA

Shallow Water Effect on Two Ship Interactions in Waves

Li, L, American Bureau of Shipping, USA; McTaggart, K, Defence Research and Development, Canada; Hsiung, C, Dalhousie Univ, Canada

Estimation of Current Loads on Side-by-side Moored Two Vessels

Yuck, R H, Choi, H S, Seoul National Univ, Korea

40. GEOTECH V: Seepage & Consolidation (V. 2)

Wednesday May 31 08:00 Merced

Chair : Tanaka, T, Kobe Univ, Japan

Co-Chair: Luan, M, Dalian Univ of Technology, China

Evaluation of Consolidation Status of the Soft Clay Deposit

Park, C M, Jung, H C, Kim, S R, ESCO Consultant & Engineers; Cho, C G, POSCO Engineering & Construction, Korea

Hybrid Online Consolidation Simulation of Osaka Harbor Clay

Kwon, Y C, Watabe, Y, Port and Airport Research Inst; Kazama, M, Tohoku Univ, Japan

Effect of Strain Rate on Consolidation Behavior of Pleistocene Clays of Osaka Bay

Oda, K, Osaka Univ; Ono, M, Kansai International Airport; Tokida, K, Osaka Univ; Matsui, T, Fukui Univ of Technology, Japan; You, S K, Myongji College, Korea

Secondary Consolidation Behavior in Pleistocene Clays of Osaka Bay and Its Numerical Modeling

Oda, K, Tokida, K, Osaka Univ; Matsui, T, Fukui Univ. of Technology; You, S K, Kobe Univ, Japan

Pore Pressure Response around VLA under Rapid and Sustained Loading

Taiebat, H A, Univ of Technology, Sydney, Australia

Decrease in the Safety Factor for Seepage Failure of Subsoil Due to Bridge Abutment Construction within a Cofferdam

Hirose, T, Tanaka, T, Kobe Univ; Sakaida, T, Kyoto Prefecture Dept of Construction; Inoue, K, Kobe Univ, Japan

Acceleration of Self-weight Consolidation due to Dewatering Using Plastic Board Drain

Yamada, S, Sato, K, Fujiwara, T, Fukuoka Univ; Nomura, T, Kinjo Rubber Co, Japan

41. COASTAL IV: Breakwater & Wave Absorber (V. 3)

Wednesday May 31 08:00 San Miguel

Chair: Mizutani, N, Nagoya Univ, Japan

Co-Chair: Yim, J Z, National Taiwan Ocean Univ, TAIWAN, China

Vila do Porto Harbour: Numerical and Experimental Tests

Fortes, C J E, Pinheiro, L, Zozimo, A, Silva, L, Sousa, I, LNEC, Portugal

Development of Long Period Wave Absorber

Hiraishi, T, Port and Airport Research Inst, Japan

Submerged Porous Plate Wave Absorber

Kee, S T, Lee, S H, Seoul National Univ of Technology; Ko, J S, Hyein E&C, Korea

Performance of a Curtain-walled Dissipater of Reflected Waves from Vertical Walls

Nakamura, T, Ehime Univ; Onozuka, T, Tripole Co, Japan

The Seismic Responses of a Rubble Mound Breakwater

Yuksel, Y, Berilgen, M, Cihan, K, Ozkan Cevik, E, Yildiz Technical Univ;
Yalciner, A C, METU, Turkey

Numerical Simulation of Wave Overtopping over Seawalls

Liu, H, Shanghai Jiao Tong Univ, China

**42. PIPELINES, RISERS AND MOORING II:
Riser Mechanics (V. 2)**

Wednesday May 31 08:00 Potrero

Chair: Park, H I, Korea Maritime Univ; Korea

Co-Chair: Oliphant, J, Technip, UK

On Vibration Control of Flexible Pipes in Ocean Drilling System

Ioki, T, Ohtsubo, K, Senga, H, Manabe, T, Koterayama, W, Kajiwara, H,
Kyushu Univ, Japan

Calculation of Extreme Nonlinear Riser Response

Sødahl, N, Hagen, Ø, Steinkjer, O, Det Norske Veritas, Norway

**Acceleration of Incompressible Fluid transported Inside an Extensible
Riser [Oral presentation only]**

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

**Dynamic Behavior of a Top Tensioned Riser in Frequency and Time
Domain**

Morooka, C K, Coelho, F M, Shiguemoto, D A, State Univ of Campinas;
Franciss, R, Costa, C G, Petrobras, Brazil

Dynamics of a Vertical Riser with a Subsurface Buoy

Morooka, C K, State Univ of Campinas; Dias Pereira, P, Petrobras; Farfan,
D, State Univ of Campinas, Brazil

**A Comparison of Time Domain and Frequency Domain Analysis of a
Flexible Marine Riser Undergoing Large Deformations by Using a
Lumped Mass Approach**

Pollio, A, Technical Univ of Bari, Italy; Langley, R, Low, Y M, Univ of
Cambridge, UK; Marano, G, Mossa, M, Technical Univ of Bari, Italy

43. HPM IX: Composites & Smart Structures 1 (V. 4)

Wednesday May 31 08:00 Butron

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

Waterfront Applications of FRP and Navigation Buoys

Fyfe, R J, Fibrwrap Construction; Brokken, S, URS Corp, USA

**Experimental Study on Corrosion Damage in CFRP-confined
Reinforced Concrete Structures**

Zhao, Y H, Hou, Y L, Dalian Maritime Univ, China

**Experimental Study on Prevention of Deterioration of Bond Strength
between Concrete and Reinforcing Bars in Slurry for the Construction
of Cast-in-place Pile**

Fujii, M, Tokai Univ; Kondo, J, Nikkoukiso Corp; Katoh, Y, Mitani Sekisan
Co; Watanabe, K, Arai, M J, Tokai Univ, Japan

Fatigue Failure Criterion of Concrete under Multi-axial and Variable-amplitude Cyclic Loading and Its Application in Offshore Engineering

Song, Y P, Meng, X H, Dalian Univ of Technology, China

Material Properties of Ductile-fiber-reinforced Cementitious Composite

Watanabe, K, Fujii, M, Arai, M J, Tokai Univ, Japan

44. UNDERWATER VEHICLES I: Acoustics (V. 2)

Wednesday May 31 08:00 San Francisco A

Chair : Lee, P M, Maritime and Ocean Engineering Research Inst, Korea

Co-Chair: Kebkal, K G, Technical Univ of Berlin, Germany

A Matching-time Peak Tracking for Ocean Acoustic Tomography

Nakano, I, JAMSTEC, Japan

Improved AUV Autonomy Provided by an Underwater Acoustic Link

Trubuil, J, ENST Bretagne; Lapiere, G, Beuzelin, N, GESMA; Labat, J, Goalic, A, Laot, C, ENST Bretagne, France

Evaluation of Underwater Acoustic Channel Capacity on Application of the Sweep-spread Carrier Signal

Kebkal, K G, Technical Univ of Berlin; Bannasch, R, Kobkal, A G, EvoLogics, Germany

Modeling and Assessment of the Underwater Acoustic Channel for Submerged End-users Positioning Information Transmission and Applications

Xiros, N I, National Technical Univ of Athens; Belibassakis, K A, Technological Educational Inst of Athens; Athanassoulis, G A, National Technical Univ of Athens, Greece

Template-based Underwater Image Compression

Nip, A M, Choi, S K, Marine Autonomous Systems Engineering, USA

45. RENEWABLE ENERGY II: Offshore Wind 1 (V. 1)

Wednesday May 31 08:00 San Francisco B

Chair: Herion, S, Karlsruhe Univ, Germany

Co-Chair: Faber, T, Germanischer Lloyd WindEnergie, Germany

Unsteady Performance Prediction for Wind/hydro Turbines

Coiro, D, Nicolosi, F, De Marco, A, Melone, S, Univ of Naples, Italy

Numerical and Experimental Investigations about Horizontal Axis Current Turbines

Coiro, D, Figliolia, S, Maisto, U, Melone, S, Univ of Naples, Italy

Intelligent Wind Turbine Generator with Tandem Rotors Applicable to Offshore Wind Farm: Flow Conditions around Tandem Rotors

Galal, A M, Kanemoto, T, Konno, Y, Ikeda, K, Inada, Y, Kyushu Inst of Technology, Japan

Variability in Offshore Wind Turbine Response Using Field Measurements

Agarwal, P, Manuel, L, Univ of Texas at Austin, USA

The Wind Power Generation System Using the Vertical Axis Wind Turbine with Arc Camber Blades

Naoi, K, Shiono, M, Suzuki, K, Nihon Univ, Japan

46. ULTIMATE STRENGTH (V. 4)

Wednesday May 31 08:00 San Francisco C

Chair: Yao, T, Osaka Univ, Japan

Co-Chair: Fujikubo, M, Hiroshima Univ, Japan

Development of ISUM Element for Rectangular Plate Panel with Cutout

Ishibashi, K, Nippon Kaiji Kyokai; Fujikubo, M, Hiroshima Univ; Yao, T, Osaka Univ, Japan

Progressive Collapse Analysis of a Modern Cruise Ship Hull Girder

Biot, M, Emolumento, F, Univ of Trieste; Rasmus, F, FINA SpA; Augusto, M, CETENA SpA; Tonelli, A, RINA SpA, Italy

Prediction of Ultimate Behaviour of Plate Girders in Transverse Frames

Dong, G, Moan, T, NTNU, Norway

Progressive Collapse Analysis of Ship Hull Girder by ISUM Considering Lateral Pressure and Welding Residual Stress

Fujikubo, M, Hiroshima Univ; Pei, Z Y, Tsuneishi Shipyard, Japan; Kaeding, P, ThyssenKrupp Marine Systems, Blohm+voss, Germany

Buckling/plastic Collapse Behaviour and Strength of Cylindrically Curved Plate under Axial Thrust

Katsura, S, Yumura, K, Iijima, K, Yao, T, Osaka Univ, Japan

Buckling/plastic Collapse Behaviour and Strength of Wide Rectangular Plates under Combined Thrust and Bending

Miyachi, S, Sano, M, Iijima, K, Yao, T, Osaka Univ, Japan

WEDNESDAY 10:45

47. Model Basin & Measurements (V. 3)

Wednesday May 31 10:45 Farallon

Chair: Duggal, A, FMC Technologies Floating Systems, USA

Co-Chair: Dessi, D, INSEAN, Italy

A Laboratory Study on Green Water Velocity Measurement and Prediction

Chang, K A, Ryu, Y, Texas A&M Univ, USA

Investigation of Propeller Wake in a Cavitation Tunnel Using PIV Measurement Techniques

Paik, B G, Kim, J, Park, Y H, Kim, K Y, Kim, K S, Maritime & Ocean Engineering Research Inst, Korea

Velocity and Acceleration Fields of Rogue Waves by PIV Measurement

Choi, H J, Kim, M H, Texas A&M Univ, USA

New Mooring Simulation Approaches in Model Testing

Markov, N, Elgamiel, H, Grinius, V, Lambert, M, Offshore Model Basin, USA

Offshore Installation Analysis by Deepwater Model Basins

Fernandes, A C, Sales, J S, Levi, C, COPPE/UFRJ, Brazil

Numerical Research on the Deepwater Current Generation System

Lu, H N, Yang, J M, Peng, T, Shanghai Jiao Tong Univ, China

48. HYDRO VI: Airgap and Diffraction (V. 3)

Wednesday May 31 10:45 Dolores

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

Diffraction Theory as a Tool for Predicting Airgap beneath a Multi-column Gravity Based Structure

Walker, D A G, Taylor, P, Eatock Taylor, R, Zang, J, Univ of Oxford, UK

Analytical Representation of Time-harmonic Flow about an Offshore Structure in Deep Water

Noblesse, F, NSWCCD; Yang, C, George Mason Univ, USA

Non-linear and Viscous Analysis of the Diffraction Flow in OWC Wave Power Plants

Alves, M A, Sarmento, A, Institute Superior Tecnico, Portugal

Experimental Study of Air Gap Response and Wave Impact Forces of a Semi-submersible Drilling Unit

Kazemi, S, Incecik, A, Newcastle Univ, UK

Numerical Simulation of Wave Runup and Greenwater on Offshore Structures by a Level-set RANS Method

Chen, H C, Yu, K, Texas A&M Univ, USA

Numerical Simulation of wave Run-up and Green Water on Offshore Structures

Bunnik, T, Buchner, B, MARIN; Veldman, A, Univ of Groningen; Wellens, P, TU-Delft, The Netherlands

49. GEOTECH VI: Anchor & Offshore (V. 2)

Wednesday May 31 10:45 Merced

Chair : Brandes, H G, Univ of Hawaii, USA

Co-Chair: Taiebat, H A, Univ of Technology, Australia

The Role of the Intermediate Principal Stress in Offshore Slope Sediment Modeling

Brandes, H G, Wang, S T, Univ of Hawaii, USA

Torpedo Anchor Piles: Recent Research and Development

Audibert, J M E, Fugro-McClelland Marine Geosciences; Gilbert, R B, Won, J Y, Morvant, M N, Univ of Texas at Austin, USA

Vertical Pullout Capacity of Embedded Suction Anchors in Sand

Bang, S C, Jones, K, South Dakota School of Mines, USA; Kim, Y S, Cho, Y K, Daewoo Engineering & Construction, Korea

Evaluation of Suction Piles and Plate Anchors from Current Deepwater Mooring Applications

Colliat, J-L, Total EP, France

Hydroplaning of Submarine Slides and the Influence of Hydrodynamic Stress

Hu, H R, Wright, S G, Kinnas, S A, Univ of Texas at Austin, USA

Properties of a Rapid-setting Controlled Low-strength Marine Clay
Cho, D H, Chung-Ang Univ; Kim, S S, Hanyang Univ; Kim, S C, Byun, G
J, Samsung Engineering & Construction; Lee, S I, Hanyang Univ, Korea

50. COASTAL V: Floating Breakwaters (V. 3)

Wednesday May 31 10:45 San Miguel

Chair: Ueda, S, Tottori Univ, Japan
Co-Chair: Angelides, DC, Aristotle Univ of Thessaloniki, Thessaloniki,
Greece

System Performance of the STEPFLOAT Floating Breakwater
Ismail, H, Lim, C H, Univ Teknologi Malaysia, Malaysia

**A Preliminary Experiment Study for Development of Floater of
Floating Breakwater**
Jung, D H, Kim, H J, Kim, J H, Maritime and Ocean Engineering Research
Inst, Korea

**Development of a Floating Body with High Performance in Wave
Reflection**
Kashiwagi, M, Yamada, H, Yasunaga, M, Kyushu Univ; Tsuji, T,
Sumitomo SRI Hybrid, Japan

**Performance of Floating Breakwater CUM Wave Energy Device in
Varying Tidal Conditions**
Neelamani, S, Kuwait Inst for Scientific Research, Kuwait; Natarajan, R,
Prasanna, D L, IIT Madras, India

Performance of Floating Breakwater Models under Regular Waves
Palli, M R, Madhav Babu, M G, Andhra Univ, India

**Numerical Analysis of the Motions of a Floating Bridge Composed of
Connecting Structures in Waves and Winds**
Nagata, S, Saga Univ, Japan

**A Study of Wave Behaviors in a Harbor due to the Porous Floating
Dock and Wall**
Hsiao, S S, Yueh, C Y, Fang, H M, Lin, C M, National Taiwan Ocean
Univ, Taiwan, China

51. PIPELINES, RISERS AND MOORING III: SCR (V. 2)

Wednesday May 31 10:45 Potrero

Chair: Fontaine, E, Institut Français du Pétrole, France
Co-Chair: Roveri, FE, Petrobras, Brazil

**Qualification of Enhanced SCR Design Solutions for Improved Fatigue
Life at Touch Down Zone**
Aggarwal, R, Bhat, S, Granherne Inc, USA; Meling, T, Statoil, Norway;
Mouelle, M, Petrobras, Brazil; van der Linden, C, TOTAL E&P, USA; Else,
M, Minerals Management Service, USA

Catenary Riser-soil Interaction
Oliphant, J, Maconochie, A, Technip; Bolton, M, White, D, Cambridge Univ,
UK

SCR Fatigue Damage Analysis due to VIM

Sagrilo, L V S, COPPE/UF RJ; Siqueira, E F N, Masetti, I Q, PETROBRAS;
Siqueira, M Q, COPPE/UF RJ, Brazil

Influence of Pipe-soil Interaction Models on SCR Fatigue Life

Fontaine, E, IFF, France

Experimental and Analytical Investigation of Soil/SCR Interaction under VIV

Kim, W J, Haws, J, Newlin, J, Shell International E&P, USA

Numerical Simulation of Unburied Pipeline Stability under Horizontal Cyclic Loading

Takatani, T, Maizuru National College of Technology, Japan

52. HPM X: Composites & Smart Structures 2 (V. 4)

Wednesday May 31 10:45 Butron

Chair: Dutta, PK, ERDC-CRREL, Hannover, NH, USA

Co-Chair: Mouring, S E, U.S. Naval Academy, USA

Impact Tests on VARTM Fabricated Woven Roving Vinyl Ester Laminates

Louca, L A, Imperial College London, UK; Mouring, S E, U.S. Naval Academy, USA

New Cost Effective and Environment-friendly Coating Technique

Onsoien, M I, Lou, D, Akselsen, O M, Berget, J, SINTEF, Norway

Electrochemical Characterization of Coatings for Smart Structures

Wheat, H G, Liu, G, Univ of Texas at Austin, USA

Numerical Modeling of Deterioration in Marine Concrete Structures

Han, S H, Chae, J W, KORDI, Korea

Effects of Moisture and Low Temperature Thermal Cycling on Damage Growth in Fiberglass/epoxy Laminates

Kellogg, K G, Oregon Inst of Technology; Okeson, M A, Minnesota Dept of Transportation; Kallmeyer, A R, North Dakota State Univ, USA

Buckling Optimization of Laminated Cylindrical Panels with Various Geometry and End Conditions

Hu, H T, Yang, J S, National Cheng Kung Univ, Taiwan, China

53. ARCTIC & ICE IV: Ice & Environment 2 (V. 1)

Wednesday May 31 10:45 San Francisco A

Chair: Saeki, H, Hokkaido Univ, Japan

Numerical Simulations of Iceberg Scour of Seabed

Sayed, M, Timco, G W, Canadian Hydraulics Centre, NRC, Canada

Distribution of Ice Cover in the Cook Inlet

Yakunin, L P, Shevelev, E, Far-Eastern State Technical Univ, Russia

Variation Characteristics of Sea Ice Area in the Chukchi Sea and Its Relation to Atmosphere Circulation

Su, J, Hu, X M, Zhao, J P, Ocean Univ of China, China

Experimental Study on Separating of Oil Trapped under Pack Ice by Air Bubbles

Otsuka, N, North Japan Port Consultants; Kondo, H, Hokkaido Railway Co; Ishikawa, R, Saeki, H, Hokkaido Univ, Japan

54. RENEWABLE ENERGY III: Offshore Wind 2 (V. 1)

Wednesday May 31 10:45 San Francisco B

Chair: Coiro, D, Univ of Naples, Italy

Co-Chair: Naoi, K, Nihon Univ, Japan

Experiences with Certification of Offshore Wind Farms

Faber, T, Klose, M, Germanischer Lloyd WindEnergie, Germany

Solutions of Fatigue Questions for Support Structures of Offshore Wind Energy Converters

Huhn, H, IMS Ingenieur GmbH; Herion, S, Univ of Karlsruhe, Germany

Simulation and Assessment of Navigation Close to Offshore Windmill Farms

Kjerstad, N, Aalesund University College, Norway

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

Wednesday May 31 10:45 San Francisco C

Chair: Langen, I, Univ of Stavanger, Norway

Co-Chair: Kanegaonkar, H B, Samsung Heavy Industries, Korea

Intellectual Methods for Inspection of System "Structure-soil"

Kim, L V, Bekker, A T, Lyubimov, V S, Far Eastern State Technical Univ, Russia

Uncertainty Analysis of Breakwater Wave Overtopping Volume, Wave Forces and Structure Stability

Liu, D F, Jiang, Y P, Liu, W W, Xie, B T, Ocean Univ of China, China

Review of Structural Reliability Methods with Applicability in Practice

Karadeniz, H, Delft Univ of Technology, The Netherlands

Performance Uncertainty

Stoelsnes, R, HolteProsjekt Consulting, Norway

Reliability of Explosion Resistant Design

Yasseri, S F, Kellogg Brown & Root, UK

WEDNESDAY 13:30

Plenary Presentation IV (V.2)

Wednesday May 31 13:30 Potrero

Materials and Welding Engineering for the Sakhalin Island Phase 1 Oil Export Pipeline

Hukle, M W, Trendsetter Engineering; Hoyt, D S, Lillig, D B, ExxonMobil Development; Dwyer, J P, Worrall Lees Associates, USA; Horn, A M, Det Norske Veritas, Norway
Introduction by Koo, J, ExxonMobil Research & Engineering Co., USA

Plenary Presentation V (V.3)

Wednesday May 31 13:30 Dolores

Wave Generation and Absorption, Theory and Application

Naito, S, Osaka Univ, Japan
Introduction by Ferrant, P, Ecole Centrale de Nantes, France

56. HYDRO XI: Wave Modeling & Experiment 1 (V. 3)

Wednesday May 31 14:30 Farallon

Chair: Naito, S, Osaka Univ, Japan

Co-Chair: Hong, K Y, Maritime and Ocean Engineering Research Inst, Korea

A TVD Method for Transport on Unstructured Grids with a Free Surface

Zhang, Z H, Fringer O B, Stanford Univ, USA

A Numerical Study on Progressive Waves over Impermeable Rippled Beds

Yang, W C, Hwang, R R, Academia Sinica; Hsieh, C M, Water Resources Agency, Taiwan, China

Numerical Analysis of Current Effect on Nonlinear Wave-body Interactions

Koo, W C, Art Anderson Associates; Kim, M H, Texas A&M Univ, USA

Prediction of Non-linear Free Surface Dynamics Using an Unsteady Navier-Stokes Solver

Kinnas, S A, Yu, Y H, Vinayan, V, Univ of Texas at Austin, USA

Viscous Flow Simulation of a TLP in Waves

Luquet, R, Gentaz, L, Ecole Centrale de Nantes; Jacquin, E, Bassin d'Essais des Carenes, Alessandrini, B, Ferrant, P, Ecole Centrale de Nantes, France

Numerical Modelling of Extreme Wave Slamming on Cylindrical Offshore Support Structures

Corte, C, TU-Braunschweig, Germany; Grilli, S T, Univ of Rhode Island, USA

A Backward Group Preserving Scheme for Inverse Subsidence Diffusion-convection Problem

Chang, C W, Chang, J R, Liu, C S, National Taiwan Ocean Univ, Taiwan, China

57. HYDRO VII: LNG Sloshing & Impact (V. 3)

Wednesday May 31 14:30 Dolores

Chair: Hong, S Y, Maritime and Ocean Engineering Research Inst, Korea

The Impact of Corrugations on LNG Tank Sloshing Pressures

Lokken, R T, Ding, J, Kuo, J F, Yung, T W, ExxonMobil Upstream Research, USA

An Experimental Study of Impulsive Sloshing Load Acting on LNGC Tank

Lee, Y B, Lee, J M, Kim, Y S, Daewoo Shipbuilding and Marine Engineering; Jung, J H, Jung, D W, Kwon, S H, Pusan National Univ, Korea

CIP-based Method for Simulation of Roof Impacts during Violent Sloshing

Kishev, Z R, BSHC, Bulgaria; Hu, C H, Kashiwagi, M, Kyushu Univ, Japan

Wet Drop Test for LNG Insulation System

Chung, J Y, Lee, J H, Kwon, S H, Pusan National Univ; Ha, M K, Lee, J N, Bang, C S, Samsung Heavy Industries; Kim, J J, Kum Sung Corp, Korea

Numerical Simulation of Three-dimensional Viscous Fluid Sloshing

Liu, D M, Lin, P Z, National Univ of Singapore, Singapore

The Effect of LNG-tank Sloshing Loads on the Motions of LNG Carriers

Lee, S J, Kim, M H, Lee, D H, Texas A&M Univ; Kim, J W, American Bureau of Shipping, USA; Kim, Y H, Seoul National Univ, Korea

Practical Application of Numerical Sloshing Analysis for Development of Large LNG Carriers

Park, J J, Kim, M S, Kim, Y B, Ha, M K, Samsung Heavy Industries, Korea

Study on Coupling Effects of Sloshing and Ship Motions

Kim, Y H, Nam, B W, Seoul National Univ; Kim, D W, Lee, Y B, Lee, J H, Daewoo Shipbuilding Marine Engineering, Korea

Heave Hydrodynamic Behavior of Twin Bodies

Yeung, R W, Seah, R K M, Univ of California-Berkeley, USA

An Analytical Solution to Sloshing Natural Periods for a Prismatic Liquid Cargo Tank with Baffles

Shin, J R, Daewoo Shipbuilding & Marine Engineering; Choi, K S, Kang, S Y, Korea Maritime Univ, Korea

58. GEOTECH VII: Pile (V. 2)

Wednesday May 31 14:30 Merced

Chair : Wong, P C, ExxonMobil Development Co., USA

Co-Chair: Luger, D J, GeoDelft, The Netherlands

Evaluation of Vibro-driveability of Large Diameter Pipe Piles – Results of Four Cases in Gulf of Mexico

Viking, K, Ramboll Sverige AB, Sweden; Stevens, R, Fugro-McClelland Marine Geosciences; LeJeune, M, Engineering Corp of Louisiana; Bruha, S, Stolt Offshore, USA

Reliability Performance of Laterally Loaded Long Piles in (*P-Y*) Soft Clay below Water Table

Lee, S H, Budkowska, B B, Balachandar, R, Univ of Windsor, Canada

Comparison of Different Methods for Simulating Laterally Loaded Pile Behaviour

Hübner, A, Saal, H, Univ of Karlsruhe, Germany; Tomboy, O, Holeyman, O, Univ Catholique de Louvain, Belgium; Schmitt, A, ProfilARBED-Research, Luxembourg

Creep-based Interpretation of the Pile Loading Test

Ku, C S, I-Shou Univ; Lee, D H, National Cheng Kung Univ, Taiwan, China

Pile Integrity Testing Signal Analyses with One Dimensional Continuous Wavelet Transform

Ni, S H, Lo, K F, National Cheng Kung Univ, Taiwan, China

Effect of Spudcan Penetration on Neighbouring Existing Pile

Tan, X M, Guo, J Y, Lu, C, Inst of High Performance Computing, Singapore

Lateral Bearing Behavior for Pile with Multiple Stepped Two Diameters Embedded in Silica Sand

Uchida, K, Kawabata, T, Shoda, D, Ohara, A, Kobe Univ, Japan

Centrifuge Study of End-bearing Resistance of Closed-ended Pile Jacked in Siliceous Sand

Xu, X T, Lehane, B, Univ of Western Australia, Australia

Centrifuge Model Study of Spudcan-pile Interaction

Leung, C F, Xie, Y, Chow, Y K, National Univ of Singapore, Singapore

Effect of Temperature on the Consolidation of Soft Bangkok Clay with PVD

Bergado, D T, Abuel-Naga, H M, Chaiprakaikeow, S, Asian Inst of Technology, Thailand

59. COASTAL VI: Port & Terminal Design (V. 3)

Wednesday May 31 14:30 San Miguel

Chair: Yalciner, A.C., Middle East Technical University, Turkey

A Feasibility Analysis of a Floating Pier

Hong, S Y, Kim, B W, Kyoung, J H, Maritime and Ocean Engineering Research Inst, Korea

Passing Ship Effects on Moored Ship at Nearby Waterfront

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

Design and Construction of the San Nicolas Island Surface Transportation Pier

Jones, J F, Lewis, C, Winzler & Kelly Consulting Engineers; Shaver, C B, USA

The Performance-based Seismic Design Method for Pile-supported Wharf Structures

Jang, J J, Shiu, W H, National Taiwan Ocean Univ, Taiwan, China

Study on Berth Allocation with Variable Service Priority in Multi-user Container Terminal

Wang, K, Zhou, P F, Kang, H G, Dalian Univ of Technology, China

Dynamic Water Pressure on Quay Wall during 2003 Tokachi-oki Earthquake in the Observation of Full-scale Gravity Type Quay Wall
Watanabe, J, Miura, K, Toyohashi Univ of Technology; Kubouchi, A, Hokkaido Development Civil Engineering Research Inst; Otsuka, N, North Japan Port Consultants; Sasajima, T, Hokkaido Regional Development Bureau, Japan

Berthing Energy Absorption for Large Container Vessel
Yamase, S, Bridgestone Corp; Ueda, S, Tottori Univ; Tokura, T, Yasui, M, Bridgestone Corp; Yamazaki, Y, Shimizu, G, Tottori Univ, Japan

Study on Improvement for Container Throughput by Database Analysis on Container Handling
Kim, H Y, Shinoda, T, Tanaka, T, Fukuchi, N, Kyushu Univ, Japan

60. PIPELINES, RISERS AND MOORING IV: Pipelines 1 (V. 2)
Wednesday May 31 14:30 Potrero

Chair: Newson, T A, Univ of Western Ontario, Canada;
Co-Chair: Hagen, Ø, Det Norske Veritas, Norway

Pipeline On-bottom Stability with Harsh Environmental
Kershenbaum, N, Balch, J D, Pope, J C, Fluor Enterprise, USA

Uplift Capacity of Buried Offshore Pipelines
El-Gharbawy, S, INTEC Engineering, USA

Numerical Prediction of the Upheaval Buckling of Buried Offshore Pipelines in Clay Backfill
Newson, T A, Dejoui, P, Univ of Western Ontario, Canada; Brunning, P, Stolt Offshore, UK

Axial Soil-pipe Interaction
Oliphant, J, Maconochie, A, Technip, UK

Physical Modelling of Current-induced Seabed Scour around a Vibrating Submarine Pipeline
Gao, F P, Yang, B, Wu, Y X, Inst of Mechanics, CAS, China

Evaluation of Hydrodynamic Forces on Bottom Pipelines Exposed to Regular and Irregular Waves
Aristodemo, F, Tomasicchio, G R, Veltri, P, Univ of Calabria, Italy

Diagnosis and Health Monitoring for Free Spanning Submarine Pipelines
Feng, X, Zhou, J, Yuang Y B, Zhang, J, Dalian Univ of Technology, China

61. HPM V: Advance in Welding Technology (V. 4)
Wednesday May 31 14:30 Butron

Chair: Fairchild, D, ExxonMobil Upstream Research Co., USA
Co-Chair: Murakawa, H, Osaka Univ, Japan

Mechanical Properties in Hyperbaric GTA Welding of X70 Pipeline
Akselsen, O M, Fostervoll, H, Harsvar, A S, Aune, R, SINTEF, Norway

Root Bead Penetration Profiles in Hyperbaric GTA Welding of X70 Pipeline
Akselsen, O M, Aune, R, Harsvar, A S, Fostervoll, H, SINTEF, Norway

A Subpixel Accuracy for Extracting Groove Center Based on Corner Detection

Liu, S Y, Wang, G R, Shi, Y H, South China Univ of Technology, China

Evaluation of Tensile Strength of Friction-welded Joints of Copper to Various Metals

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

Effect of Grooving Corrosion on Static Strength of Fillet Welded Joints for Hull Structures under Compression Induced by Patch Loading

Matsushita, H, Nakai, T, Yamamoto, N, Nippon Kaiji Kyokai, Japan

Controlled Short-circuiting MIG/MAG Welding Process (CCC) Applied to the Root Pass in the Construction of Offshore Oil Pipelines – Process Analysis Tools

Goncalves e Silva, R H, Dutra, J C, Gohr Jr, R, de Oliveira, M A, Federal Univ of Santa Catarina, Brazil

Determination of Optimal Heating Conditions in Line Heating Process with Weaving Motions

Jang, C D, Ha, Y S, Seoul National Univ, Korea

62. PROPULSION & POSITIONING CONTROL (V. 4)

Wednesday May 31 14 :30 San Francisco A

Chair: Chen, H C, Texas A&M Univ; USA

Co-Chair: Choi, J-S, Maritime and Ocean Engineering Research Inst, Korea

A Basic Study on Numerical Estimation of Ship Positioning for Weather Routing in Coastal Sea Area

Shiotani, S, Xia, H, Kobe Univ, Japan

Robust Tracking Control for Ship-to-ship Operation

Shimizu, E, Tokyo Univ of Marine Science & Technology, Japan; Pedersen, E, NTNU, Norway

Numerical Study of Confined Water Effects on a Self-propelled Submarine in Steady Maneuvers

Brogli, R, Di Mascio, A, Muscari, R, INSEAN, Italy

An Investigation of the Velocity Distributions within a Ship's Propeller Wash

Kee, C, Hamill, G A, Wilson, P, Lam, W H, Queen's Univ of Belfast, UK

Simulation of a Ship's Propeller Wash Using Computational Fluid Dynamics

Lam, W, Robinson, D J, Hamill, G A, Raghunathan, S R, Kee, C, Queen's Univ of Belfast, UK

Influence of a Horizontal Boundary on a Marine Propeller Wash

Wilson, P R, Hamill, G A, Johnston, H T, Kee, C, Queen's Univ of Belfast, UK

Chimera RANS Simulation of Coupled Ship and Propeller Flows

Pontaza, J P, Chen, H C, Texas A&M Univ; Lee, S K, American Bureau of Shipping, USA

63. RENEWABLE ENERGY IV: Wave Energy 1 (V. 1)

Wednesday May 31 14:30 San Francisco B

Chair: Hong, S W, Maritime and Ocean Engineering Research Inst, Korea
Co-Chair: Cermelli, C, Marine Innovation & Technology, USA

Results of the Real Sea Testing Program of the OWC Wave Energy Plant at Pico, Azores

Brito-Melo, A, Neumann, F, Wave Energy Centre; Sarmiento, A, Instituto Superior Tecnico, Portugal

Numerical Modelling of an Offshore Wave Powered Desalination Device

Cruz, J, Salter, S, Univ of Edinburgh, UK

Numerical Modelling of the Sloped IPS Buoy Wave Energy Converter

Payne, G S, Taylor, J R M, Parkin, P, Salter, S H, Univ of Edinburgh, UK

Design of the SEADOG™ Offshore Wave Energy Generator Support Structure

Serrahn, C S, McHaney, S, Winzler & Kelly Consulting Engineers; Thomas, M A, Independent Natural Resources, USA

Development and Testing of a Submerged Buoy Wave Power System

Zambrano, T, MacCready, T, Letourneau, D, AeroVironment Inc; Cermelli, C, Roddier, D, Marine Innovation & Technology, USA

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

Wednesday May 31 14:30 San Francisco C

Chair: Manuel, L, Univ of Texas at Austin, USA

Co-Chair: Karadeniz, H, Delft Univ of Technology, The Netherlands

Assessment of the Risk of Offshore Marine Hydraulic Structures

Bellendir, E N, Glagovsky, V B, Finagenov, O M, The B.E. VEDENEV VNIIG, Russia

Natural Catastrophe Risk management for Industrial Facility Networks

Gupta, A, Exponent Failure Analysis Associates; Bazzurro, P, AIR Worldwide Corp, USA

Fuzzy Rule Based Framework for Explosion Risk Assessment

Kanegaonkar, H B, Samsung Heavy Industries, Korea

Risk Assessments for Offshore Jacket Platforms Based on Fuzzy Probabilistic Influence Diagram

Kang, H G, Zhou, P F, Dalian Univ of Technology, China

Risk Limits of Oil Transport in the Aegean Sea

Lyridis, D V, Ventikos, N, Zacharioudakis, P, Psaraftis, H N, National Technical Univ of Athens; Volakis, S, Environmental Protection, Greece

A Safety Assessment Using Psychological Intelligence Model for Establishing Navigation Support System

Fukuchi, N, Tamura, Y, Koyma, K, Kyushu Univ, Japan

Safety Evaluation of Fenders by Reliability Analysis Considering Temperature Factors and Velocity Factors

Yoneyama, H, Shiraishi, S, Port and Airport Research Inst, Japan

WEDNESDAY 19:00

Conference Annual Banquet

19:00

Plaza Ballroom

THURSDAY 08:00

65. HYDRO XII: CFD & Modeling (V. 3)

Thursday June 1 08:00 Bayview, 36F

Chair: Grilli, S T, Univ of Rhode Island, USA

Co-Chair: Tanizawa, K, National Maritime Research Inst, Japan

Application of the Complementary Volume Method for Simulation of Viscous Flow on Unstructured Grid

Zhao, G, Kitanidis, P K, Street, R L, Stanford Univ, USA

CFD Application on the Development of Circulating Water Channel

Chen, Z G, Kurokawa, Y, Nishimoto, H, West Japan Fluid Engineering Laboratory, Japan

Efficient Computation of the Nonhydrostatic Pressure

Kang, D J, Fringer, O B, Stanford Univ, USA

A Numerical Simulation of Water Impact Phenomena by the CIP-based CFD Combined with the Multigrid Method

Nishi, Y, Hu, C H, Kashiwagi, M, Kyushu Univ, Japan

The Numerical Modelling of the Bosphorus

Yuksel, Y, Ozturk, M N, Aydogan, B, Yildiz Technical Univ, Turkey

66. HYDRO VIII: Nonlinear Wave-Body I (V. 3)

Thursday June 1 08:00 Union Square, 36F

Chair: Yang, C, George Mason University, USA

Co-Chair: Mathai, T, The Glostest Associates, USA

An Overlapping Grids Approach for Moving Bodies Problems

Di Mascio, A, Muscari, R, INSEAN, Italy

CFD Simulation of a Drifting Ship in Shallow Water

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

Numerical Solutions of Forward-speed Ship Motion in the Frequency Domain with a Panel-free Method

Qiu, W, Memorial Univ of Newfoundland; Peng, H, Oceanic Consulting, Canada

On the Modeling of Highly Nonlinear Wave-body Interactions

Yang, C, Löhner, R, George Mason Univ, USA

The Response Characteristics of Small Vessel to Actuator and Environmental Forces

VanZwieten, J H, Driscoll, F R, Florida Atlantic Univ, USA

Study of Ship Responses and Wave Loads in the Freak Wave
Minami, M, Sawada, H, Tanizawa, K, National Maritime Research Inst,
Japan

67. GEOTECH VIII: Environment (V. 2)

Thursday June 1 08:00 Conference Theater

Chair : Fakharian, K, Amirkabir Univ of Technology, Iran
Co-Chair: Chung, H I, Korea Inst of Construction Technology, Korea

Improvement of Marine Clay by the Leaching Effect of Electrolyte Reaction in Electrode

Kim, J Y, Kim, S S, Hanyang Univ; Jeong, S Y, Expert Group for Earth & Environment; Koh, K H, Samsung Engineering & Construction, Korea

Evaluation of the Environmentally Friendly Drains for Soft Ground Improvements

Kim, J H, Cho, S D, Korea Inst of Construction Technology; Jung, S Y, Expert Group for Earth & Environment, Korea

Comprehensive Evaluation with Variable Fuzzy Sets for Global Stability of High-steep Rock Slope of the Three Gorges Project Permanent Shiplock

Guo, Y, Chen, S, Dalian Univ of Technology, China

Engineering and Environmental Characteristics of Contaminated River Sediment Treated by Micro Air Bobble Injection System

Chung, H I, Yu, J, Lee, Y S, Korea Inst of Construction Technology, Korea

Remedial Measures by Atomizing Slag PRB System to Control Pollutant Migration Problems in Contaminated Site

Chung, H I, Kim, S K, Korea Inst of Construction Technology; Chang, W S, Ecomaister, Korea

Environmental Monitoring of Non-point Source Pollution in Urban Area and Roadway Corridors

Chung, H I, Lee, M H, Yu, J, Korea Inst of Construction Technology, Korea

Field Scale Investigations for In Situ Electrokinetic Remediation with Permeable Reactive Barrier

Chung, H I, Lee, M H, Lee, Y S, Korea Inst of Construction Technology, Korea

68. COASTAL VII: Seabed Responses (V. 3)

Thursday June 1 08:00 San Miguel

Chair: Deguchi, I, Osaka Univ, Japan
Co-Chair: Kuroiwa, M, Tottori Univ; Kuchiishi, Tottori Univ, Japan

Mechanics of Water Waves over a Viscoelastic Mud Layer

Ng, C O, Zhang, X Y, Univ of Hong Kong, Hong Kong, China

Scour Protection Using Geotextile Sandcontainers for Offshore Monopile Structures

Grüne, J, Sparboom, U, Schmidt-Koppenhagen, R, Wang, z, Oumeraci, H, Coastal Research Centre (FZK), Germany

Experimental Study of Wave-induced Sediment Transport Rate

Liao, Y C, Lee, C P, Wang, C C, National Sun Yat-sen Univ, Taiwan, China

Estimating the Speed of Nearshore Sand Waves

Lin, M, Yuan, Z, Inst of Mechanics, CAS, China

Collapse of Beach Slope due to Cross-shore Sediment Transport during Severe Storm

Cho, W C, Han, J G, Chung-Ang Univ, Korea

Inverse Estimation of Depth Distribution of D50 of Seabed Materials from Stable Local Slope

Kobayashi, A, Noshi, Y, Nihon Univ; Uda, T, Public Works Research Center; Kumada, T, Laboratory of Aquatic Science Consultant Co; Serizawa, M, Coastal Engineering Laboratory, Japan

69. PIPELINES, RISERS AND MOORING V: Pipelines 2 (V. 2)

Thursday June 1 08:00 Potrero

Chair: Gresnigt, A M, Delft Univ. of Technology, The Netherlands

Co-Chair: Focke, E S, Heerema Marine Contractors and Delft Univ. of Technology, The Netherlands

Effects of Stress State on the Tensile Strain Capacity of Pipelines

Wang, Y Y, Liu, M, Engineering Mechanics Corp of Columbus, USA

Interface Shear Stress of Thermally Insulated Ocean Pipelines

Yan, S W, Li, B Q, Tian, Y H, Tianjin Univ, China

Small Scale Reeling Tests

Focke, E S, Heerema Marine Contractors/TU-Delft; Gresnigt, A M, Meek, J, TU-Delft, The Netherlands

Statistical Analysis of Continuous Current Measurements for Pipeline Design

Hagen, Ø, Det Norske Veritas; Kleiven, G, Eide, L I, Norsk Hydro, Norway

A New Method in Seismic Design of Subsea Pipelines

Sun, Z C, Lin, Z M, Chen, R F, China Classification Society, China

70. HPM VI: Linepipe Steels & Tubular 1 (V. 4)

Thursday June 1 08:00 Butron

Chair: Liu, M, Engineering Mechanics Corp of Columbus, USA

Co-Chair: Jin, H W, ExxonMobil Research & Engineering, USA

Improved Collapse Resistance of UOE Line Pipe with Thermal Aging for Deep Water Service

Tsuru, E, Asahi, H, Nippon Steel, Japan

The Impact of Higher Frequency Wind Induced Vibration on Arctic Pipeline Systems

Collins, M G, ConocoPhillips Alaska; Hart, J D, SSD Inc, USA

Special Steels for Tubular Offshore Structures

Krampen, J, V&M Deutschland, Germany

Static Strength of Sleeve Reinforced X-joints Loaded by In-plane Bending

Feng, Q, Tan, H J, Shanghai Jiaotong Univ, China

71. UNDERWATER VEHICLES II: Deep Ocean (V. 2)

Thursday June 1 08:00 San Francisco A

Chair : Koterayama, W, Kyushu Univ, Japan

Co-Chair: Spiewak, J-M, Lirmm, France

The Two-stage ROV to the Oceans' Deepest Depth

Yoshida, H, Aoki, T, Osawa, H, Miyazaki, T, Tahara, J, Shibata, K, JAMSTEC, Japan

Sea Trial for Underwater Vehicle "URASHIMA" Powered by Fuel Cell

Hyakudome, T, Aoki, T, Yamamoto, I, Tsukioka, S, Yoshida, H, Tahara, J, Sawa, T, Ishibashi, S, Mizuno, M, JAMSTEC; Ishikawa, A, Nippon Marine Enterprises, Japan

A Study on the Design and Manufacturing of a Deep-sea Unmanned Underwater Vehicle Based on Structural Reliability Analysis

Joung, T H, Flinders Univ, Australia; Nho, I S, Lee, J H, Chungnam National Univ; Park, S H, KIMM; Lee, C M, Lee, P M, Maritime and Ocean Engineering Research Inst, Korea; Sammut, K, Flinders Univ, Australia

System Design and Laboratory Test of a Deep-sea Unmanned Underwater Vehicle HEMIRE

Lee, P M, Jun, B H, Choi, H T, Lee, C M, Li, J H, Kim, S M, Lim, Y K, Yang, S I, Hong, S W, Maritime and Ocean Engineering Research Inst, Korea; Han, S C, Seo, Y W, Daeyang Electric, Korea; Bowen, A, Yoerger, D, Woods Hole Oceanographic Institution, USA; Aoki, T, JAMSTEC, Japan

Control of Heading Angle of Launcher of Deep Sea Exploration Unmanned Underwater Vehicle "KAIKO"

Nakamura, M, Koterayama, W, Kyushu Univ; Yamamoto, I, Hyakudome, T, Aoki, T, JAMSTEC, Japan

72. RENEWABLE ENERGY V: Wave Energy 2 (V. 1)

Thursday June 1 08:00 San Francisco B

Chair: Nagata, S, Saga University, Japan

Co-Chair: Kofoed, J P, Aalborg Univ, Denmark

Comparison of Results from Time-domain Simulations and Model Tests of a Water-pumping Wave-power Unit

Bjarte-Larsson, T, Falnes, J, Moan, T, NTNU, Norway

Simulation of a Bio-mimetic Wave Energy Device Using Blade-element Theory

Finnigan, T D, Univ of Sydney, Australia

Influence of Spectrum Spreading on the SEAREV Wave Energy Converter

Gilloteaux, J-C, Babarit, A, Clément, A H, Ecole Centrale de Nantes, France

Mechanics of the Float Type Wave Energy Conversion

Hadano, K, Taneura, K, Watanabe, M, Nakano, K, Saito, T, Yamaguchi Univ; Matsuura, M, Mitsubishi Heavy Industries, Japan

Absorption of Energy from Irregular Waves by a Buoyant, Surging Body

Meadowcroft, J A C, Stallard, T J, Lancaster Univ, UK

73. FATIGUE (V. 4)

Thursday June 1 08:00 San Francisco C

Chair: Moncarz, P D, Exponent, USA

Fatigue Damage Assessment Techniques in SPM Anchorages
Caligiuri, R D, Gupta, A, Moncarz, P D, Sire, R, Exponent, USA

Interval Analysis Method of Fatigue and Fracture Reliability for Offshore Structures Based on Probabilistic and Non-probabilistic Hybrid Model

Tang, W Y, Xue, H X, Zhang, S K, Yuan, M, Shanghai Jiao Tong Univ, China

Fatigue Life Prediction for a Vessel Sailing the North Atlantic Route
Baxevari, A, Chalmers Inst of Technology; Rychlik, I, Lund Univ, Sweden

Numerical Evaluation of Welded Toe Cracks for the Ship Structures
Sawamura, J, Osawa, N, Hashimoto, K, Chousokabe, H, Osaka Univ, Japan

Combination of Extreme Loads for Fatigue Assessment
Kim, B K, Shin, Y S, American Bureau of Shipping, USA

THURSDAY 10:45

74. HYDRO XIII: Wave Modeling & Experiment 2 (V. 3)

Thursday June 1 10:45 Bayview, 36F

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

Co-Chair: Kinnas, S A, Univ of Texas at Austin, USA

The Effect of Grid Resolution on the Numerical Simulation of Internal Tides

Jachec, S M, Fringer, O B, Street, R L, Gerritsen, M, Stanford Univ, USA

Modelling the Velocity Field of Regular Waves

De Serio, F, Mossa, M, Technical Univ of Bari, Italy

Mass Transports in 2D and 3D Wavemaker Problems

Lee, J F, Chen, C W, National Cheng Kung Univ, Taiwan, China

Numerical and Experimental Study of Wave Propagation in a Wave Basin

Shin, Y S, Halla Univ; Jo, C H, Inha Univ, Korea

Second-order Approximation to Interfacial Waves on a Rigid Seabed

Jeng, D S, Williams, S, Univ of Sydney, Australia

The Induced Flow Field by the Fifth-order Stokes Internal Wave and Its Action on Cylindrical Piles in the Stratified Ocean

Cheng, Y L, North China Electric Power Univ; Li, J C, Inst of Mechanics, CAS; An, L S, North China Electric Power Univ, China

75. HYDRO IX: Nonlinear Wave-Body II (V. 3)

Thursday June 1 10:45 Union Square, 36F

Chair: Chwang, A T, Univ of Hong Kong, HONG KONG, China

Co-Chair: Noblesse, F, NSWCCD, USA

Identification of Quadratic Responses of Floating Structures in Waves

Huijsmans, R H M, Voogt, A, Bunnik, T, MARIN, The Netherlands; Namba, S, National Maritime Research Inst, Japan

Motions and Cross Structure Loads for a Simple Swath Vessel

Mathai, T, The Glosten Associates, USA

Numerical Simulation and Field Study of Single-point-mooring Marine Cage

Huang, C C, Tang, H J, Liu, J Y, National Sun Yat-sen Univ, Taiwan, China

Performance Evaluation of Loading/offloading Operability from Floating Quay to Super Container Ship

Kim, M H, Kumar, B, Texas A&M Univ; Chae, J W, KORDI, Korea

Wave Load Analysis for Damaged Ships with Flooded Compartments

Kim, B W, Maritime and Ocean Engineering Research Inst; Hong, D C, Chungnam National Univ; Hong, S Y, Maritime and Ocean Engineering Research Inst, Korea

Cruising Performance of a Large Passenger Ship in Heavy Sea

Fujiwara, T, Ueno, M, National Maritime Research Inst; Ikeda, Y, Osaka Prefecture Univ, Japan

76. GEOTECH IX: Foundation & Stability (V. 2)

Thursday June 1 10:45 Conference Theater

Chair : Audibert, J M E, Fugro-McClelland Marine Geosciences, USA

Co-Chair: El-Sherbiny, R M, Univ of Texas at Austin, USA

Optimal Inclined Bearing Capacity of Shallow Foundations

Hesar, M, Halliburton KBR, UK

Characterization of Marine Clay for Road Embankment Design in Coastal Area

Oh, E Y N, Chai, G W K, Griffith Univ, Australia

Prediction of Shear Bands in Clay Specimens under Undrained Compression Loadings Using Finite Element Method and Its Comparison with Bifurcation Analytical Result

Shibi, T, Kamei, T, Shimane Univ, Japan

Interpretation of Sensitivity and Remolded Undrained Shear Strength with Full Flow Penetrometers

Yafate, N J, DeJong, J T, Univ of California, Davis, USA

An Investigation of Defected Kao-Ping Bridge Piers Image Segmentations by Using 2D Wavelet Transforms

Shao, K Y, I-Shou Univ; Tsai, C L, Ministry of Transportation and Communications, Taiwan, China

Verification of Earth-retaining Wall Deformation in Shallow Braced-cut Works at Soft Ground Sites Using Simple Prediction Method

Shimizu, M, Aoi Engineering Consulting; Hayakawa, K, Ritsumeikan Univ;
Nabeshima, Y, Osaka Univ; Kani, Y, Nippon Concrete Industries, Japan

**Evaluation of the Lateral Soil Movement Induced by Embankments
on Soft Grounds**

Lee, K W, Korea Inst of Construction Technology; Hong, W P, Lee, J H,
Chung-Ang Univ; Cho, S D, Korea Inst of Construction Technology,
Korea

**Experimental Study on Bearing Capacity Behavior of Foundation
Subgrade in Port and Harbor Engineering**

Yuan, F F, Inst of Rock and Soil Mechanics, CAS; Luan, M, Dalian Univ
of Technology; Yan, S W, Tianjin Univ, China

77. COASTAL VIII: Waves & Submerged Breakwaters (V. 3)

Thursday June 1 10:45 San Miguel

Chair Li, Y C, Dalian Univ of Technology, China

Co-Chair: Araki, S, Osaka Univ, Japan

**Numerical Simulation of Water Waves Overturning on a Submerged
Breakwater**

Lin, C Y, Huang, C J, National Cheng Kung Univ, Taiwan, China

Random Waves Propagating over a Submerged Breakwater

Shen, M L, Huang, C J, National Cheng Kung Univ, Taiwan, China

Propagation of Water Waves over a 3D Submerged Breakwater

Wang, H W, Huang, C J, National Cheng Kung Univ, Taiwan, China

**Spectral Analysis of Wave Transmission behind Submerged
Breakwaters**

Ferrante, V, Vicinanza, D, Second Univ of Naples, Italy

Wave Transformations over Porous Beds by Boussinesq Equations

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

**Theoretical and Experimental Research on the Breaking-wave
Impulse upon Gentle Sloping Seabed**

Tseng, W J, Chen, Y Y, Chen, G Y, National Sun Yat-sen Univ, Taiwan,
China

78. Pipelines, Risers and MooringVI: : Cable/Mooring (V. 2)

Thursday June 1 10:45 Potrero

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

Co-Chair: Gao, F P, Inst of Mechanics, CAS, China

**Development of a Fibre Rope Based Deployment System for Deep
Water Application**

Ingeberg, P, Torben, S, ODIM Alitec, Norway; Bull, S, The Cortland Co,
USA; Bunes, Ø, ODIM, Norway

**Probabilistic Fatigue Curve Estimation for Reinforcement Wires of
Flexible Risers**

Hougaz, A G, Petrobras; Goncalves, E, Univ of Sao Paulo, Brazil

Parametric Modeling of Cables with Double and Triple Helical Strands

Huang, C, Knapp, R H, Univ of Hawaii, USA

Trelline, a New Flexible Deepwater Offloading Line (OLL)

Rampi, L, Single Buoy Mooring, Monaco; Mayau, D, Trelleborg Industries, France

Fault Detection and Fault Location on Direct Electrical Heating Piggyback Cables

Bruaset, A, SINTEF Energy Research; Bremnes, J, Nexans Norway; Børnes, A, STATOIL, Norway

79. HPM VII: Linepipe Steels & Tubular 2 (V. 4)

Thursday June 1 10:45 Butron

Chair: Kang, K B, POSCO, Korea

TAP Project: High Performance Steel for High Performance Pipeline

Spinelli, C M, ENI Gas & Power; Demofonti, G, Mannucci, G, CSM; Marchesani, F, Snamprogetti, Italy

Development of Thick Steel Plate Having the Superior Mechanical Properties and Weldability

Kim, S H, Suh, I S, Kang, K B, POSCO, Korea

Collapse Testing Short Linepipe for Deepwater Applications

DeGeer, D, Piers, K, Timms, C, Xie, J, C-FER Technologies, Canada; Tsuru, E, Nippon Steel, Japan

Analysis and Evaluation on Heat Treatment of Fine Grain Rolling Steel

Huang, Z J, Gotoh, M, Kanazawa Univ; Shozu, M, Maizuru National College of Tech; Hirose, Y, Kanazawa Univ, Japan

Buckling Resistance of High Deformable X80 Linepipe

Cho, W Y, RIST; Ahn, S S, POSCO; Yoon, T Y, RIST, Korea

Study on Mechanical Property of Corroded Pipeline

Fan, Y F, Hu, Z Q, Zhou, J, Dalian Univ of Technology, China

80. UNDERWATER VEHICLES III: Control (V. 2)

Thursday June 1 10:45 San Francisco A

Chair : Chien, L K, National Taiwan Ocean Univ, TAIWAN, China

Co-Chair: Nakamura, M, Kyushu Univ, Japan

Development of Agent Based Docking System for Autonomous Underwater Vehicles

Yu, S C, Kim, T W, Biron, K M T, Univ of Hawaii; Yuh, J K, NSF, USA

A Modified Feed-forward Feed-back Control System for a Small Under-actuated Vessel

Driscoll, F R, Morriseau, P F, Florida Atlantic Univ, USA

The Method to Improve the Performance of an Inertial Navigation System Using a Turntable

Ishibashi, S, Aoki, T, Yamamoto, I, Tsukioka, S, Yoshida, H, Hyakudome, T, JAMSTEC, Japan

Thrust Optimization for Compact Pulsatile Jets for Low Speed Maneuvering of Unmanned Underwater Vehicles

Mohseni, K, Univ of Colorado, USA

Numerical Simulation of Flow around the Colorado Underwater Vehicle

Mohseni, K, Univ of Colorado, USA

81. RENEWABLE ENERGY VI: Wave Energy 3 (V. 1)

Thursday June 1 10:45 San Francisco B

Chair: Sarmiento, A, Institute Superior Tecnico, Portugal

Co-Chair: Finnigan, T D, Univ of Sydney, Australia

Fourier Approach to Short Term Deterministic Wave Prediction

Halliday, J R, Dorrell, D, Univ of Glasgow, UK; Wood, A, Univ of Canterbury, New Zealand

Estimation of Design Wave Loads on the SSG WEC Pilot Plant Based on 3-D Model Tests

Kofoed, J P, Aalborg Univ, Denmark; Osaland, E, WAVEnergy AS, Norway; Larsen, B J, Aalborg Univ, Denmark

A Generic Method for Determining WEC Power Conversion from a Random Sea

Smith, G H, Venugopal, V, Heriot-Watt Univ, UK

Numerical Analysis on Optimal Profile of Floating Device with OWC Type Wave Energy Converter

Suzuki, M, Univ of Tokyo; Kuboki, T, The Pacific Society; Arakawa, C, Univ of Tokyo; Nagata, S, Saga Univ, Japan

Small-scale Modelling of Hydraulic Power Take-off in Reflector Joint of the Offshore Wave Energy Converter, Wave Dragon

Tedd, J W, Kofoed, J P, Aalborg Univ, Denmark

82. OCEAN MINING I (V. 1)

Thursday June 1 10:45 San Francisco C

Chair: Yamazaki, T, Natl. Inst. of AIST, Japan

Co-Chair: Hong, S, Maritime and Ocean Engineering Research Inst, Korea

Placer Dome and Nautilus Minerals go to the Source on the Seafloor to Explore for the New Generation of Gold Rich VMS Ore Bodies

Heydon, D, Nautilus Minerals, Australia

Multifractal Analysis of Mineral Surface Together with Hydrophobicity and Electrophysical Properties of Sulphides

Bunin, I J, Chanturiya, V A, Nedosekina, T V, IPKON RAS, Russia

A Resolution for In Situ pH Sensing on Seafloor: Ir/IrO₂ Electrode with Nafion Shielding Membrane

Ye, Y, Huang, X, Yang, C J, Chen, Y, Zhao, W, Wu, D D, Zhejiang Univ, China

Flow Analysis of Lifting Pump and Flexible Hose for Sea-test

Yoon, C H, Park, Y C, Lee, D K, Kwon, S K, Korea Inst of Geoscience & Mineral Resources, Korea

THURSDAY 14:30

83. HYDRO XIV: Wave Modeling & Experiment 3 (V. 3)

Thursday June 1 14:30 Bayview, 36F

Chair: Jo, C H, Inha Univ, Korea
Co-Chair: Sphaier, S H, COPPE/UF RJ, Brazil

Numerical Simulation of Strongly Nonlinear Wave-body Interactions with Experimental Validation

Hu, C H, Kashiwagi, M, Kitadai, A, Kyushu Univ, Japan

Internal Wave Energetics on a Shelf Break

Venayagamoorthy, S K, Fringer, O B, Stanford Univ, USA

A Tsunami Warning System for the Use of Emergency Management Officials

Lee, J L, Sungkyunkwan Univ; Kim, I H, Samcheok National Univ, Korea

A Combined Utilization of Lagrangian and Eulerian or Pseudo-Lagrangian Description of Free Surface Waves around an Advancing Body

Sung, H G, Korea Ocean R&D Inst, Korea; Grilli, S T, Univ of Rhode Island, USA

Numerical Simulation of Transmission Study for Nonlinear Waves Going through Single and Multiple Floating Structures

Li, L, American Bureau of Shipping, USA; Watanabe, R, Martec Limited, Canada

On the Estimation of Wave Period in SWAN Wave Model

Lee, B C, Hua fan Univ; Cheng, H Y, Kao, C C, Fun, Y M, National Cheng Kung Univ, Taiwan, China

84. HYDRO X: NWT (V. 3)

Thursday June 1 14:30 Union Square, 36F

Chair: Teng, B, Dalian Univ of Technology, China
Co-Chair: Kim, Y H, Seoul National Univ, Korea

A Fast Multiple Expansion Method and Its Application in BEM for Wave Diffraction and Radiation

Teng, B, Guo, Y, Dalian Univ of Technology, China

Cavitating Hydrofoils inside a Numerical Wave Tank

Bal, S, Istanbul Technical Univ, Turkey

Implementation and Validation of Nonlinear Wave Maker Models in a HOS Numerical Wave Tank

Ducrozet, G, Bonnefoy, F, Le Touze, D, Ferrant, P, Ecole Centrale de Nantes, France

Numerical Simulation of violent Sloshing Flows

Nam, B W, Kim, Y H, Seoul National Univ, Korea

Numerical Simulation of Wave-body Interactions Using a Modified SPH Solver

Guilcher, P-M, Ducrozet, G, Doring, M, Alessandrini, B, Ferrant, P, Ecole Centrale de Nantes, France

On the Study of Wave-current-structure Interactions in a Numerical Wave Tank

Li, T Q, Troch, P, De Rouck, J, Ghent Univ, Belgium

Diffraction of a Horizontal Cylinder by Regular and Irregular Waves in Fully Nonlinear Numerical Wave Tank Using Desingularized BEM

Zhang, X T, Khoo, B C, National Univ of Singapore; Lou, J, Inst of High Performance Computing, Singapore

85. GEOTECH X: Modeling & Simulation (V. 2)

Thursday June 1 14:30 Conference Theater

Chair : Bang, S C, South Dakota School of Mines, USA

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

Simulation of Stress-strain Behavior of Fine Sand Using Artificial Neural Network

Hsieh, S C, Chen, Y R, Shih, P Y, Chang Jung Christian Univ, Taiwan, China

Numerical Simulation of Caisson Installation in Clay by Suction and by Jacking

Zhou, H J, Randolph, M, Univ of Western Australia, Australia

Numerical Modeling of Cyclic Axially Loaded Piles in Sand

Fakharian, K, Farshad, K, Amirkabir Univ of Technology, Iran

Numerical Analyses of Bearing Capacity of Large-diameter Cylindrical Structure on Soft Ground against Lateral Loads

Fan, Q L, Luan, M, Yang, Q, Dalian Univ of Technology, China; Hu, Y, Curtin Univ of Technology, Australia

Estimation of Stress Concentration Characteristics in the Composite Ground Reinforced by Sand Compaction Pile with Low Replacement Ratio

Shin, H Y, Expert Group for Earth & Environment; Kim, S S, Han, S J, Hanyang Univ; Kim, J K, Samsung Engineering & Construction; Lee, M H, Korea Inst of Construction Technology, Korea

Upper-bound Limit Analysis of Bearing Capacity Behavior of Shallow Foundations under Combined Loading

Luan, M, Zhao, S F, Dalian Univ of Technology, China, Hu, Y, Curtin Univ of Technology, Australia; Yuan, F, Inst of Rock and Soil Mechanics, CAS; Lv, A, Shandong Univ of Science & Technology, China

Analysis on the Ultimate Depth-diameter Ratio of Suction Caisson in Seabed

Wu, M X, Inst of Mechanics, CAS, China

An Analysis on the Relationship between the Ground Water Level and Rainfall at Ta-Lun Mountain

Lee, B C, Xu, H L, Tsao, S P, Huafan Univ, TAIWAN, China

Availability of Neural Network System to Handling of Geotechnical Information Database of Osaka Bay

Oda, K, Tokida, K, Okada, M, Osaka Univ, Japan

Numerical Analysis of Piled-raft Foundation Considering Sand Cushion Effects

Seo, Y K, Korea Maritime Univ, Korea

86. COASTAL IX: Coastal Erosion (V.3)

Thursday June 1 14:30 San Miguel

Chair: Cho, W C, Chung-Ang Univ, Korea

Co-Chair Yauchi, E, Chiba Inst of Technology, Japan

Dynamics of the Nutrient in a Tidal Flat Covered with *Ulva sp.*
Yauchi, E, Imoto, T, Hayami, T, Gomyo, M, Chiba Inst of Technology, Japan

Mathematical Model of Spit Growth in Serayu Estuary, Central Java, Indonesia
Salim, H T, Kusuma, S B, Nazili, N, Inst Technology of Bandung, Indonesia

Prediction System of 3D Beach Evolution with 2DH and Q-3D Hydrodynamic Modes
Kuroiwa, M, Tottori Univ; Kuchiishi, T, NIKKEN Consultants; Matsubara, Y, Tottori Univ, Japan

A Long-term Stability of Narugashima Beach against High Wave Caused by Typhoon
Arimitsu, T, Kansai Electric Power; Deguchi, I, Araki, S, Osaka Univ, Japan

Coastal Erosion Processes Modelling at Maronti Bay (Ischia Island, Southern Italy)
Giordano, L, Marsella, E, IAMC-CNR; Ferrante, V, Vicinanza, D, Second Univ of Naples, Italy

Shore Protection and Recreation Planning at An-Ping Port in Taiwan Ying-Feng
Chung, Y F, Kaohsiung Harbor Bureau; Lin, C K, China Engineering Consultants; Chiu, Y F, Inst of Harbor and Marine Technology, Taiwan, China

Beach Nourishment Design: An Integrated Approach
Giordano, L, Marsella, E, IAMC-CNR; Vicinanza, D, Second Univ of Naples, Italy

Topography Change in the Vicinity of Submerged Breakwater
Araki, S, Osaka Univ; Fumoto, H, Ministry of Land Infrastructure & Transport; Miyoshi, H, Deguchi, I, Osaka Univ, Japan

Shallow Water Flow: Numerical Simulations vs. Experiments
Lalli, F, Corsini, S, APAT; Romano, G P, Univ. degli Studi di Roma "La Sapienza;" Verzicco, R, Politecnico di Bari, Italy

87. Pipelines, Risers and Mooring VII: (V. 2)

Thursday June 1 14:30 Potrero

Chair: Huang, T, Univ. of Texas at Arlington, USA

Analytical Methods of the Ultimate Pull-out Capacity for the Vertically Loaded Anchor
Liu, H X, Tianjin Univ, China

Centrifuge and 1-g Model Tests on Rockfill – Anchor Chain Interaction
Luger, D J, GeoDelft; Stam, C-J M, van Oord nv; Veenstra, E G, Delft Univ of Technology; van Lottum, H, GeoDelft, The Netherlands

Rockfill Protection Berms: A Geotechnical Basis for Geometrical Design and Material Selection
Luger, D J, GeoDelft; van Kesteren, W, Delft Hydraulics, The Netherlands

Experimental Study on Behavior of Ship Moored by Anchor
Shoji, K, Minami, K, Kimura, A, Mita, S, Inoue, M, Tokyo Univ of Marine Science and Technology, Japan

88. HPM VIII: Linepipe Steels & Tubular 3 (V. 4)

Thursday June 1 14:30 Butron

Chair: Pontremoli, M, CSM, Italy
Co-Chair: Jun, H J, ExxonMobil Research & Engineering Co., USA

A Computational Approach Incorporating Local Criteria to Predict Burst Pressure of High Pressure Pipelines with Axial Flaws
Ruggieri, C, Dotta, F, Univ of Sao Paulo, Brazil

Modeling of Anisotropy of TMCP Linepipe Steels
Liu, M, Wang, Y Y, Engineering Mechanics Corp of Columbus, USA

Nonlinear Analysis for Ultimate Loading Capacity of Cast Tubular T-joints
Sun, P, Wang, Y Q, Shi, Y J, Tsinghua Univ, China

The Influence of Heating of the Liner Pipe during the Manufacturing Process of Tight Fit Pipe
Focke, E S, Heerema Marine Contractors/TU-Delft; Gresnigt, A M, Meek, J, TU-Delft, The Netherlands

A Study on the Control of Buckling Distortion of the Thin Panel Welded Structure
Shin, S B, Yoon, J G, Kim, K K, Hyundai Heavy Industries, Korea

89. UNDERWATER VEHICLES IV: (V. 2)

Thursday June 1 14:30 San Francisco A

Chair : Hyakudome, T, JAMSTEC, Japan
Co-Chair: Yamaguchi, S, Kyushu University, Japan

A New Design of AUV for Shallow Water Applications: H160
Spiewak, J-M, Fraisse, P, Lapierre, L, Jouvencel, B, Lirmm, France

Experimental Study of a Design Suggestion for a Towed Underwater Vehicle
Fuglestad, A-L, Grahl-Madsen, M, Bergen University College, Norway

Comparison between Numerical and Field Test Results for Towed Long Marine Cable with Heavy Weight
Park, H I, Kwon, D Y, Korea Maritime Univ; Lee, P M, Maritime and Ocean Engineering Research Inst, Korea

Motion Simulation of Trawl Net System
Nakamura, M, Koterayama, W, Kyushu Univ, Japan

90. RENEWABLE ENERGY VII: Wave Energy 4 (V. 1)

Thursday June 1 14:30 San Francisco B

Chair: Chair: Smith, G H, Venugopal, V, Heriot-Watt Univ, UK
Co-Chair: Brito-Melo, A, Wave Energy Centre, Portugal

Numerical Simulation of All Airflow Passages Including Impulse Turbine, OWC Chamber and Duct for Wave Energy Conversion

Hyun, B S, Moon, J S, Korea Maritime Univ; Hong, K Y, Hong, S W, Maritime and Ocean Engineering Research Inst, Korea

Improvement of Wells Turbine Performance by Means of End Plate

Takao, M, Matsue National College of Technology; Setoguchi, T, Kinoue, Y, Kaneko, K, Nagata, S, Saga Univ, Japan

SEADOG™: Pump Technology Wave Energy Converter

Thomas, M A, Independent Natural Resources; Welch, K W, USA

An Assessment of Multidirectional Wave Spectra Estimation Techniques in the Edinburgh Curved Tank

Cruz, J, Pascal, R, Taylor, J, Univ of Edinburgh, UK

91. OCEAN MINING II (V. 1)

Thursday June 1 14:30 San Francisco C

Chair: Chung, J S, ISOPE, Cupertino, CA, USA

Co-Chair: Yoon, C H, Korea Inst of Geoscience & Mineral Resources, Korea

A Path Tracking Control Algorithm for an Underwater Mining Vehicle

Won, M C, Chin, S C, Lee, J S, Chungnam National Univ; Hong, S, Choi, J S, Kim, H W, Maritime and Ocean Engineering Research Inst, Korea

Dynamic Analysis of Self-propelled Miner Coupled with Lifting Pipe System

Kim, H W, Hong, S, Choi, J S, Yeu, T K, Maritime and Ocean Engineering Research Inst, Korea

Launching Simulation of Deep-seabed Mining System

Hong, S, Kim, H W, Choi, J S, Yeu, T K, Maritime and Ocean Engineering Research Inst, Korea

Slippage Control of Tracked Vehicle in Turning on a Specified Path

Yeu, T K, Park, S J, Hong, S, Kim, H W, Choi, J S, Maritime and Ocean Engineering Research Inst, Korea

Design Procedure of Deep-seabed Miner Based on Design for Six Sigma

Choi, J S, Hong, S, Kim, H W, Yeu, T K, Maritime and Ocean Engineering Research Inst; Lee, T H, Hanyang Univ, Korea

FRIDAY June 2

Conference Tour: Buy tickets at Tour Desk, Monday, May 29.

- **Wine country tour**
- **Monterey/Carmel**
- **Others**

Find further details inside the program and www.isoqe.org .