

TECHNICAL PROGRAM

The Fourteenth (2004) International Offshore and Polar Engineering Conference Toulon, France, May 23–28, 2004

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-2004 Technical Program Committee (TPC) received in writing before December 24, 2003 are reflected in this program. Final corrections will be updated in the Conference Proceedings and the Final Program. Proceedings CD-ROM will be available as a set of 4 volumes (2,800 pp. est.) from ISOPE during and after the Conference.

SUNDAY

Conference Reception

18:00 Sunday, May 23

Hotel Mercure

MONDAY 08:30

Conference Opening Addresses

by
National and Regional Authorities, France

1. OCEAN TECHNOLOGY REVIEW (V. 1)

Monday

May 24

08:30

Vauban

Chair: Herrouin, G, Ifremer, France

Co-Chair: Ueda, Y, Osaka University, Japan

Perspectives in Operational Oceanography

Jean-Francois Minster, President, Ifremer, France

Challenges Encountered While Constructing the World's Largest Spar

Stephen R. Perryman, Holstein Spar Manager, BP, Houston, USA

The World's First Dual FSO for LNG/Condensate

Han, Sung Yong, SamSung Heavy Industries, Korea

Deep-sea Neutrino Telescope ANTARES

John Carr, Centre de Physique des Particules de Marseille, France

MONDAY 13:20

Monday	May 24	13:20	Vauban
Numerical Modeling of Environmental Impact Assessment of Ocean Structures			
Kyoizuka, Y, Kyushu Univ, Japan			
Introduction by Choi, Hang S, Seoul National Univ, Korea			

2. OFFSHORE I: Subsea Installation & Operations (V. 1)

Monday May 24 14:00 Vauban

Chair: Teigen, P, Statoil, Norway
Co-Chair: Duggal, A, FMC-SOFEC, TX, USA

Template Installation Offshore – Wave Diffraction Effects on Splash Zone Forces
Reinholdtsen, S-A, Braaten, H, Sandvik, P, MARINTEK, Norway

Vertical, Resonant Response of Suspended Objects during Subsea Installation Operations
Teigen, P, Statoil, Norway

Numerical Prediction of Wave Loads on Subsea Structures in the Splash Zone
Buchner, B, Bunnik, T, Loots, E, MARIN, The Netherlands

Experimental Investigation of Subsea Structures during Installation and the Related Wave Loads, Added Mass and Damping
Bunnik, T, van der Wal, R, MARIN, The Netherlands

The Interaction Effects of Mooring in Close Proximity of Other Structures
De Wilde, J, Buchner, B, de Boer, G, MARIN, The Netherlands

FPSO Roll Response
Waals, O J, MARIN; van der Cammen, J J, Bluewater Energy Services, The Netherlands

Experiences with Designing and Testing ABB's Subsea Heatbank
Friedmann, J D, Lussier, C, Damsleth, P, Scigliano, M, ABB Offshore System, Norway

Torsional Capacity of Subsea Foundations
Finnie, I M S, Morgan, N, Lloyds Register, UK

3. METOCEAN I: Waves (V. 3)

Monday May 24 14:00 Colbert

Chair: Prevosto, M, Ifremer, France
Co-Chair: Athanassoulis, G A, National Technical Univ of Athens, Greece

Freak Waves and Their Conditional Probability Problem
Haver, S K, Vestbustad, T M, Andersen, O J, Statoil; Jakobsen, J B, Stavanger University College, Norway

Sensitivity Study of Sea State Parameters in Correlation to Extreme Wave Occurrences
Olagnon, M, IFREMER, France; Magnusson, A K, Norwegian Meteorological Inst, Norway

Wavelet Transform Technique for Analysis of Freak Waves and Its Impact

Kwon, S H, Lee, H S, Kim, C H, Texas A&M Univ, USA

Joint Time-frequency Properties of Freak Waves

Shin, Y J, Kim, T H, Powers, E J, Univ of Texas at Austin; Kim, N S, Kim, C H, Texas A&M Univ, USA

Successive Wave Crests in Gaussian Seas

Fedele, F, Univ of Vermont, USA; Arena, F, Univ “Mediterranea” of Reggio Calabria, Italy

Velocities for Non-Gaussian Seas

Baxevani, A, Rychlik, I, Lund Univ, Sweden

The Occurrence of Extreme Crests and the Nonlinear Wave-wave Interaction in Deep-water Random Seas

Fedele, F, Univ of Vermont, USA

4. HYDRO Dynamics and Forces I (V. 3)

Monday

May 24

14:00

Bonaparte

Chair: Choi, H S, Seoul National University, Korea

Co-Chair: Noblesse, F, David Taylor Model Basin; USA

Directional Metocean Criteria for Mooring and Structural Design of Floating Offshore Structures

Francois, M, Bureau Veritas; Quiniou-Ramus, V, TOTAL; Legerstee, F, Vazeille, A, Bureau Veritas, France

On the Development and Validation of the Fluid-structures-interaction Model for a Numerical Wave-maker

Derradji-Aouat, A, Inst for Marine Dynamics, NRC, Canada

Fully Nonlinear Wave Interactions with Floating Bodies Undergoing Large Motions

Koo, W C, Kim, M H, Texas A&M Univ, USA

Radiation and Diffraction Problems of a Floating Body in a Two-layer Fluid of Finite Depth

Kashiwagi, M, Ten, I, Kyushu Univ, Japan

Investigations on Hydrodynamic and Mechanical Coupling Effects for Deepwater Offloading Calm Buoy

Berhault, C, Gerin, P, Ricbourg, C, Heurtier, J M, Principia RD, France

Experimental Study of the Non-linear Wave Interaction with a Vertical Plate

Molin, B, Remy, F, Kimmoun, O, Ecole Superieure d’Ingenieurs de Marseille, France

Forces on a Vertical Cylinder Given by Random High Wave Groups Interacting with a Current

Arena, F, Romolo, A, Univ “Mediterranea” di Reggio Calabria, Italy

Visualization of Floating Body Responses Using Java 3D™

Mathai, T, The Glosten Associates, USA

Application of Direct Boundary Element Method to Three Dimensional Hydrodynamic Analysis of Interaction between Sea Waves and Floating Offshore Structures

Kazemi, S, Incecik, A, Univ of Newcastle upon Tyne, UK

Free Vibrations of Elastically Supported, Semi-submerged Horizontal Rectangular Cylinder

Sulisz, W, Wilde, P, Wisniewski, M, Polish Academy of Sciences, Poland

5. GEOTECH I: Centrifuge Modeling & Piles (V. 2)

Monday May 24 14:00 Port cros, Hotel

Chair: Allersma, H, Delft Univ of Technology, The Netherlands
Co-Chair: Garnier, J, Laboratoire Central des Ponts et Chausses, France

Centrifuge Research on Methods Improving Capacity Offshore Foundation Systems

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

Centrifuge Investigation of the Installation and Lateral Response of Pile Groups in Sand

Ghosh Roy, D, Bransby, M F, Univ of Dundee, UK

Centrifuge Modeling of Laterally Loaded Pile in Cemented Calcareous Soils

Ismail, M, Stewart, D, Univ of Western Australia, Australia

Centrifuge Tests on Some Soil-structure Interaction Problems

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

Centrifuge Modeling of LANPL Transportation in Sand Deposits by Ground Water Flow

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

Offshore Pile Design and Monitoring at the Ieodo Ocean Research Station

Yoon, G I, Shim, J S, Korea Ocean R&D Inst, Korea

Experimental Study on the Circular Rock-Filled Cages Skirted Group Piles Capacity in Kao-Ping River

Shao, K Y, I-Shou Univ; Chen, S C, Tsai, C L, Ministry of Transportation & Communication, Taiwan, China

The Capacity of Circular and Square Sheet Pile Foundation on Sand under Combined Loading

Punrattanasin, P, Khon Kaen Univ, Thailand; Izawa, J, Kusakabe, O, Tokyo Inst of Technology, Japan

6. DECOMMISSIONING I: (V. 1)

Monday May 24 14:00 Porquerolles, Hotel

Chair: Capanoglu, C, IDEAS, USA

Comparative Assessment of Decommissioning Application of Typical North Sea and the Gulf of Mexico Approaches to Several Categories of Offshore Platforms in the Middle East

O'Connor, P E, BP Amoco Corp, USA

Decommissioning of Offshore Platforms: Overview of Recent Platform Removals and Contracting Strategies

Van Voorst, O, Platform Brokers, The Netherlands

Decommissioning of Platforms Hope, Heidi, Hazel and Hilda

Basavalingandoddi, C, California State Lands Commission, USA

Removal and Deconstruction of Maureen Alpha Platform – The World's Largest Gravity Based Steel Structure

Kristing, K, Aker Kvaerner Offshore Partners, Norway

The Sub Bottom Cutter (SBC)Project: New, Safe and Environment-friendly Technology for Decommissioning Offshore Structures
Grant, E, Cutting Underwater Technologies Ltd (CUTUK), UK; de Martino, L, TS Tecnospamec, Italy

Decommissioning of Offshore Platforms Utilizing Cost Effective Single Lift Technology
Andresen, J F, SeaMetric International, Norway

Simulation of Navigational Aids during Offshore Field Cessation
Kjerstad, N, Bjoerneseth, O, Aalesund University College, Norway

The Decommissioning of Submerged Structures: Prototype Equipment Design and Assessment
Cavallo, E, Michelini, R C, Molfino, R M, Univ of Genova, Italy

7. HYDRATES AND MINING I (V. 1)

Monday May 24 14:00 Raimu 1

Chair: Komai, T, AIST, Japan

Engineering Significance and Consequences of Gas Hydrate in Deep and Ultra Deep Water Development
Kumar, P, Sonawane, A K, Oil and Natural Gas Corp, India

Analytical Estimation of Seabed Deformation in Methane Hydrate Production
Ogisako, E, Nishio, H, Okuno, T, Shimizu Corp, Japan

The Impact of the Porous Microstructure of Gas Hydrates on Their Macroscopic Properties
Kuhs, W F, Genov, G, Goreschnik, E, Klapp, S, Staykova, D K, Univ of Goettingen, Germany

Measurement of Thermal Conductivity of Artificial Hydrate Sediment Sample
Yamamoto, Y, Kawamura, T, Ohtake, M, Komai, T, National Inst of AIST ; Nakagawa, F, Tsuji, T, Nihon Univ ; Tsukada, Y, National Inst of AIST, Japan

Laboratory Evidence of Microbial-Sediment-Gas Hydrate Synergistic Interactions in Ocean Sediments
Rogers, R E, Zhang, G, Woods, C E, Dearman, J L, Mississippi State Univ, USA

Effect of Methane Hydrate in Pore Space on Mechanical Properties of Sand
Nishio, S, Ogisako, E, Abe, T, Shimizu Corp ; Akagawa, S, Hokkaido Univ, Japan

Dissociation Behavior of Methane Gas Hydrate in Silicone Oil at the Temperature Condition of Under 0
Kawamura, T, Yamamoto, Y, Yoon, J H, Sakamoto, Y, Komai, T, Haneda, H, Ohtake, M, National Inst of AIST ; Ohga, K, Hokkaido Univ, Japan

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

Monday May 24 14:00 Raimu 2

Chair: Fontaine, E, Institut Français du Pétrole, France
Co-Chair: Otsuka, K, Osaka Prefecture Univ, Japan

Coupled RANS Methods to Study Full-scale SPAR Vortex Induced Motion
Woodburn, P, Gallagher, P, Atkins Process, UK

Multi-modal Response of Long Marine Risers in Severe Sheared Flows
Lucor, D, Brown Univ; Triantafyllou, M S, MIT; Karniadakis, G E, Brown Univ, USA

Experimental and Numerical Study on Vortex Induced Vibration of Long Risers
Senga, H, Hong, Y P, Koterayama, W, Kyushu Univ, Japan

Laboratory Investigation of Long Riser VIV Response
De Wilde, J, Huijsmans, R, MARIN, The Netherlands

Motion Trajectory of Bare and Suppressed Tubulars Subjected to Vortex Shedding at Subcritical and Critical Reynolds Numbers
Lee, L, Allen, D W, Henning, D L, Shell Global Solutions (US), USA

Wind-induced Vibrations Assessed with CFD and Fluid-structure Interaction Coupling
Herfjord, K, Selstad, H, Norsk Hydro, Norway

Flow-induced Vibrations of a High Mass Ratio Filament
Schouveiler, L, Eloy, C, Le gal, P, IRPHE, France

SCR Fatigue Life Associated to VIV and Soil Interaction
Fontaine, E, Institut Français du Pétrole, France

9. POLAR & ICE I: Polar Research (V. 1)

Monday May 24 14:00 Dumont

Chair: Chung, J, ISOPE, Cupertino, CA, USA
Co-Chair: Voelker, R P, US Maritime Administration, USA

New Generation Polar Research Vessel Design Initiated
Voelker, R P, US Maritime Administration; Sutherland, A, National Science Foundation; Owen, H, Olsgaard, P, Holik, J, Raytheon Polar Services; St. John, J, Iyerusalimiskiy, A, Karnes, D, Science & Technology Corp, USA

MABEL — The First Seafloor Observatory for Multidisciplinary Long-term Monitoring in Polar Environment
Cenedese, S, Tecnomare SpA; Calcara, M, INGV, Italy; Evers, K-U, HSWA, Germany; Favali, P, INGV; Gasparoni, F, Tecnomare SpA, Italy

RV “MARIA S. MERIAN”: A Medium-sized Ice-margin Research Vessel for Polar Research
Von Broeckel, K, Univ of Kiel, Germany

Sea Ice Variations in Lutzow-Holmbukta, Antarctica, Derived from Ice Navigation Log during the Period of 1980-2003
Ushio, S, National Inst of Polar Research, Japan

The CCGS *Amundsen*: a Canadian research icebreaker for international collaboration in the study of the changing Arctic [Oral Presentation Only]
Louis Fortier, Martin Fortier, Université Laval, Canada

Calibrations of the Electromagnetic-inductive (EMI) Measurements for the Winter Antarctic Sea-ice and Snow in the 110-120°E Sector
Tateyama, K, Shirasawa, K, Hokkaido Univ; Uto, S, National Maritime Research Inst; Enomoto, H, Kitami Inst of Tech; Tamura, T, Hokkaido Univ; Muto, Chiba Univ; Ushio, S, NIPR, Japan; Lytle, V, Worby, T, Massom, R, Univ of Tasmania, Australia

Internet-based Teleoperation of the Romeo ROV in Polar Environments
Caccia, M, Bono, R, Bruzzone, G, Spirandelli, E, Veruggio, G, CNR – ISSIA Sez. Di Genova, Italy

10. MECHANICS & STRUCTURES I (V. 4)

Monday May 24 14:00 Puget

Chair: Karadeniz, H, Delft Univ of Technology, The Netherlands
Co-Chair: Kawano, K, Kagoshima Univ, Kagoshima, Japan

Inelastic Large Deflection Analysis of Plates and Stiffened Panels due to Global Buckling
Chen, Y, Technip Offshore, USA

Performance of a Novel Self Installing Platform Concept
Pinna, R, Cole, G K, Murphy, D, Univ of Western Australia, Australia

Development of Towing Support Tool Named Optimum Towing Support System (OTSS)
Hara, S, Yamakawa, K, Hoshino, K, Yukawa, K, Hasegawa, J, Tanizawa, K, Ueno, M, National Maritime Research Inst, Japan

Shapes of Submerged Funicular Arches
Chai, Y H, Univ of California Davis, USA; Wang, C M, National Univ of Singapore, Singapore

Strength Assessment of Hatch Covers for Existing Cape Size Bulk Carriers
Ergas, I, Zheng, Y L, Dracos, V, Univ of Glasgow and Strathclyde, UK

Optimum Temperature of Brine Heating System for Above-ground LNG Storage Tank
Oh, B T, Hong, S H, Yang, Y M, Kim, Y K, Korea Gas Corp, Korea

Cost-effective Rehabilitation of Kao-Ping Bridge across the Kao-Ping River
Shao, K Y, I-Shou Univ; Chen, S C, Tsai, C L, Ministry of Transportation & Communications, Taiwan, China

Experimental and Numerical Examination on Accuracy of Caustics Method
Mori, T, Kanawa Univ; Shozu, M, Maizuru Nat'l College of Tech; Hirose, H, Kinjo Univ, Japan

TUESDAY 08:00

11. OFFSHORE II: Nonlinear Wave Loads (V. 1)

Tuesday May 25 08:00 Vauban

Chair: Duggal, A, FMC-SOFEC, USA
Co-Chair: Teigen, P, Statoil, Norway

An Improved Volume of Fluid Method for Wave Impact Type Problems
Kleefsman, K M T, Veldman, A E P, Univ of Groningen, The Netherlands

Validation of Second-order Analysis in Predicting Diffracted Wave Elevation around Vertical Cylinders
Kristiansen, T, Baarholm, R, Stansberg, C T, MARINTEK, Norway

Wave Impacts on Ship-type Offshore Structures in Steep Fronted Waves
Voogt, A, Buchner, B, MARIN, The Netherlands

Prediction of Green Sea Loads on FPSO in Random Seas
Stansberg, C T, Berget, K, Hellan, O, Hermundstad, O A, Kristiansen, T, MARINTEK ; Hansen, E, Complex Flow Design, Norway

Coupling Freak Wave Events with Green Water Simulations

Huijsmans, R H M, MARIN, van Groesen, E, Univ of Twente, The Netherlands

Influence of Breakwaters in Reducing the Effects of Green Water Loading Onboard High Speed Container Vessels Using CFD

Varyani, K S, Pham, X P, Univ of Glasgow and Strathclyde, UK

Scale Experiments for the Measurement of Motions and Wave Run-up on a TLP Model Subjected to Monochromatic Waves

Chatjigeorgiou, I K, Mavrakos, S A, Grigoropoulos, G, National Technical Univ of Athens, Greece; Maron, A, Canal de Experiencias Hidrodinamicas de El Pardo, Spain

12. METOCEAN II: Waves & Sea State I (V. 3)

Tuesday May 25 08:00 Colbert

Chair: Jenkins, A D, University of Bergen, Norway

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

Experimental Study on Arrayed Buoy GPS Wave Information System – Results of Comparison between GPS Buoy System and Acoustic Wave Height Meter

Hou, S, Kouguchi, N, Kobe Univ; Fujii, H, Oshima National College of Maritime Tech; Ishida, H, Kobe Univ; Deguchi, I, Osaka Univ, Japan

Wave Measurements by X-band Radar: From Spectral to Single Wave Detection

Hessner, K, Reichert, K, Dittmer, J, OceanWaveS GmbH, Germany

On the Return Period of Non-linear High Wave Crests during Storms

Arena, F, Univ “Mediterranea” of Reggio Calabria, Italy

Verification of a Simplified Double Peak Spectral Model for Ocean Waves

Torsethaugen, K, SINTEF; Haver, S, Statoil, Norway

Dangerous Sea-state for Marine Operations

Toffoli, A, Katholieke Univ Leuven, Belgium; Lefevre, J-M, Meteo-France, France; Monbaliu, J, Katholieke Univ Leuven, Belgium; Bitner-Gregersen, E, Det Norske Veritas, Norway

Comparative Analysis of Wave Regimes Obtained with TRANSFER and MAR3G Methodologies

Capitao, R, Fortes, C J, LNEC; Carvalho, F, Inst de Meteorologia, Portugal

13. HYDRO Dynamics and Forces II (V. 3)

Tuesday May 25 08:00 Bonaparte

Chair: Chaplin, J R, Southampton Univ, UK

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

Wave Forces on an Array of Vertical Circular Cylinders: Experimental Study on the Second Order near Trapping

Contento, G, D’Este, F, Sicchiero, M, Codiglia, R, Calza, M, Univ of Trieste, Italy

An Experimental Study of Wave Drifting Force Free Model

Terao, Y, Ishida, K, Yamada, Y, Senou, T, Tokai Univ, Japan

Numerical and Experimental Study of Flow Characteristics around Two Vertical Cylinders

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

Viscous Flow across a Translating Circular Cylinder

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

Gaussian- and Non-Gaussian-input Method for Extraction of QTFs from Test Data of Offshore Structures

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

14. GEOTECH II : Piles & Caissons (V. 2)

Tuesday May 25 08:00 Port cros, Hotel

Chair: Bransby, M F, Univ of Dundee, UK

A Case Study on the Sand Compaction Pile (SCP) at Busan Newport Project in Korea

Kim, S S, Hanyang Univ; Kim, J K, Byun, K J, Samsung Corp, Korea

Assessment of the Effects of Faults Intersecting TLP Pile Foundation: A Case History Review

Audibert, J M E, Al-Khafaji, Z, Fugro-McClelland Marine Geosciences; Campbell, K, Fugro Geoservices; Guion, J, El Paso, USA

Axial Capacity of Caissons in Clay Installed by Jacking and by Suction

Chen, W, Randolph, M, Univ of Western Australia, Australia

Inclined Pull-out of Suction Caissons

Supacharawote, C, Gourvenec, S, Univ of Western Australia, Australia

Uplift Capacity of Buried Offshore Pipelines

El-Gharbawy, S L, Morgan, V, C-CORE, Canada; Olipant, J, Fisher, R, Technip Offshore (UK), UK

Engineering Properties and Pile Shaft Resistance for Clayey Ground in Sunan Area of China

Shi, M L, Southeast Univ; Xia, Z X, Transportation Bureau of Wuxi City, China

Characteristics of Hardened Cement Slurry in Bored Precast Pile

Suzuki, N, Chuken Consultant; Nguyen, Q H, Tamano, T, Kanaoka, M, Osaka Sangyo Univ, Japan

15. DECOMMISSIONING II: Panel (V. 1)

Tuesday May 25 08:00 Porquerolles, Hotel

Chair: O'Connor, P E, BP Amoco Corp, USA

The New DnV Recommended Practice (DnVRP) for Marine Operations During the Removal of Decommissioned Offshore Platforms

Alvaer, P O, Det Norske Veritas, Norway

Safety Considerations in Offshore Decommissioning

Billington, C J, Bolt, H M, Williams, J R, BOMEL Limited, UK

20 Years of Decommissioning Experience in the Gulf of Mexico, How Does It Translate to the Rest of the World?

Thornton, W, WINMAR Consulting Services, Inc, USA

Followed by Panel Discussions.

16. HYDRATES AND MINING II (V. 1)

Tuesday May 25 08:00 Raimu 1

Chair: Yamazaki, T, AIST, Japan

Co-Chair: Rogers, R E, Mississippi State Univ, USA

Gas Hydrate Extraction from Marine Sediments by Heat Stimulation Method

Komai, T, Sakamoto, Y, Kawabe, Y, Kawamura, T, Yamamoto, Y, AIST, Japan

Numerical Simulation of a Droplet Behavior Using Unstructured Mesh

Rho, T J, Hong, G S, KRISO/KORDI, Korea; Sato, T, Univ of Tokyo, Japan

Experimental and Numerical Analysis of Flow Characteristics for Two-phase Mixture through Lifting Pipe of On-land Hydraulic Lifting System

Yoon, C H, Lee, D K, Park, Y C, Kwon, K S, Kwon, S K, Korea Inst of Geoscience & Mineral Resources, Korea

Development of Solid-liquid-gas Three-fluid Transient Model for Air-lift System

Yoon, C H, Park, Y C, Lee, D K, Kwon K S, Kwon, S K, Korea Inst of Geoscience & Mineral Resources ; Kwon, O K, Korea National Oil Corp, Korea

Model Tests of Ocean Nutrient Enhancer « TAKUMI » in Deep-sea Basin

Maeda, K, Tamura, K, Kokubun, K, Ohkawa, Y, Yago, K, Takai, R, Shintomi, K, National Maritime Research Inst, Japan

Concept for a Wave Driven Mechanical Artificial Downwelling System (Meadows-1)

Handschuh, R, Schulte, E S, Germany

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

Tuesday May 25 08:00 Raimu 2

Chair: Koterayama, W, RIAM, Kyushu Univ, Japan

Co-Chair: Huang, S, Univ of Glasgow and Strathclyde, UK

Mean Wake Flow and Drag on Downstream Cylinder

Huang, S, Bai, W, Univ of Glasgow and Strathclyde, UK

Analytical Methods for Calculation of In-plane and Out-of plane Eigenmodes and Eigenfrequencies of SCRs

Averbuch, D, Le Cunff, C, Martins, A, Biolley, F, Institut Francais du Petrole, France

Control of Vortex Shedding Passed Cylinders

Bruneau, C H, Mortazavi, I, Univ Bordeaux 1, France

Vortex Shedding Reduction in 3D Wakes Using Belt Actuators and Genetic Algorithms

Poncet, P, INSA Toulouse, France; Koumoutsakos, P, Swiss Federal Inst of Technology, Switzerland

Effect of Helical Strakes on Hydrodynamic Forces on an 8-shaped Oscillating Cylinder

Mikata, N, Otsuka, K, Osaka Prefecture Univ, Japan

Control of Wind-induced Nonlinear Oscillations in Suspended Cables

Abdel-Rohman, M, Kuwait Univ, Kuwait

18. POLAR & ICE II: Ice Engineering 1 (V. 1)

Tuesday May 25 08:00 Dumont

Chair: Izumiya, K, National Maritime Research Institute, Japan

A Simple Stefan Approach to Freezing of Salt Water at a Cold Plane Surface

Weber, J E, Univ of Oslo, Norway

The Mechanical Properties of Refrozen Cracks

Langhorne, P J, Univ of Otago; Haskell, T G, Industrial Research, New Zealand

An Energy Conserving Oceanographic Profiler for Use under Mobile Ice Cover: ICYCLER

Fowler, G A, Siddall, G R, Prinsenber, S J, Bedford Inst of Oceanography, Canada

Peculiarity of Heat and Water Vapor Exchange at the Ocean Surface in the Presence of Ice Floes

Yegorov, K L, Russian State Hydrometeorological Univ, Russia

Long-range Forecasting of the Iceberg Population on the Grand Banks

Peterson, I K, Bedford Inst of Oceanography, Canada

Synergy of Active and Passive Satellite Microwave Data: Application for Studies of Ice Conditions and Navigation in the Seasonally Ice-covered Seas

Kouraev, A V, CESBIO; Papa, F, LEGOS; Mognard, N M, CESBIO, France; Buhariain, P I, Water Problems Inst of RAS, Russia

19. MECHANICS & STRUCTURES II (V. 4)

Tuesday

May 25

08:00

Puget

Chair: Ellinas, C P, Mott McDonald Ltd, UK

Co-Chair: Kajaste-Rudnitski, J, Helsinki Univ of Technology, Finland

A Study on the Control and Analysis of Buckling Distortion in Welded Structure with Thin Steel Plates

Jang, K B, Cho, S H, Jang, T W, Samsung Heavy Industries, Korea

Fluid Compressibility Effects on the Stochastic Dynamic Response of Fluid-structure Systems

Bayraktar, A, Hancer, E, Karadeniz Technical Univ, Turkey

An Axi-symmetric Finite Element for Analyses of Soil-structure and Fluid-structure Interactions

Karadeniz, H, Delft Univ of Technology, The Netherlands

Non-linear Dynamic Analysis of Offshore Platform Structures Using Exact Pipe Element

Horr, A M, Gifford and Partners Consulting Engineers, UK; Safi, M, Univ of Waterloo, Canada

Study on Non-destructive Detection System by Magnetic Characteristics

Hashimoto, K, Tomita, Y, Osawa, N, Miyashita, T, Osaka Univ, Japan

Effects of Fatigue and Aging on the Dynamic Behavior of Elastomeric Bearings

Chou, H W, Huang, J S, National Cheng Kung Univ, Taiwan, China

TUESDAY 10:40

Tuesday **20. OFFSHORE III: FPSO/TLP/VLFS 1 (V. 1)** May 25 10:40 Vauban

Chair: Natvig, B J, Marine Technology Consulting AS, Norway
Co-Chair: Takagi, K, Osaka Univ, Japan

Shallow Water to Deepwater Development Challenges and Opportunities in Offshore Newfoundland Environment
Ewida, A, Hurley, S, Edison, S, Teh, C, Petro-Canada, Canada

A New Multi-cylinder Column Design Enhances Both Structural Integrity and Cost Efficiency
Capanoglu, C C, International Design, Engineering and Analysis Services, USA

Motion Analysis of a New Type of Minimal Floating Platform
Cermelli, C, Busso, C, Roddier, D, Marine Innovation & Technology, USA

Development of the Hexagonal Floating Structure
Izumikawa, T, Okinawa Industrial Tech Center; Nagai, M, Ameku, K, Nagai, Y, Univ of the Ryukyus; Kugai, K, Okinawa Kensetsu Kougyou; Sumida, K, Shinohara, J, Daioh Construction, Japan

An Introduction to Extendable Draft Platform (EDP)
Xu, Q, Xu, L X, Technip Offshore, USA

Experimental Study on a Dolphin-fender Moored Pontoon-type Structures
Kim, J H, Hong, S Y, Cho, S K, Park, S H, KRISO/KORDI, Korea

ASOP, a New Generation of Offshore Platforms
Grinius, V G, Elgamiel, H A, Offshore Model Basin, USA

Tuesday **21. METOCEAN III: Waves & Sea State 2 (V. 3)** May 25 10:40 Colbert

Chair: Stansberg, C T, MARINTEK, Norway
Co-Chair: Rychlik, I, Lund Univ, Sweden

A Novel Bi-variable Distribution of Long-term Wind Speed and Wave Height
Dong, S, Wang, T, Ocean Univ of Qingdao, China; Wei, Y, Univ of Hawaii, USA

Interaction of Ocean Waves and Currents: How Different Approaches May Be Reconciled
Jenkins, A D, Univ of Bergen, Norway; Arduin, F, Service Hydrographique et Oceanographique de la Marine, France

Cycle Distributions for Gaussian Waves: Exact and Approximative Results
Lindgren, G, Lund Univ, Sweden; Broberg, K B, University College Dublin, Ireland

Objective Analysis of Maximum Typhoon Wave Prediction around Taiwan Water
Lee, B C, Huafan Univ; Fan, Y M, Yang, B M, National Cheng Kung Univ, Taiwan, China

Modelling of Swell Spectra at a West Africa Location

Girard, F, Optimer; Olagnon, M, IFREMER; Quiniou-Ramus, V, Total, France

IPAS: Interactive Phenomenological Animation of the Sea

Parenthoen, M, Jourdan, T, Tisseau, J, ENIB, France

Neural Networks for Estimation of Wave Spectra

Deo, M C, Namekar, S, Indian Inst of Technology, India

22. HYDRO Dynamics and Forces III (V. 3)

Tuesday May 25 10:40 Bonaparte

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

Co-Chair: Li, R P, Shanghai Jiao Tong Univ, China

Sloshing of Partially Filled LNG Carriers

Huijsmans, R H, Gaillarde, G, MARIN, The Netherlands; Trischler, G, DCN, France; Dallinga, R, MARIN, The Netherlands

Numerical Simulation of 3D Sloshing Waves in Irregular Tanks

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

Numerical Simulation of Bulk Carriers' Ballast Water Exchange at Sea and Assessment of Sloshing Loads

Arai, M, Makiyama, H S, Yokohama National Univ, Japan

Generalized Potential Representation for Wave Diffraction-Radiation by Ships and Offshore Structures

Noblesse, F, David Taylor Model Basin; Yang, C, George Mason Univ, USA; Khabakhpasheva, T I, Lavrentyev Inst of Hydrodynamics, Russia

Comparison of Classical and Simple Free-surface Green Functions

Yang, C, George Mason Univ; Noblesse, F, David Taylor Model Basin; Lohner, R, George Mason Univ, USA

Time-Domain Simulation of Viscous Nonlinear Waves around Offshore Structures

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

Calculation of Steady-state Ship Wave Patterns Using a General Rankine Source Method

Diken, O, Du, S X, Hudson, D A, Temarel, P, Univ of Southampton, UK

23. GEOTECH III : Piles & Anchors (V. 2)

Tuesday May 25 10:40 Port cros, Hotel

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

Transition of Soil Strength during Suction Pile Retrieval in Sand

Bang, S C, South Dakota School of Mines & Tech, USA; Cho, Y K, Daewoo E&C, Korea

Siting Suction Caissons near Faults: A Review of Three Case Histories

Audibert, J M E, Fugro-McClelland Marine Geosciences; Campbell, K, Fugro Geoservices, Clukey, E, BP; Stevenson, S, Dominion; Al-Khafaji, Tjok, K M, Fugro-McClelland Marine Geosciences, USA

Analytical Study on Effect of Thickness on Consolidation Behavior of Quasi-overconsolidated Clays

Oda, K, Matsui, T, Cho, Y S, Kamitake, H, Osaka Univ, Japan

Evaluation of Load Bearing Mechanism for Pile with Multiple Stepped Two Diameters

Uchida, K, Kawabata, T, Kobe Univ; Nakase, H, Tokyo Electric Power Services; Imai, M, Syoda, D, Ooishi, J, Kobe Univ, Japan

Penetration Analysis of Drag Embedment Anchors in Soft Clays

Ruinen, R, Vryhof Anchors, The Netherlands

The Use of Inflatable Anchors in Offshore Sand and Clay Soils

Newson, T A, Smith, F W, Univ of Dundee; Brunning, P, Stolt Offshore, UK

Strengthening of Rectangular Reinforced Concrete Plates with Fiber Reinforced Plastics

Lin, F M, Hu, H T, National Cheng Kung Univ, Taiwan, China

24. ROV KAIKO ACCIDENT: Review and Analysis (V. 2)

Tuesday May 25 10:40 Porquerolles, Hotel

Chair: Michel, J-L, Ifremer, France

Co-Chair: Hong, S W, Korea Research Inst of Ship and Ocean Eng, Korea

Loss of the Full Ocean Depth ROV Kaiko: Part 1. Full Ocean Depth ROV Kaiko – A Review

Momma, H, JAMSTEC, Japan

Loss of the Full Ocean Depth ROV Kaiko: Part 2. Search for the ROV Kaiko Vehicle

Tashiro, S, JAMSTEC, Japan

Loss of the Full Ocean Depth ROV Kaiko: Part 3. Analysis of the Accident

Watanabe, M, JAMSTEC, Japan

25. MATERIALS/WELDING/FATIGUE I (V. 4)

Tuesday May 25 10:40 Raimu 1

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

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

Fatigue Behaviour of Girth Welded Joints of High Grade Risers

Mecozzi, E, Demofonti, G, Centro Sviluppo Materiali, Italy; Quintanilla, H, Tenaris Group, Mexico; Cumino, G, Dalmine, Italy; Izquierdo, A, Tenaris Group, Mexico

Fatigue Life Evaluation Based on Modified Notch Strain Approach Considering Welding Residual Stress Relaxation

Han, J W, Han, S H, Shin, B C, Korea Inst of Machinery & Materials; Kim, J H, Chungnam National Univ, Korea

Study on Estimation of Fatigue Strength in ($\alpha+\gamma$) Dual Phase Stainless Steel

Nakayama, K, Kanazawa Univ; Shozu, M, Maizuru Nat'l College of Tech; Hirose, H, Kinjo Univ, Japan

Fatigue Characteristics of Nitrided SACM 645 According to Surface Conditions and Notch Shape

Suh, C M, Son, K S, Jang, H K, Kim, S C, Kyungpook National Univ, Korea

Investigation of Impact Toughness of SHLA Steel at Low Temperatures

Bolshakov, V, Uzlov, O, Pridneprovsk State Academy of Civil Engineering & Architecture, Ukraine

Penetration Control of TIG Weld by Monitoring Molten Pool Oscillation Induced by Pulse Assist-gas Method
Ju, J B, Suga, Y, Keio Univ, Japan

New Formula to Prediction of Cold Cracking Susceptibility of High Strength Steels for Offshore Structures
Buglacki, H, Polski Rejestr Statkow, Poland

26. HYDRATES AND MINING III (V. 1)

Tuesday May 25 10:40 Raimu 2

Chair: Hong, S, Korea Research Inst of Ship and Ocean Eng, Korea

Review of Japan's R&D Results for Manganese Nodule Processing and the Economical Re-evaluation
Yamazaki, T, National Inst of AIST ; Park, S H, Univ of Tokyo, Japan

A Study on Prediction Model of Tracked Vehicle for Straight Maneuvering on Soft Soil
Kim, H W, Choi, J S, KRISO/KORDI, Korea

An Experimental Study on Steering Performance of Tracked Vehicle on Cohesive Soft Soil by Using Taguchi Method
Choi, J S, Hong, S, Kim, H W, KRISO/KORDI, Korea

Dynamic Analysis of Underwater Tracked Vehicle Connected with Flexible Riser
Hong, S, Kim, H W, Choi, J S, KRISO/KORDI, Korea

Comparison of the Mineralization of the Ferromanganese Crusts between the West Pacific and the Central Pacific
Xu, D Y, Qingdao Inst of Marine Geology, China

Design of Floating Farm on the Sea
Eto, H, Saito, Y, RIKEN ; Saijo, O, Nihon Univ ; Abe, T, Yoshida, S, RIKEN ; Manzai, S, Abe, H, Nihon Univ, Japan

27. POLAR & ICE III: Ice Engineering 2 (V. 1)

Tuesday May 25 10:40 Dumont

Chair: Frederking, RMW, National Research Council, Canada
Co-Chair: Bekker, A T, Far Eastern State Tech Univ, Russia

The Scattering of Flexural-gravity Waves by a Sea-ice Shelf Transition
Williams, T, Squire, V A, Univ of Otago, New Zealand

On Modelling the Interaction of Large Amplitude Waves with a Single Floe
Hegarty, G M, Squire, V A, Univ of Otago, New Zealand

Deformation of Ice Cover on the Northeastern Shelf of Sakhalin Island Induced by the Wind
Tikhoncuk, E, Inst of Marine Geology & Geophysics; Tambovsky, V, Environmental Co of Sakhalin; Shevchenko, G, Sakhalin Inst of Fisheries & Oceanography, Russia

Performance of the New Canadian Ice Service Ice Thickness Redistribution Model
Kubat, I, Sayed, M, Canadian Hydraulics Centre, NRC; Carrieres, T, Canadian Ice Service; Savage, S B, McGill Univ, Canada

Estimations of the Ice and Icebergs Distribution in the Barents Sea
Buzin, I V, Zubakin, G K, Naumov, A K, Arctic and Antarctic Research Inst, Russia

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

Tuesday May 25 10:40 Puget

Chair: Langen, I, Stavanger University College, Norway

Assessment of the Reliability of Marine Installation Escape, Evacuation, and Rescue Systems and Procedures

Bercha, F G, Cerovsek, M, Abel, W, Bercha Engineering, Canada

Optimal Inspection Planning of Logic Structures that are Subject to Fatigue and Random Accidents

Kawano, A, Univ of Sao Paulo, Brazil

An Intelligence Method for Structural Reliability Analysis based on Response Surface

Kang, H G, Gui, J S, Dalian Univ of Technology, China

Reliability-based Classification Criteria and Their Application Procedures

Song, Y Z, Sasaki, S, Nippon Kaiji Kyokai, Japan

Reliability and Availability Studies on Critical Safety Systems of an Offshore Drilling Platform

Min, J H, Kim, J H, Lee, S J, Chang, K P, Moon, K H, Chang, D J, Hyundai Heavy Industries, Korea

TUESDAY 13:20

Plenary Presentation II (V.2)

Tuesday May 25 13:20 Port cros, Hotel

Centrifuge Modeling in Offshore Engineering

Garnier, J, Laboratoire Central des Ponts et Chaussées, France

Introduction by Wong, P C, ExxonMobil Development Co, USA

29. OFFSHORE IV: FPSO//TLP/VLFS 2 (V. 1)

Tuesday May 25 14:00 Vauban

Chair: Stansberg, C T, MARINTEK, Norway

Co-Chair: Mathai, T, The Glosten Assoc, USA

On the Current Trend Towards the Use of Production and Drilling Semi-submersible Platforms in Deepwater

Ferrari Junior, Jose A, Petrobras, Brazil; Thuestad, T C, Norsk Hydro, Norway

Increased Fatigue Life of TLP Piles for the Ultra Deep Water Installed by the Pyrodriver

Van Foeken, R, Jonker, G, IHC Hydrohammer, The Netherlands

Aerodynamic Behavior of Offshore Triangular Tension Leg Platform

Jain, A K, IIT Delhi; Chandrasekaran, S, BHUIT, India

Ringing Response of Vertical Cylinder under the Action of Numerical Simulated Extreme Waves

Qin, C R, Pang, H L, Zhang, Q H, Han, T, Tianjin Univ, China

Twisting Behaviour of Pontoon and Semi-submersible Types of Very Large Floating Structure in Regular Oblique Waves

Phan, T S, Temarel, P, Univ of Southampton, UK

Hydroelastic Responses of Very Large Floating Structures Lying over Variable Bathymetry Regions

Athanassoulis, G A, Belibassakis, K A, National Technical Univ of Athens, Greece

Characteristics of Wave Loading and Structural Response of Mat-type VLFS due to Waves

Hong, S Y, Cho, S K, Kim, J H, KRISO/KORDI, Korea

Efficiency of Using Ballasting Materials (Concrete, Iron-ore Concentrate, Sand, etc) to Optimize Weight and Size Parameters of Ice Resistant Construction Structures of Gravity Type

Toropov, Y Y, Gintovt, A R, SOE CDB ME Rubin'; Bellendir, E N, Kostyrya, G Z, Belyaev, B V, VNIIG, Russia

30. METOCEAN IV: Sea State & Current (V. 3)

Tuesday May 25 14:00 Colbert

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

Non-parametric Modeling of Cyclo-stationary Markovian Processes. Part I: Simulation of Multivariate Sea State Processes

Monbet, V, UBS/SABRES; Marteau, P-F, UBS/VALORIA, France

Non-parametric Modeling of Cyclo-stationary Markovian Processes. Part II: Prediction of Multivariate Sea State Processes

Gamir, F, Marteau, P-F, UBS/VALORIA; Monbet, V, UBS/SABRES, France

Modelling Significant Wave Height Time Series Using ARMA and ARIMA Models

Soukissian, T C, National Centre for Marine Research; Kechagioglou, S, Aegean Univ; Prospathopoulos, A, National Centre for Marine Research, Greece

Sea State Characteristics of Artificially Worsened Observed Storm Events

Reistad, M, Magnusson, A K, Norwegian Meteorological Inst; Gudmestad, O T, Haver, S, Statoil, Norway

The Value of In-situ and Remote Sensing Current Measurement Techniques Offshore Angola

Upton, J, Fugro GEOS; Grant, C, BP Exploration, UK

Operational Metocean Monitoring at Catenary Anchor Leg Moorings

Gaffney, A, Bellamy, I, Fugro GEOS, UK

The Use of Underwater Acoustic Modems to Provide Full Water Column Current Profiles from Dynamically Positioned Drilling Installations

Crawshaw, M, Mardell, G, Fugro GEOS, UK

31. COASTAL ENG I: Coastal Waves (V. 3)

Tuesday May 25 14:00 Bonaparte

Chair: Teng, B, Dalian Univ of Technology, China

Co-Chair: Yalciner, A C, Middle East Technical Univ, Turkey,

Investigation of Coastal Waves around Japan with Cross-correlation Analysis between NOWPHAS Wave Observation Data and ECMWF Atmospheric Pressure Data

Hashimoto, N, Nagai, T, Port and Airport Research Inst, Japan

Incorporating Third Order Derivative Terms of the Parabolic Absorbing Boundary Condition in CO Finite Elements

Clyne, M J, Mullarkey, T P, National Univ of Ireland, Ireland

Moving Boundary Treatment of Hydrodynamic Numerical Models with Slot Patch Method

Oh, B C, Min, I K, KORDI; Chun, I S, Konkuk Univ, Korea

A Study on Boussinesq Equation with the Presence of Currents

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

Formation and Development of Spreading Gravity Currents

Katsuragi, T, Baba, N, Kan, S, Kitaura, K, Osaka Prefecture Univ, Japan

Development of Storm Surge Model Coupled with Wave Model and Hindcasting of Storm Surge and Wave Caused by Typhoon 9918

Kawai, H, Port and Airport Research Inst; Kawaguchi, K, Ministry of Land, Infrastructure and Transport; Hashimoto, N, Port and Airport Research Inst, Japan

Numerical Implementation of Radiation B.C in Fully Elliptic Modified Mild-slope Equation under FEM Computational Environment

Cho, Y J, Cho, E K, Univ of Seoul; Kim, M S, Daelim Industrial, Korea

The Influence of Partially Reflecting Boundaries on Waves in a Harbor

Lin, J G, Hsiao, S S, National Taiwan Ocean Univ; Chiu, Y F, Center of Harbor and Marine Technology; Fang, H M, Chen, C H, National Taiwan Ocean Univ, Taiwan, China

32. GEOTECH IV : Soil Dynamics (V. 2)

Tuesday May 25 14:00 Port cross, Hotel

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

Study on Statistics-based Evaluation of Soil Liquefaction

Chen, Y R, Hsieh, S C, Chiu, Y C, Chang Jung Christian Univ, Taiwan, China

Seismic Response of Earth Dam with Varying Depth of Liquefiable Foundation Layer

Sharp, M K, Adalier, K, US Army ERDC, USA

Evaluation of Liquefaction Potential by the Test Results of In-situ Frozen Samples

Chen, Y C, You, P S, National Taiwan Univ of Science and Technology, Taiwan, China

Influence of Sand Liquefaction on the Self Burial of a Pipe Submitted to Wave Action

Foray, P, Bonjean, D, Laboratory 3S; Michallet, H, LEGI, France

Application of GIS to Evaluate the Soil Liquefaction Analysis

Chien, L K, Chang, C H, Ling, M C, Chen, E L, National Taiwan Ocean Univ, Taiwan, China

Monitoring of the Foundations of a Coastal Structure Submitted to Breaking Waves: Occurrence of Liquefaction

Bonjean, D, Laboratory 3S; Michallet, H, Barnoud, J-M, LEGI; Foray, P, Laboratory 3S; Mory, M, ENSGTI; Abadie, S, LASAGEC, France; Piedra-Cueva, I, Univ de Monte-Video, Uruguay

Artificial Neural Network for the Prediction of Wave-induced Liquefaction

Cha, D H, Jeng, D S, Blumenstein, M, Griffith Univ, Australia

Seismic Response Properties of Stratified Ground Including Clay Layer with Various Degrees of Consolidation

Yamamoto, Y, Sumitomo Mitsui Construction; Hyodo, M, Yoshimoto, N, Yamaguchi Univ; Takahashi, N, Sumitomo Mitsui Construction; Kimura, S, Yamaguchi Univ, Japan

Applicability of Seismic Deformation Method in Aseismic Analysis of Underground Linear Structure

Nishida, M, Sumitomo Mitsui Construction; Matsui, T, Osaka Univ, Japan

33. ENVIRONMENT & SENSING (V.1)

Tuesday May 25 14:00 Porquerolles, Hotel

Chair: Sayed, M, National Research Council, Canada

Co-Chair: Kyozuka, Y, Kyushu Univ, Japan

EXtreme Ecosystem Studies in the Deep OCEan: Technological Developments: EXOCET/D

Sarradin, P-M, Sarrazin, J, IFREMER, France; Sauter, E, AWI, Germany; Shillito, B, UPMC, France; Waldmann, C, Univ Bremen, Germany; Olu, K, IFREMER, France; Colaço, A, Instituto do Mar, Portugal; EXOCET/D consortium

Automated Monitoring and Analysis of Micro-vibration in the Hi-tech Industrial Park

Lin, W C, Chen, Y, Kuo, C W, Southern Taiwan Science Park Administration; Ni, S H, Ko, C C, National Cheng Kung Univ, Taiwan, China

Study on Ocean Dumping of Dredged Material from Keelung Harbor

Liu, C I, Su, J C, Sinotech Engineering Consultants; Wang, C H, You, J M, Lai, K H, Keelung Harbor Bureau, Taiwan, China

An Analysis of the Extraordinary Proliferation of *Ulva* sp. in an Urban Wetlands

Yauchi, E, Hayami, T, Gomyo, M, Chiba Inst of Technology, Japan

A Generating Mechanism of Nutrient Trapping Phenomenon by the Coastal Developments

Lee, I C, Yoon, H S, Ryu, C R, Pukyong National Univ, Korea

The Dispersion Activities Analysis of Subsurface Plume Flow in Sea Floor

Lin, C K, China Engineering Consultants, Taiwan, China; Kulasiri, D, Lincoln Univ, New Zealand

Modeling the Impact of Umm Al Nar Power and Desalination Plant on Water Quality

Mohamed, K A, Odeh, M, Eco Hydraulic Laboratory, United Arab Emirates

Comparative Study on the Ocean Current Modeling and Observations by Drilling Buoy

Chien, H, Chen, P H, Chiou, M D, Kao, C C, National Cheng Kung Univ, Taiwan, China

The Eddy Northwest of Luzon Island in South China Sea

Lan, J, Ocean Univ of China, China

34. MATERIALS/WELDING/FATIGUE II (V. 4)

Tuesday May 25 14:00 Raimu 1

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

New Chord Load Functions for Rectangular Hollow Section Joints

Liu, D K, Wardenier, J, Delft Univ of Technology, The Netherlands ; van der Vegte, Kumamoto Univ, Japan

Effects of Chord Length and Boundary Conditions on Axial Capacity of Circular Tubular T-joints

Zhu, L, Shi, Y J, Wang, Y Q, Shi, G, Tsinghua Univ, China

Finite Element Analysis of Concrete Plugs Embedded in Tubular Steel Piles

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

Static Strength of Thick-walled CHS T-joints Subjected to Brace Axial Loads

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

Secondary Stresses in Lattice Girders : Influence on the Fatigue Strength of Tubular Trusses

Börger, A J, Romeijn, A, Wardenier, J, Delft Univ of Technology, The Netherlands

Internal Stress Measurement of Rolled Steels Using Neutron Diffraction

Gotoh, M, Sasaki, T, Kanazawa Univ; Kamiyama, T, High Energy Accelerator Research Org; Hirose, Y, Kanazawa Univ, Japan

X-ray Examination of Fracture Surfaces of Dental Material and Other Applications

Umeda, A, Kanazawa Univ; Hirose, H, Kinjo Univ; Gotoh, M, Kanazawa Univ, Japan; Saito, T, Dalian Inst of Light Industry, China

Pre-cracking Technique and Its Application to X-ray Fractography of Dental Material and Other Applications

Umeda, A, Kanazawa Univ; Hirose, H, Kinjo Univ; Gotoh, M, Kanazawa Univ, Japan; Saito, T, Dalian Inst of Light Industry, China

35. PIPELINES/RISERS/MOORING I (V. 2)

Tuesday May 25 14:00 Raimu 2

Chair: Price, J C, SBM-IMODCO, USA

Co-Chair: Jo, C, Inha Univ, Korea

Safety Concepts in the New Dutch Pipeline Standard NEN 3650

Guijt, W, Tebodin; Vrouwenvelder, A, Gresnigt, A M, TU-Delft; Dijkstra, G J, Tebodin, The Netherlands

Strain Based Design Guidelines for Pipelines

Mohr, B, Gordon, R, EWI; Smith, R, MMS, USA

Evaluations of Surface and Subsea Pig Launching Systems

Fakas, E, Chin, J, Univ of Western Australia, Australia

Technical Viability Study for Alternative of the Flexible Lines Transportation

Martins, M R, Andrade, B L R, Univ of Sao Paulo, Brazil

Design of Anode Corrosion Protection System on Electrically Heated Pipelines

Hesjevik, S M, Statoil; Lervik, J K, Klevjer, G, SINTEF, Norway

Subsea Pipelines Leak Detection and Location Based on Fluid Transient and FDI

Bai, L, Yue, Q J, Li, H S, Dalian Univ of Technology, China

Determination of Undrained Shear Strength Parameters for Buried Pipeline Stability in Deltaic Soft Clays

Newson, T A, Bransby, M F, Univ of Dundee; Brunning, P, Stolt Offshore, UK

The Effects of Backfill Soil Properties on Wave-induced Pore Pressure around a Trenched Pipeline

Gao, F P, Wu, Y X, Inst of Mechanics, CAS, China; Jeng, D S, Griffith Univ, Australia

36. POLAR & ICE IV: Ice Engineering 3 (V. 1)

Tuesday May 25 14:00 Dumont

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

Analysis of Complex Ice-structure Interactions Using Continuum Mechanics

Bercha, F G, Bercha Engineering; Glockner, P G, Univ of Calgary, Canada

Ice-Resistant Fixed Platform for the Kravtsovskoye Field, The Baltic Sea

Potapov, V M, Lensky, V F, CDB "Corall"; Yershov, B I, Crane-Shelf; Muradov, K V, Lukoil, Russia

Design Earthquake Load on a Structure in Ice-covered Waters

Kato, K, Kinki Univ; Toyama, Y, Mitsui Shipbuilding & Engineering, Japan

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

Bekker, A T, Uvarova, T E, Kim, S D, Far Eastern State Technical Univ, Russia

A Simplified 3-Dimensional Ice Ridge Scour Model

Choi, K S, Korea Maritime Univ, Korea

Application of the Mechanical Model for Ice Scour to a Field Site and Simulation Method of Scour Depths

Kioka, S, Civil Engineering Research Inst of Hokkaido; Ishikawa, R, Hokkaido Univ; Kubouchi, A, Civil Engineering Research Inst of Hokkaido; Saeki, H, Hokkaido Univ, Japan

Empirical Determination of Iceberg Draft and Cross-sectional Areas

Barker, A, Sayed, M, Canadian Hydraulics Centre, NRC; Carrieres, T, Canadian Ice Service, Canada

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

Tuesday May 25 14:00 Puget

Chair: Ersdal, G, Petroleum Safety Authority, Norway

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

Structural Analysis and Performance of Offshore Materials in Fire and High Strain Rate Events

Price, J C, SBM-IMODCO, USA

Response of Topside Structures to Fires and Explosions

Hamdan, F H, Burgan, B A, Steel Construction Inst, UK

The Characteristic Analysis on Thermal Properties and Emitting Smoke in the Oil Pool Fires of Engine Room for Fire Safety Design

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

Design and Numerical Assessment of Blast Walls Subjected to Hydrocarbon Explosions

Boh, J W, National Univ of Singapore, Singapore; Louca, L A, Imperial College London, UK; Choo, Y S, National Univ of Singapore, Singapore

Modelling the Effect of Extreme Diurnal Temperature Changes on Ship Structures for the Assessment of Structural Reliability Using Load Combination Techniques

Moatsos, I, Das, P K, Univ of Glasgow and Strathclyde, UK

RAM Study on a Subsea Production System of an Offshore Oil and Gas Plant

Kim, J H, Lee, S J, Min, J H, Chang, K P, Nam, K I; Lee, D H, Hyundai Heavy Industries, Korea

Safety Margin of Structural Member of Offshore Structures Subjected to Wave and Current

Taniguchi, T, Tottori Univ; Kawano, K, Kagoshima Univ, Japan

WEDNESDAY 08:00

38. OFFSHORE V: FPSO/SPAR/TLP/VLFS 3 (V. 1)

Wednesday May 26 08:00 Vauban

Chair: Kashiwagi, M, Kyushu Univ, Japan

Co-Chair: Roddier, D, Marine Innovation & Technology, USA

A Study on Hydroelastic Element of a Floating Plate in Waves

Tsubogo, T, Osaka Prefecture Univ, Japan

Hydroelastic Behavior of VLMOS in Beam Seas

Takagi, K, Osaka Univ, Japan

Experimental Study on Motion of Elastic Floater in Directional Seas

Hiraishi, T, Okuno, M, Port and Airport Research Inst; Miyazato, T, Ecoh Co, Japan

Varying Wave Drift Force Acting on Semi-submersible Type Mega-float in Irregular Waves

Sunahara, S, Tokai Univ; Nishimura, Y, Shipbuilding Research Centre of Japan, Japan

A Study of Preliminary Structural Design of Pontoon Type VLFS

Park, S W, Korea Inst of Machinery & Materials; Hong, S Y, Korea Research Inst of Ships & Ocean Eng; Lee, T K, Korea Inst of Machinery & Materials, Korea

Estimation of Hydrodynamic Forces Acting on a VLFS with a Submerged-plate

Takaki, M, Lee, S M, Hiroshima Univ, Japan

39. METOCEAN V: Climatology (V. 3)

Wednesday May 26 08:00 Colbert

Chair: Olagnon, M, IFREMER, France

Wave Climate in Deep and Shallow Water

Lopatoukhin, L J, State Univ; Boukhanovsky, A V, Inst for High Performance Computing; Rozhkov, V A, State Univ, Russia

Wave Climate of North Aegean Sea: Inter-comparison of Topex/Poseidon, Wave Buoy and WAM Model Results

Kehris, C, Plymouth Univ, UK; Soukissian, T, National Centre for Marine Research, Greece

Wave and Wind Micro-climates in Saronikos Gulf

Soukissian, T, Ballas, D, National Centre for Marine Research, Greece

Wind and Wave Flimatology of the Mediterranean Sea. Part I: Wind Statistics

Stefanakos, C N, Athanassoulis, G A, National Technical Univ of Athens, Greece; Cavaleri, L, Bertotti, L, ISMAR, Italy; Lefevre, J-M, Meteo-France, France

Wind and Wave Climatology of the Mediterranean Sea. Part II: Wave Statistics

Stefanakos, C H, Athanassoulis, G A, National Technical Univ of Athens, Greece; Cavaleri, L, Bertotti, L, ISMAR, Italy; Lefevre, J-M, Meteo-France, France

A Study of the Wave Climate of Northern Taiwan

Yim, J Z, Chou, C R, National Taiwan Ocean Univ, Taiwan, China

Met-ocean Contour Lines for Design Purposes, Correction for Omitted Variability in the Response Process

Kleiven, G, Norsk Hydro; Haver, S, Statoil, Norway

40. COASTAL ENG II: Breakwaters 1 (V. 3)

Wednesday May 26 08:00 Bonaparte

Chair: Mizutani, N, Nagoya Univ, Japan

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

Differences between Deformations of Submerged Breakwater in Two- and Three-dimensional Experiments

Araki, S, Osaka Univ; Yanagihara, T, Shimizu Corp; Nijjima, H, Fumoto, H, Deguchi, I, Osaka Univ, Japan

Numerical Simulation for the Interaction of Irregular Wave with Perforated Caissons

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

Rapidly Installed Membrane Breakwater in the Oblique Seas

Kee, S T, Seoul National Univ of Technology; Shin, M S, Kunsan National Univ; Cho, W C, Chung-Ang Univ; Han, J O, Seoul National Univ of Technology, Korea

Large Scale Membrane-type Barrier against Extraordinary Water Surface Elevation

Tanigaki, S, Mutsuura, M, Isoda, A, Ogasa, M, Mitsubixhi Heavy Industries, Japan

Hydraulic Characteristics of Rubble Mound Structure in Relation to the Internal Waterlevel Fluctuation

Ryu, C R, Pukyong National Univ, Korea

Expected Overtopping Probability Considering Real Tide Occurrence

Kweon, H M, Gyeongju Univ, Korea

41. GEOTECH V : Soil Properties 1 (V. 2)

Wednesday May 26 08:00 Port cros, Hotel

Chair: Matsui, T, Osaka Univ, Japan

Co-Chair: Newson, T A, Univ of Dundee; UK

Time Dependency of Deep Sea and Island Clays at Room and Elevated Temperature

Brandes, H G, Univ of Hawaii, USA

Hollow Cylindrical Torsional Test under Strain-path Control

Uchida, K, Fujihara, N, Kobe Univ, Japan

Normalized Compression Line for Reconstituted Soil

Hong, Z S, Liu, Z F, Yuan, S H, Southeast Univ, China

Physical Properties of Natural Sedimentary Soils Deposited in North Shore of the Yangtze River Delta

Gu, D J, Yuan, S G, Jiangsu Provincial Communications Dept; Shi, M L, Southeast Univ, China

Compression Behavior of Natural Intermediate Soils Deposited in Jiangsu, China

Gu, D J, Ye, Y C, Jiangsu Provincial Communications Dept; Hong, Z S, Shi, M L, Southeast Univ, China

A Note on Soil Structure Resistance of Structured Soils

Hong, Z S, Liu, S Y, Guo, H L, Southeast Univ, China

Piezocene Factors and OCR of Marine Clays in Shihwa Region of Korea Obtained from Piezocene Tests

Jang, I S, KORDI; Kim, B S, SK Engineering and Construction; Kwon, O S, KORDI, Korea

A New Approach of Settlement Analysis of Soft Clay by the Development of Hybrid-online Simulation Method

Kwon, Y C, Kazama, M, Uzuoka, R, Sento, N, Tohoku Univ, Japan

42. AUV & ROBOTICS I (V. 2)

Wednesday May 26 08:00 Porquerolles, Hotel

Chair: Rigaud, V, IFREMER, France

Co-Chair: Lee, K H, US Navy Coastal Systems Station, USA

The Autonomous Vehicle Programme at Ifremer

Rigaud, V, Opderbecke, J, Lion, P, Laframboise, J-M, IFREMER, France; Ferguson, J S, ISE Research, Canada

First Sea Trials of the Intervention AUV

Marty, P, CYBERNETIX; Perrier, M, IFREMER, France

Development of Compact Deep-sea Monitoring Robot System “TAM-EGG 1”

Tamura, K, Ando, H, Maeda, K, Ueno, M, Nimura, T, National Maritime Research Inst, Japan

Underwater Navigation System Based on an Inertial Sensor and a Doppler Velocity Log Using Indirect Feedback Kalman

Lee, P M, Jeon, B H, Choi, H T, Kim, Y K, KRISO/KORDI; Park, J Y, Oh, J H, KAIST, Korea

A System of Small AUVs Interlinked with a Smart Cable for Inspection of Underwater Structures

Yu, S C, Ura, T, Univ of Tokyo, Japan

Optical Stabilisation for the ALIVE Intervention AUV

Brignone, L, Perrier, M, IFREMER, France

A Parametric Identification of the “Olister” Hydrodynamic Behaviour

Etaki, R, ECA, France

ISOPE Friction Stir Welding Symposium

Chair: Ayer, R, ExxonMobil Research and Engineering, USA

43. FSW I: Mechanisms & Modeling (V. 4)

Wednesday May 26 08:00 Raimu 1

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

Friction Stir Joining of Structural Materials - Microstructure, Properties and Applications

Jata, K V, Air Force Research Laboratory, USA

Mechanical Property and Microstructural Mapping of Friction Stir Welded Al 5456

Fonda, R W, Pao, P S, Jones, H N, Naval Research Laboratory, USA

The Formation of Nugget Zone Grain Structures in Al-Alloy Friction Stir Welds

Prangnell, P B, Heason, C, Hassan, Kh, A A, Univ of Manchester and UMIST, UK

Heat Source Models in Simulation of Heat Flow in Friction Stir Welding

Schmidt, H, Technical Univ of Denmark/Risø National Laboratory; Hattel, J, Risø National Laboratory, Denmark

The Thermal Model of Tool Penetrating Workpiece Process for Friction-stir Welding

Wang, D Y, Feng, J C, Harbin Inst of Technology, China

44. PIPELINES/RISERS/MOORING II (V. 2)

Wednesday May 26 08:00 Raimu 2

Chair: Lim, F K, 2H Offshore Engineering, UK

Co-Chair: Srisankarajah, T, Kellogg Brown & Root, UK

A Technique for Modelling the Lateral Stability of On-bottom Pipelines in a Small Drum Centrifuge

Cheuk, C Y, White, D J, Bolton, M D, Univ of Cambridge, UK

HF Frequency Measurements of Current Speeds and Direction: Measurement Set-up and Some Findings

Kleiven, G, Eide, L I, Norsk Hydro, Norway

Optimisation of Pipeline Routes

Meisingset, H, Norsk Hydro; Hove, J, Unifob AS; Olsen, G, Norsk Hydro, Norway

Oscillatory Flow Induced Hydrodynamic Forces upon a Pipeline near Erosive Sandy Seabed

Wu, Y X, Yang, H P, Pu, Q, Li, K, Gao, F P, Inst of Mechanics, CAS, China

Nonlinear Interactions among Waves, Current and a Marine Pipeline over Rubble Protection

Mostafa, A M, Cairo Univ, Egypt

Comparison on the Stability and Ability of Resisting of Self-Floating Delivery Pipeline

Li, S S, Qin, C R, Cheng, S B, Tianjin Univ, China

45. POLAR & ICE V: Ice Environment & Icing (V. 1)

Wednesday May 26 08:00 Dumont

Chair: Bercha, F G, Bercha Engineering Ltd, Canada

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

Bubble Curtain to Prevent Freezing
Eidnes, G, Torum, A, SINTEF, Norway

Estimation of Oil Area Spilled under an Ice Cover
Izumiyama, K, Uto, S, Kanada, S, National Maritime Research Inst; Kioka, S, Civil Engineering Research Inst of Hokkaido, Japan

Experimental Study on Separating Oil Which Trapped under Pack Ice Fields
Otsuka, N, North Japan Port Consultants; Kondo, H, Ishikawa, R, Saeki, H, Hokkaido Univ, Japan

Chinese Transmission Lines' Icing Characteristics and Analysis of Severe Ice Accidents
Jiang, X L, Shu, L C, Sima, W, Xie, S J, Hu, Q, Chongqing Univ, China

Maximum Withstand Voltage of Artificial Ice-covered Insulators
Jiang, X L, Zhang, Z J, Sun, C X, Shu, L C, Sima, W, Chongqing Univ, China

46. RELIABILITY, RISK & SAFETY III (V. 4)

Wednesday May 26 08:00 Puget

Chair: Yao, T, Osaka Univ, Japan

Risk Based Inspection Planning for an FPSO Hull – the Lessons for Design
Holdbrook, S J, Kellogg Brown & Root, UK

Directional Aspects of Collision Risk between Passing Ships and Platforms: A North Sea Case Study
Wolfram, J, Heriot Watt Univ, UK; Naegli, G, Petrobras, Brazil

Basic Research on Safety Management of Ferry Cargo under Rough Weather Conditions
Mizui, S, Sasa, K, Kobayashi, G, Hiroshima Nat'l College of Tech; Kubo, M, Kobe Univ, Japan

The Role of the Human Factor within Maritime Safety – An Introduction to Critical Aspect and Records
Lyridis, D V, Ventikos, N P, National Technical Univ of Athens, Greece

WEDNESDAY 10:40

47. OFFSHORE VI: FPSO/SPAR/TLP/VLFS 4 (V. 1)

Wednesday May 26 10:40 Vauban

Chair: Ewida, A, Petro-Canada, Canada
Co-Chair: Sphaier, S H, COPPE/UFRJ, Brazil

Study on Dynamic Responses of MOB Connectors
Yu, L, Shu, Z, Li, R, Shanghai Jiao Tong Univ, China

Wave Response Analysis of a Floating Artificial Base-building Using Developed Easy Equation of Added Mass
Saijo, O, Kamekawa, K, Maruyoshi, K, Kawano, S, Nihon Univ; Eto, H, Inst of Physical & Chemical Research; Saito, Y, Nihon Univ, Japan

Variability of Results of Dynamic Analyses of Spars

Sarkar, I, Kellogg Brown & Root; Roesset, J M, Texas A&M Univ, USA

Spar Topsides-to-hull Connection – Welded Vs Grouted

Luo, M Y H, Zhang, B, Harwood, M, Technip Offshore, USA

The Heave Motion Characteristics of Truss Spars in Waves

Rho, J B, Choi, H S, Seoul National Univ, Korea

Estimating Current Wake Effects on FPSO-Shuttle Dynamics: A Semi-empirical Approach

Simos, A N, Sparano, J V, Univ of Sao Paulo, Brazil

Modeling of Springing and Whipping of FPSOs in a Time Domain Sea-keeping Tool

Ledoux, A, Principia RD; Mary, C, ENSTA; Couty, N, Principia Marine, France

48. METOCEAN VI: Hindcast (V. 3)

Wednesday May 26 10:40 Colbert

Chair: Lalli, F, APAT, Italy

Validation and Assimilation of ENVISAT ASAR Wave Spectra in Wave Model WAM: Toward Operational Use

Aouf, L, Lefevre, J-M, Meteo-France; Hauser, D, Univ de Versailles; Chapron, B, IFREMER, France

Investigation of Source Terms in the SWAN Wave Model with NDBC Buoy Data During Hurricane

Guan, C L, Ocean Univ of China, China; Xie, L, North Carolina State Univ, USA

Diagnosing Water Vapor Fields over the Ocean from Satellite Infrared Measurements for Use of Marine Weather Analysis

Takemi, T, Shibayama, K, Osaka Univ, Japan

Wave Spectra from ENVISAT's Synthetic Aperture Radar in Coastal Areas: Spectral Inversion Adapted for Coastal Areas: Validation

Ardhuin, F, SHOM; Collard, F, BOOST Technologies; Chapron, B, IFREMER, France

A Coupled-mode Technique for Wave-Current Interaction

Belibassakis, K A, Athanassoulis, G S, National Technical Univ of Athens, Greece

Modeling of Propagation and Transformation of Transient Water Waves

Sulisz, W, Chybicki, W, Polish Academy of Sciences, Poland

Experimental Study of the Wave Climate Close to a Ship in Beam Seas at $F_n=0$

Ekman, P, Chalmers Univ, Sweden

49. COASTAL ENG III: Breakwaters 2 (V. 3)

Wednesday May 26 10:40 Bonaparte

Chair: Ueda, S, Tottori Univ, Japan

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

Physical Model Study on Floating Breakwater

Dong, G H, Zheng, Y N, Li, Y C, Dalian Univ of Technology; Guan, C T, Lin, D F, Chinese Academy of Fishery Sciences, China

Numerical Analysis of Wave and Floating Breakwater Interaction Using VOF Method

Mizutani, N, Rahman, M A, Nagoya Univ, Japan

Application of the VOF-FEM Model to the Reef Breakwater Built on the Sandy Bed

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

Measuring Dynamic Response of Floating Breakwater

Kim, D H, Park, W S, Korea Ocean R&D Inst, Korea

A Performance of A Multipurpose Breakwater with Twin Hull Float Type

Kim, S G, Cheju National Univ; Lee, S M, Dongyang Univ; Park, R S, Lee, M S, Univ of Ulsan, Korea

50. GEOTECH VI : : Soil Properties 2 (V. 2)

Wednesday May 26 10:40 Port cros, Hotel

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

Co-Chair: Tanaka, Y, Kobe Univ., Japan

Analytical Study on Effect of Thickness on Consolidation Behavior of Quasi-overconsolidated Clays

Oda, K, Matsui, T, Cho, Y S, Kamitake, H, Osaka Univ, Japan

Borehole Squeezing in Soft Clay

Kay, S, Fugro Engineers, The Netherlands

Time Effects on One Dimensional Consolidation Analysis

Sugiyama, M, Tokai Univ; Shirako, H, Kensetsu-kikaku Consultant; Akaishi, M, Tokai Univ, Japan

Strain-path Controlled Ko Consolidation Test of Marine Clays with Bender Element Test

Uchida, K, Stedman, D J, Shimizu, M, Kobe Univ, Japan

Fabric of the Simulated Hydraulic Filled Sand and Its Variation after Shearing

Jeng, C J, Huafan Univ, Taiwan, China

51. AUV & ROBOTICS II (V. 2)

Wednesday May 26 10:40 Porquerolles, Hotel

Chair: Momma, H, JAMSTEC, Japan

Co-Chair: Opderbecke, J, IFREMER, France

The Assessment of Self-compensating, Vectored Thruster AUV

Cavallo, E, Michelini, R C, Univ of Genova, Italy

Fuel Cell Underwater Vehicle "URASHIMA"

Hyakudome, T, Aoki, T, Tsukioka, S, Yoshida, H, Ishibashi, S, Inada, T, JAMSTEC; Maeda, T, Hirokawa, K, Yokoyama, K, Tani, T, Mitsubishi Heavy Industries; Sasamoto, R, Tokyo Univ of Mercantile Marine, Japan

Pressure Balanced Lithium/Ion Secondary Batteries

Hainsselin, J-P, ECA, France

A Working AUV Using CAN Bus Interface

Yoshida, H, Aoki, T, Tsukioka, S, Hyakudome, T, Ishibashi, S, JAMSTEC; Sasamoto, R, Tokyo Univ of Mercantile Marine, Japan

ALISTAR AUV and Its Autonomy Management System: A Functional View

Kermorgant, H, Eteki, R, ECA, France

**Underwater Acoustic Color Picture Transmission System for AUV
“URASHIMA”**

Ochi, H, Shimura, T, Sawa, T, Amitani, Y, Nakajoh, H, Hyakudome, T,
Tsukioka, S, Murashima, T, Aoki, T, JAMSTEC, Japan

**Performance Estimation Tool for Deep Underwater Acoustics
Communication**

Viala, C, Noel, C, Semantic TS, France

ISOPE Friction Stir Welding Symposium

52. FSW II: Steels (V. 4)

Wednesday May 26 10:40 Raimu 1

Chair: Nelson, T W, Brigham Young Univ, USA

The Potential for Friction Stir Welding in Oil and Gas Applications

Threadgill, P L, TWI Ltd, UK

Progress in Friction Stir Welding of High Temperature Materials

Sorensen, C D, Brigham Young Univ, USA

Advanced Welding Processes for the Upstream Oil & Gas Industry

Gordon, R, EWI Microalloying; Denney, P, Gould, J, Ames, N, EWI, USA

53. OCEAN & WIND ENERGY I (V. 1)

Wednesday May 26 10:40 Raimu 2

Chair: Henderson, A R, Ceasa, UK

Co-Chair: Matsumiya, H, AIST, Japan

Review of Current Activities in Offshore Wind Energy

Zaaijer, M B, Delft Univ of Technology, The Netherlands ; Henderson, A R,
Ceasa, UK

**An Investigation for Offshore Wind Power Generation Fleet
Development**

Shinkai, A, Yamaguchi, S, Kyushu Univ ; Ikeda, S, Hitachi Ltd ; Nagao, T,
Kyushu Univ, Japan

**An Assessment of the Capacity Utilisation Factor of a Combined Off-
shore Wind and Wave Power Generating Plant**

Clarke, J A, Grant, A D, Johnstone, C M, Univ of Strathclyde, UK

**Simulation of the Electric Self-sufficiency of an Atlantic Island Supplied
by Offshore Wind Energy and Wave Energy Associated with a Medium
Scale Local Energy Storage**

Babarit, A, Ecole Centrale de Nantes ; Hamed, H B, ENS-Cachan ; Clement,
A H, Ecole Centrale de Nantes ; Debusschere, B, ENS-Cachan ; Duclos, G,
Ecole Centrale de Nantes ; Multon, B, Robin, G, ENS-Cachan, France

Feasibility Study on Floating Offshore Wind Farms in Japanese Waters

Ushiyama, I, Ashikaga Inst of Technology ; Seki, K, Tokai Univ ; Miura, H,
Japan Ocean Industries Assoc, Japan

54. POLAR & ICE VI: Icing (V. 1)

Wednesday May 26 10:40 Dumont

Chair: Lozowski, E P, Univ of Alberta, Canada

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

Measuring Spongy Accretion Liquid Fraction in an Icing Wind Tunnel

Lozowski, E P, Inst for Aerospace Research, NRC; Blackmore, R Z, Univ of
Alberta; Farzanaeh, M, Karev, A, Univ du Quebec a Chicoutimi, Canada

A High Resolution Full-scale 3D Model of Glaze Ice Accretion on a Non-energized Station Post Insulator

Rudzinski, W J, Lozowski, E P, Univ of Alberta; Farzaneh, M, Univ du Quebec a Chicoutimi, Canada

Ice Flashover Performance and Process on Three Types of EHV DC Insulators at Low Pressure

Sun, C X, Jiang, X L, Xie, S J, Shu, L C, Sima, W, Chongqing Univ, China

AC Flashover Performance of Natural Iced Insulators in High Altitude Regions

Shu, L C, Mei, B X, Jiang, X L, Hu, Q, Yang, Q, Chongqing Univ, China

Flashover Performance and Process of Iced Composite Insulators in Atmospheric Pressure of 3500 Meters and Above

Sima, W, Yang, Q, Jiang, X L, Shu, L C, Zhang, Z J, Chongqing Univ, China

55. ADVANCED SHIP TECHNOLOGY I (V. 4)

Wednesday May 26 10:40 Puget

Chair: Naito, S, Osaka Univ, Japan

Co-Chair: Falzarano, J M, Univ of New Orleans, USA

Buckling/plastic Strength of Bilge Circle and Its Contribution to Ultimate Longitudinal Strength of Ship's Hull Girder

Maeno, Y, Sanoyas Hishino Meisho; Yamaguchi, H, Osaka Univ; Fujii, Y, Sanoyas Hishino Meisho; Yao, T, Osaka Univ, Japan

Load Combination for Strength and Fatigue Analyses of Ship Structure

Shin, Y, Kim, B K, Kim, S, Hwang, C, Wang, X, American Bureau of Shipping, USA; Fyfe, A J, PAFA Consulting Engineers, UK

A Numerical Calculation of Relative Wave Height Generated by a Seagoing Ship in Waves

Inoue, Y, Kamruzzaman, M, Yokohama National Univ, Japan

Time-domain Simulation of Four-quadrant Propeller Flows by a Chimera Moving Grid Approach

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

Numerical Analysis of Flow Characteristics around a Rudder by Multi-block Method

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

Estimation Method of Drift Resistance Acting on Broken or Inclined Ships

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

Numerical Simulation of the Interaction of a Propeller Jet and Ground

Lobatchev, M P, Pustoshny, A V, Sazonov, K E, Tchitcherine, I A, Krylov Shipbuilding Research Inst, Russia

WEDNESDAY 13:20

Plenary Presentation I (V.1)

Wednesday May 26 13:20 Vauban

Up-dating the Canadian Standards Association Offshore Structures Code

Frederking, R, National Research Council; Brown, T, Univ of Calgary;
Grant, R, CBCL Limited, Canada
Introduction by Wardenier, J, Delft Univ of Technology, The Netherlands

56. OFFSHORE VII: FPSO/SPAR/TLP/VLFS 5 (V. 1)

Wednesday May 26 14:00 Vauban

Chair: Roesset, J M, Texas A&M Univ, USA

Modeling of the Separated Flow over Bilge Keels of FPSO Hulls under Heave and Roll Motions

Kinnas, S P, Yu, Y H, Kacham, B, Univ of Texas at Austin, USA

An Experimental and Numerical Study of Roll Motions for a Barge-type LNG FPSO

Choi, Y R, Univ of Ulsan; Kim, J H, KRISO/KORDI; Song, M J, Kim, Y S, Daewoo Shipbuilding & Marine Engineering, Korea

A Roll Damping Prediction Method for a FPSO with Steady Drift Motion

Ikeda, Y, Ali, B, Osaka Prefecture Univ, Japan

Roll Motion Reduction Devices for Harsh Environmental FPSOs

Park, I K, Yang, J H, Shin, H S, Hyundai Heavy Industries, Korea

Effect of Roll Damping on the FPSO Motions

Lee, D Y, Hong, S K, Choi, Y H, Kim, S E, Samsung Heavy Industries, Korea

FPSO Roll Damping Prediction from CFD and 2D Model Tests Investigations

Ledoux, A, Princia RD ; Molin, B, ESIM ; de Jouette, C, Principia RD ; Coudray, T, Technip, France

Development of Diagonal Tensioning System for Lifting FPSO Topside Module with Eccentric Center of Gravity

Yang, Y T, Kwon, J S, Kumar, R, Hyundai Heavy Industries, Korea

Simplified Model of the Nonlinear Oscillations of Two Ships in Tandem

Souza Junior, J R, Fernandes, C G, Univ of Sao Paulo, Brazil

Computation of Wave and Current Loads on Offloading FPSOs

Chen, X-B, Orozco, J-M, Malenica, S, Bureau Veritas, France

57. HYDRO Dynamics and Forces IV (V. 3)

Wednesday May 26 14:00 Colbert

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

Co-Chair: Inoue, Y, Yokohama National Univ, Japan

Wave Drift Added Mass of a Vertical Circular Cylinder of Which Draft is Same as the Water Depth Derived from a Moving Frame Formulation

Kinoshita, T, Bao, W, Yoshida, M, Univ of Tokyo, Japan

Simulation of Ship Motion and Deck-wetting Due to Steep Random Seas
Kim, C H, Adil, A M, Texas A&M Univ, USA

Nonlinear Drift Motion of a Ship in Heavy Beam Seas
Kuroda, T, Hokkaido Univ; Ikeda, Y, Osaka Prefecture Univ, Japan

Fundamental Model Experiments of a Reduction System for Low-frequency Ship Motions
Yoneyama, H, Port and Airport Research Inst; Shiraishi, S, Coastal Development Inst of Tech; Satoh, H, Ministry of Land, Japan

Nonlinear Dynamic Analysis of Ship Capsizing in Random Waves
Falzarano, J M, Cheng, J, Vishnuboltha, S, Univ of New Orleans, USA

Wave Groups: Their Characterization and Effects on Moored Ships
Neves, M G, Capitco, R, Santos, J A, LNEC, Portugal

A Study on Seaquake Forces Acting on Floating Body due to Seaquake by Three Dimensional Time Domain Analysis
Jang, R D, Korean Register of Shipping, Korea; Higo, Y, Hiroshima Univ, Japan

Numerical Study of Nonlinear Loads on Vertical Cylinders in Extreme Waves
Pang, H L, Zhang, Q H, Qin, C R, Han, T, Tianjin Univ, China

58. COASTAL ENG IV: Erosion & Sediment Transport (V. 3)

Wednesday May 26 14:00 Bonaparte

Chair: Deguchi, I, Osaka Univ, Japan
Co-Chair: Shyue, S W, National Sun Yat-sen Univ, Taiwan, China

Determination and Control of the Longshore Sediment Transport at Karaburun Fishery Harbor (Black Sea Coast of Istanbul)
Yuksel, Y, Ari, A, Cevik, E, Yildiz Tech Univ; Fuler, I, Yuksel Proje International; Yalciner, A C, Middle East Technical Univ, Turkey

Numerical Studies of the Circulation, Sediment Transport, and Dispersion of Contaminants in the Persian Gulf
Sadrasab, M, Kaempf, J, Flinders Univ of South Australia, Australia

A Two-dimensional Vertical Finite-element Mathematical Modeling of Sediment Transport due to Tidal Flow
Wang, J F, Li, S S, Tianjin Univ; Shi, Z, Shanghai Jiao Tong Univ, China

Experimental Study on the Beach Drainage Effects
Damiani, L, Petrillo, A F, Politecnico di Bari, Italy

Experiment on Sand Transport in an Oscillatory Flow
Kan, S, Baba, N, Katsuragi, T, Kitaura, K, Osaka Prefecture Univ, Japan

Applicability of 3D Morphodynamic Model with Shoreline Change Using a Quasi-3D Nearshore Current Model
Kuchiishi, T, Kato, K, NIKKEN Consultants; Kuroiwa, M, Matsubara, Y, Tottori Univ; Noda, H, Tottori Univ of Environmental Studies, Japan

Shoreline Configuration Equilibrated with Protective Structures
Koh, R, Port Hydraulic Research Center, Turkey

Erosion of an Artificial Beach Constructed on Reclaimed Land
Yoneda, N, Sugo, Y, Yauchi, E, Chiba Inst of Technology, Japan

59. GEOTECH VII : Foundation (V. 2)

Wednesday May 26 14:00 Port cros, Hotel

Chair: Kim, S S, Hanyang Univ, Korea
Co-Chair: Audibert, J M E, Fugro-McClelland Marine Geosciences; USA

Earthquake Resistant Foundation Retrofit Designs for Offshore and Coastal Embankments

Adalier, K, Florida State Univ; Pamuk, A, Zimmie, T F, Rensselaer Polytechnic Inst, USA

Model Tests in Saturated Sand to Investigate the Behaviour of Multi-footing Caisson Foundation for Offshore Wind Turbines

Kelly, R B, Houlsby, G T, Byrne, B W, Martin, C M, Univ of Oxford, UK

Recovery of Wall Friction after Penetration in Skirt Suction Foundation

Masui, N, Obayashi Corp, Japan

Penetration Analysis of Spudcan Foundation in Layered Soils

Mehryar, Z, Hu, Y, Curtin Univ of Technology, Australia

Study on the Horizontal Bearing Capacity of Bucket Foundations

Liu, Z W, Win, C R, Tianjin Univ, China

A 3-D Quality Control System for Foundation Constructions

Tamura, M, Building Research Inst; Sato, H, Mizutani, Y, Osakabe, T, Kouda, M, Makiuchi, K, Kawamura, M, Nihon Univ, Japan

Deformation Analysis of Offshore Structure-ground System with Change in Rigidity and Strength of Sand Ground

Yokohama, S, Miura, S, Hokkaido Univ, Japan

Case Study on Progressive Displacement Method Constructed in the South Coastal Area in Korea

Kim, S S, Hanyang Univ; Shin, H Y, Chung-Ang Univ; Han, S J, Hanyang Univ; Sym, S H, Samsung Corp, Korea

60. AQUABIO MECHANICS & ROBOTICS (V. 2)

Wednesday May 26 14:00 Porquerolles, Hotel

Chair: Kato, N, Osaka Univ, Japan
Co-Chair: Wheeldon, H, ECA, France

Biology-inspired Precision Maneuvering of Underwater Vehicles (Part 3)

Kato, N, Osaka Univ; Liu, H, Chiba Univ; Morikawa, H, Shinshu Univ; Ando, Y, Shigetomi, T, Osaka Univ, Japan

Mechanical Characteristics of Caudal Fin Resulting from Caudal Muscle-skeletal Structure of Bluefin Tuna

Morikawa, H, Yusa, K, Kobayashi, S, Shinshu Univ, Japan

Controlling Underwater Robots with Electronic Nervous Systems

Ayers, J, Inst for Non-linear Science/Northeastern Univ, USA; Volkovskii, A, Rukoy, N, Selverston, A, Abarbanel, H, Rabinovich, M, Inst for Non-linear Science

Development of a Novel Type of Underwater Micro Biped Robot with Multi DOF

Guo, S X, Okuda, Y, Kagawa Univ; Asaka, K, Osaka National Research Inst, AIST, Japan

Generation of Movement for Multi-link Propulsion Mechanism in Fluid

Kobayashi, S, Kameyama, T, Morikawa, H, Shinsyu Univ, Japan

Research on Patrol Algorithm of Multiple Behavior-based RoboFishes
Sang, H, Wang, S, Tan, M, Zhang, Z, Inst of Automation, CAS, China

The SeaKeeper Remote Minehunting System
Ferguson, J S, ISE Ltd, Canada; Waquet, P, DCN SA, France

An Optical Control for Multiple Unmanned Underwater Crawling Vehicles
Lee, K H, US Navy Coastal Systems Station, USA

A Novel Deep-sea Variable Buoyancy Control System
Bagley, P M, Jamieson, A J, Player, A, Univ of Aberdeen, UK

ISOPE Friction Stir Welding Symposium
61. SW III: Steels and Alloys (V. 4)

Wednesday May 26 14:00 Raimu 1

Chair: Threadgill, P L, TWI Ltd, UK
Co-Chair: Sorensen, C D, Brigham Young Univ, USA

Friction Stir Welding and Processing of Ferritic Steels
Nelson, T W, Su, J Q, Brigham Young Univ, USA

Friction Stir Welding Equipment and Method for Joining High Melting Temperature Alloy Pipe
Packer, S M, MegaStir Technologies; Matsunaga, M, Tecnar Tooling, USA

A Microstructural Study of Friction Stir Welded Joints of Carbon Steels
Ozekcin, A, Jin, H, Koo, J Y, Bangaru, N V, Ayer, R, ExxonMobil Research and Engineering; Packer, S, MegaStir Technologies, USA

Friction Stir Welding of Duplex Stainless Steels
Steel, R J, MegaStir Technologies; Sterling, C J, Brigham Young Univ, USA

Microstructural Evolution of 304 Austenitic Stainless Steel during Friction Stir Welding
Kokawa, H, Park, S H, Sato, Y S, Tohoku Univ; Okamoto, K, Hirano, S, Inagaki, M, Hitachi Ltd, Japan

Friction Stir Welding of Superplastic Zn-22Al Alloy
Nishihara, T, Kokishikan Univ, Japan

62. PIPELINES/RISERS/MOORING III (V. 2)

Wednesday May 26 14:00 Raimu 2

Chair: Gresnigt, A M, Delft Univ of Technology, The Netherlands
Co-Chair: Nystrom, P R, ABB Offshore Systems, Norway

Ultimate Stress Analysis for Subsea Pipeline Design against Earthquake
Duan, M L, China Classification Society; Sun, Z C, Fudan Univ; Gao, X, China Classification Society; Chen, D C, Peking Univ; Jia, X, Su, J, CNOOC Research Center, China

Seismic Response Analysis on Free Spanning Submarine Pipeline
Zhou, J, Li, X, Fan, Y F, Dalian Univ of Technology; Liu, Q T, Victory Oil, China

Expansion and Buckling Design for Pipe-in-pipe Systems Laid on an Uneven Seabed
Nystrom, P R, Tormes, K, Rundsag, J O, Ayele, J, ABB Offshore Systems, Norway

General Expansion and Buckling Behaviour of Pipe-in-pipe Systems
Tormes, K, Rundsag, J O, Nystrom, P R, ABB Offshore Systems, Norway

Global Buckling Behaviour of Internally Clad Pipelines

Tornes, K, Nystrom, P R, Bjordal, K, Rundsag, J O, ABB Offshore Systems, Norway

Elastic and Inelastic Upheaval Buckling of Pipelines

Rundsag, J O, Tornes, K, Nystrom, P R, ABB Offshore Systems, Norway

63. OCEAN & WIND ENERGY II (V. 1)

Wednesday May 26 14:00 Dumont

Chair: Kuo, C, Univ of Strathclyde, UK

Co-Chair: Zaaier, M B, TU-Delft, The Netherlands

Floating Windfarms for Shallow Offshore Sites

Henderson, A R, Ceasa, UK ; Bulder, B, ECN ; Huijismans, R, MARIN ; Pierik, J, ECN ; Snijders, E, MSC ; van Hees, M, MARIN ; Wijnants, G H, Wolf, M J, TNO-BOUW ; Zaaier, M B, TU-Delft, The Netherlands

Reliability of Offshore Wind Turbines against Wind and Wave Loading

Manuel, L, Saranyasontorn, K, Univ of Texas at Austin ; Sweetman, B A, Texas A&M Univ at Galveston, USA

Contributions of Naval Architecture to Offshore Wind Energy Devices

Kuo, C, Sukovoy, L, Univ of Strathclyde, UK

Hydrodynamic Loading on Offshore Wind Turbines

Henderson, A R, Ceasa, UK ; Zaaier, M B, Delft Univ of Technology, The Netherlands

Numerical Analysis of Large-scale Offshore Vertical Axis Wind Turbine

Cheboxarov, V V, Cheboxarov, V V, Bekker, A T, Far Eastern State Technical Univ, Russia

Modelling and Analysis of Foundations of Offshore Wind Turbines

Zaaier, M B, Delft Univ of Technology, The Netherlands

Analysis of the Fatigue Damage on the Large Scale Offshore Wind Turbines Exposed to Wind and Wave Loads

Yamashita, A, Nippon Steel ; Sekita, K, Tokai Univ, Japan

64. ADVANCED SHIP TECHNOLOGY II (V. 4)

Wednesday May 26 14:00 Puget

Chair: Park, R S, Univ of Ulsan, Korea

Co-Chair: Yamaguchi, S, Kyushu Univ, Japan

A Stochastic Model for Evaluation of Seakeeping Performance

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

The Performance Test of Kogas Membrane for Applying to the Large Scale LNG Storage Tank and LNG Carrier

Kim, Y K, O, B T, Yoon, I S, Hong, S H, Yang, Y M, Korea Gas Corp, Korea

A Numeric Method for Predicting Wash Waves of SES

Xie, N, Jasionowski, A, Vassalos, D, Univ of Glasgow and Strathclyde, UK

Sail and Flow Interaction Taking into Account the Deformation and the Displacements of the Stay

Mounoury, S, Hauville, F, Institut de Recherche de L'Ecole Navale, France

Effect of Interaction between Hybrid-sails and the Hull on an Oceangoing Sailing

Fujiwara, T, Kitamura, F, Ueno, M, Minami, Y, National Maritime Research Inst, Japan

Position Control of Floating Structure by Neural-net Controller
Nakamura, M, Kyushu Univ; Shima, T, Nissan Motor, Japan

Recent studies on Polar Restriction Diagrams for Dynamically Positioned Rigs
Oliveira, C A F, Vardaro, E, Pallaoro, A A, Petrobras; Jabob, B P, Vieira, L T, COPPE/UF RJ, Brazil

Deepwater Offshore Loading Using Dynamic Positioning of Tankers
Kaasen, K E, MARINTEK, Norway; Olsen, C W, Remora Technology; Steube, C G, ConocoPhillips Marine, USA

WEDNESDAY 18:30

Conference Annual Banquet

18:30

Hyeres

Bus departs at 18:30 from the Neptune Convention Center.

THURSDAY 08:00

65. OFFSHORE VIII: FPSO/SPAR/TLP/VLFS 6 (V. 1)

Thursday May 27 08:00 Vauban

Chair: Haver, S, Statoil, Norway
Co-Chair: Park, I K, Hyundai Heavy Industries, Korea

First- and Second-order Hydrodynamic Forces and Moments between Two Offshore Structures in Waves
Ha, M K, Kim, M S, Park, J J, Lee, J H, Samsung Heavy Industries, Korea

A Finite-element Computation for Three-dimensional Problems of Sloshing in LNG Tank
Kim, J W, American Bureau of Shipping, USA; Sim, I H, Daewoo Shipbuilding & Marine Eng, Korea; Shin, Y, American Bureau of Shipping, USA; Park, J S, Daewoo Shipbuilding & Marine Eng, Korea; Bai, K J, Seoul National Univ, Korea

Design Considerations for Modular FPSO Hull System
Sliwinski, M, Vencor Technologies, Canada

Investigation on Hydrodynamic Performance of a Turret Moored FPSO by Using Hybrid Model Test Technique
Zhang, H M, Yang, J M, Xiao, L F, Shanghai Jiao Tong Univ, China

Testing a FPSO System in Waves
Sales, J S, Vinicius, Sphaier, S H, COPPE/UF RJ; Maseti, I Q, Henrique S, Correa, S, Petrobras, Brazil

Performance of BZ25-1 FPSO Exposed to Various Environments during Operation
Xiao, L F, Yang, J M, Peng, T, Li, X, Shanghai Jiao Tong Univ, China

66. HYDRO Nonlinear Waves I (V. 3)

Thursday May 27 08:00 Colbert

Chair: Ferrant, P, Ecole Centrale de Nantes, France
Co-Chair: Huijsmans, R H M, MARIN, The Netherlands

The Generation and Propagation of Deep Water Multichromatic Regular and Irregular Nonlinear Long-crested Surface Waves

Baddour, R E, Inst for Marine Dynamics, NRC; Parsons, W, College of the North Atlantic, Canada

Generation of Fully-nonlinear Prescribed Wave Fields Using a Spectral Model

Bonnefoy, F, Le Touze, D, Ferrant, P, Ecole Centrale de Nantes, France

Performances and Applications of a 3D Wave Tank Accelerated by a Fast Multipole Algorithm

Fochesato, C, Dias, F, ENS-Cachan, France; Grilli, S, Univ of Rhode Island, USA

Numerical Simulation of Fully-nonlinear Wave Propagation by Use of a Viscous Numerical Wave Tank (vNWT)

Park, J C, Pusan National Univ; Heo, J K, Hanjin Heavy Industries; Lee, Y G, Inha Univ; Chun, H H, Pusan National Univ, Korea

Numerical Simulations of Fully Nonlinear Wave Motions in a Viscous Numerical Wave Tank (vNWT)

Park, J C, Chun, H H, Pusan National Univ; Park, I R, KRISO/KORDI, Korea

Comparative Analysis of Finite Element Models Based on the Nonlinear and Linear Time Dependent Mild-slope Equation

Fortes, C J E M, LNEC, Portugal

Laboratory Experiments with an Optical Instrument for Measuring, Recording and Imaging Washover

Yankielun, N E, US Army Cold Regions R&E Lab; Clark, J H, Naval Undersea Warfare Center, USA

67. COASTAL ENG V: Tsunami & Current (V. 3)

Thursday May 27 08:00 Bonaparte

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

Co-Chair: Mizutani, N, Nagoya Univ, Japan

3D Direct Numerical Analysis of Wave-Flow Interaction in a Port

Mizutani, N, Hur, D S, Nagoya Univ, Japan

Study on Disaster Prediction and Tsunami Refuge Route to Nankai Earthquake

Okabayashi, K, Tagaya, K, Takeuchi, T, Ono, M, Kochi National College of Technology, Japan

Experimental Study of Tsunami Inundation in Coastal Urban Area

Yasuda, T, Hiraishi, T, Port and Airport Research Inst, Japan

Numerical Simulation of Wave-induced Currents behind a Breakwater and Comparison with PIV Measurements

Lee, J L, Park, C S, Sungkyunkwan Univ, Korea

68. GEOTECH VIII : Soil & Stability 1 (V. 2)

Thursday May 27 08:00 Port cros, Hotel

Chair: Chien, L-K, National Taiwan Ocean Univ, Taiwan, China

Improvement of Soft Hong Kong Marine Deposits by Mixing with Cement

Yin, J H, Hong Kong Polytechnic Univ, Hong Kong

Development of the Ready-mixed Soil Material

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

Electrochemical Cementation of Calcareous Sand for Offshore Foundations

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

A Study of Ground Improvement for Silty Clay Using Electro-osmotic Chemical Grouting

Ou, C Y, Yang, Y K, National Taiwan Univ of Science and Technology;
Chien, S C, Lan-Yang Inst of Technology, Taiwan, China

Properties of Soilcrete Stabilized with Jet Grouting

Fang, Y S, National Chiao Tung Univ; Kuo, L Y, Ministry of Transportation and Communications, Taiwan, China

69. TOWED CABLES & UNDERWATER OBSERVATION (V. 2)

Thursday May 27 08:00 Porquerolles, Hotel

Chair: Drogou, J F, IFREMER, France

Co-Chair: Sim, J S, KORDI, Korea

Dynamic Analysis of a Towed Underwater Vehicle System

Haugen, G K, Grahl-Madsen, M, Bergen University College, Norway

Technical Approach and Improvement of Air-gun Towing System

Shibata, H, Ohwatari, Y, Katayama, T, Nippon Marine Enterprises; Baba, K, Momma, H, JAMSTEC, Japan

Experimental Study on a Controllable Underwater Towed System

Ye, J W, Wu, J M, South China Univ of Technology, China

Design and Modeling of Synthetic Electro-Optical-Mechanical Cables For Use with Moored-Buoy Observatories

Grosenbaugh, M, Paul, W, and Frye, D, Woods Hole Oceanographic Institution, USA

First Tests of Penfeld: A New Seabed Penetrometer

Meunier, J, Sultan, N, Jegou, P, Harmegnies, F, IFREMER, France

Near Real Time Ocean Observatory Design

Waldmann, C, Univ of Bremen, Germany

Marine Architecture and Installation Methods Developed for the Deep Sea Neutrino Telescope

Valdy, P, IFREMER, France

70. MATERIALS/WELDING/FATIGUE III (V. 4)

Thursday May 27 08:00 Raimu 1

Chair: Murakawa, H, Osaka Univ, Japan

Production and Properties of High-Strength Steel Plates for Offshore Applications

Kern, A, Niessen, T, Schriever, U, Tschersich, H-J, ThyssenKrupp Stahl, Germany

On the Automation System for Plate Forming by Line Heating

Lee, J S, Univ of Ulsan, Korea

Assessment of Corrosion Defects in Pipelines

Andrade, E Q, Benjamin, A C, Petrobras, Brazil

Integrity Assessments of High Pressure Pipelines with Axial Flaws

Ruggieri, C, Univ of Sao Paulo, Brazil

Modelling of the Manufacturing Process of Tight Fit Pipe

Focke, E S, TU-Delft/Heerema Marine Contractors Nederland; Gresnigt, A M, Meek, J, TU-Delft, The Netherlands; Nakasugi, H, Kuroki T&P, Japan

Engineering Critical Assessment of Girth Welds in Laterally Buckling Pipelines

Sriskandarajah, T, Sreetharan, T, Bedrossian, A, Kellogg Brown and Root, UK

71. PIPELINES/RISERS/MOORING IV (V. 2)

Thursday May 27 08:00 Raimu 2

Chair: Moshagen, H, Statoil, Norway

A Probabilistic Model of Hummocks Impact on the Sea Bottom and Subsea Pipelines

Bekker, A T, Sabodash, O A, Vavilin, R V, Far-Eastern State Technical Univ, Russia

Estimation of the Action of Gas Pipeline on the Permafrost Soils Using as Foundations

Minkin, M, Magomedgadzhieva, M, Dmitriyeva, S, OPIRS, Russia

The Complex Damping Dynamic Characteristic Analysis of Submarine Free Spanning Pipelines

Fu, Q, Guo, H Y, Ocean Univ of China, China

Response of an Armoured Riser for Arctic Offshore Loading

Bonnemaire, B, NTNU, Norway

Numerical Analysis of Marine Riser's Dynamic Behaviour

Ljustina, A M, Senjanovic, I, Parunov, J, Rudan, S, Univ of Zagreb, Croatia

Integrated Fluid-structure Model (RVM-FEM) for Riser Analysis

Martins, S B C, Sphaier, S H, Neto, S F S, COPPE/UFRJ, Brazil

Natural Frequencies and Mode Shapes of Beams with Step Change in Cross-section

Kim, Y C, Nam, A V, Yeungnam Univ, Korea

72. OCEAN & WIND ENERGY III (V. 1)

Thursday May 27 08:00 Dumont

Chair: Hong, S Y, Korea Research Inst of Ship and Ocean Eng, Korea

Effect of LIMPET Control Algorithms on Transmission Network Power Quality

Boake, C B, Shiono, M, Folley, M, Queen's Univ Belfast; Ellen, H, Wavegen, UK

Marine Energy in the Strait of Gibraltar: A Case of Dike Built Enclosing the Strait

Cañada, F, Spain

Hydraulic Characteristic of Floating Buoy for Tidal Current Power Generation

Kashiwabara, T, Nakajima, N, Kochi National College of Technology; Kanemoto, T, Kyushu Inst of Technology; Nakanishi, Y, Kanagawa Univ, Japan

A Hybrid Model Test of a Deep Water OTEC Mooring System

Hong, S, Kim, J H, Hong, S W, Hong, S Y, KRISO/KORDI, Korea; Jalihal, P, Ravindran, M, NIOT, India

The Oscillating Wave Surge Converter

Folley, M, Whittaker, T, Boake, C, Osterried, M, Queen's Univ Belfast, UK

Non-linear Simulation of Wave Energy Devices

Mingham, C G, Gian, L, Causon, D M, Ingram, D M, Manchester Metropolitan Univ, UK

73. COLLISION, IMPACT & DAMAGE (V. 4)

Thursday May 27 08:00 Puget

Chair: Ueda, Y, Osaka Univ, Japan

Co-Chair: Varyani, K S, Univ of Glasgow, UK

Numerical Experiments on Slamming of Rigid Wedge-shaped Bodies

Causon, D M, Mingam, C G, Ingram, D M, Qian, L, Manchester Metropolitan Univ, UK

SPH and Finite Volume Simulations of a Wedge Water Entry

Doring, M, Oger, G, Leroyer, A, Alessandrini, B, Visonneau, M, Ecole Centrale de Nantes, France

Visualization of Shipping Water on Running Ship Foredeck in Regular Head Seas

Tanizawa, K, Sawada, H, Hoshino, K, Tsujimoto, M, National Maritime Research Inst, Japan

Mechanics of Ship Grounding

Kajaste-Rudnitski, J, Varsta, P, Matusiak, J, Helsinki Univ of Technology, Finland

Dynamic Analysis of the Drillstring Protection System from Ice-Floe Impacting

Tikhonov, V S, Safronov, A I, Gelfgat, M Y, Aquatic Co, Russia

A Simplified Numerical Simulation for the Estimation of Transient Behavior of a Back Face Seated Occupant

Shibue, T, Ohmasa, M, Kinki Univ, Japan

THURSDAY 10:45

74. OFFSHORE IX: Offshore Engineering 1 (V. 1)

Thursday May 27 10:40 Vauban

Chair: Boswell, L F, City Univ, UK

Co-Chair: Jain, A K, IIT Delhi, India

Comparative Evaluation of Jack-up and Jacket Structures Using Non-linear Dynamic Analysis

Panagiotopoulos, P, Izzuddin, B A, Imperial College London; Hamdan, F, The Steel Construction Inst, UK

Numerical Simulation of Local Scour around a Large-scale Vertical Circular Cylinder due to Combined Wave and Current Action

Li, Y C, Liu, D L, Cheng, B, Li, L P, Dalian Univ of Technology, China

Seismic Fragility Analysis of Pile-founded Offshore Platforms

Yasseri, S F, Kellogg-Brown & Root (UK), UK; Ossei, R, France

Using Neural Networks in Determining Random Wave-induced Hydrodynamic Forces Acting on a Cylindrical Pile

Yaghin, M A L; Sanaaty, B, Urmia Univ, Iran

Assessment of Base-structure Connection by Using Modal Testing Method for Offshore Structures

Khiem, N T, Son, D, Inst of Mechanics; Luong, H X, Le Quy Don Univ; Tien, P H, NCST, Vietnam

Static Versus Dynamic Response of Jackets Exposed to Wave-in-deck Loading

Van Raaij, K, Jakobsen, J B, Stavanger University College, Norway

Modelling of Marine Growth Effect on Offshore Structures Loading Using Kinematics Field

Schoefs, F, Univ of Nantes; Boukinda, M L, Belorgey, M, Univ of Caen, France

75. HYDRO Nonlinear Waves II (V. 3)

Thursday May 27 10:40 Colbert

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

Co-Chair: Rey, V, Univ of Toulon, France

Two-phase Flow Modelling of Breaking Waves without Interface Reconstruction

Duval, M, Astruc, D, Legendre, D, Inst de Mecanique des Fluides de Toulouse, France

Large Eddy Simulation of Wave Overtopping on Nonuniform Cartesian Cut-sell Grids

Li, T Q, Troch, P, De Rouck, J, Ghent Univ, Belgium

Large Eddy Simulation of Vortices Induced by Plunging Breaking Waves

Lubin, P, Vincent, S, Caltagirone, J-P, Ecole Nationale Supérieure de Chimie et de Physique de Bordeaux; Abadie, S, ISA-BTP, France

Laboratory PIV Measurements of Waves Breaking on a Beach

Kimmoun, O, ESIM; Branger, H, Zucchini, B, IRPHE, CNRS, France

Energy Dissipation and Transfer in Breaking Waves Generated by Directional and Multi-frequency Focusing in Deep Water

Hong, K Y, KRISO/KORDI, Korea; Conde, E M, IPN, Mexico

Flow Field Measurements in Broken Waves and Bores

Longo, S, Univ of Parma; Petti, M, Univ of Udine, Italy

Numerical Modeling and Experiments for Solitary Wave Shoaling and Breaking over a Sloping Beach

Grilli, S, Gilbert, R, Univ of Rhode Island, USA; Lubin, P, Vincent, S, MASTER-ENSCP; Astruc, D, Legendre, D, Duval, M, IMFT; Kimmoun, O, ESIM; Branger, H, IRPHE; Drevard, D, Fraunie, P, LSEET; Abadie, S, LaSAGEC, France

76. COASTAL ENG VI: Estuary Process (V. 3)

Thursday May 27 10:40 Bonaparte

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

Influence of Stabilization Work of a Narrow Inlet on Tidal Response of an Estuary

Arita, M, Aoki, S, Toyohashi Univ of Technology, Japan

The Coastal Erosion and Evolution of the Abandoned Lobe of the Yellow River Delta

Li, A L, Li, G X, Cao, L H, Yang, R M, Ocean Univ of China, China

Field Measurement of Tidal Oscillation in an Estuary with a Narrow Inlet

Aoki, S, Arita, M, Toyohashi Univ of Technology; Deguchi, I, Osaka Univ, Japan

Field Measurement of Turbidity Maximum in Hiji River Estuary

Ifuku, M, Ehime Univ, Japan

Shallow Water Bathymetric Surveys by Using Model Boat

Shyue, S W, National Sun Yat-sen Univ; Lai, C P, Lai, C T, Strong Co; Chiu, Y F, Center of Harbor and Marine Technology, Taiwan, China

77. GEOTECH IX : Soil & Stability 2 (V. 2)

Thursday May 27 10:40 Port cross, Hotel

Chair: Bang, S C, South Dakota School of Mines and Techn, USA

Co-Chair: Fakas, E, Univ of Western Australia, Australia

A New Method for Seismic Slope Stability Analyses of Submarine Normally Consolidated Clays

Oudhof, J, Fugro Engineers, The Netherlands

A New Procedure to Determine the Failure of Soil Slopes

Huang, T K, Chang, Y L, National Chung-Hsing Univ, Taiwan, China

Concepts for Mitigation of Spudcan-footprint Interaction

Dean, E T R, Soil Models Limited, UK

Mechanism Investigation on Instability and Failure of Structures in Seabed-wave-structure Coupling System

Liu, H X, Liu, J Q, Tianjin Univ, China

A Preliminary Study on Seabed Instability Induced by Internal Waves

Chen, C Y, Hsu, J R C, National Sun Yat-sen Univ, Taiwan, China

78. UNDERWATER OBSERVATION & INTERVENTION (V. 2)

Thursday May 27 10:40 Porquerolles, Hotel

Chair: Person, R, Ifremer, France

Co-Chair: Grosenbaugh, M, Woods Hole Oceanographic Inst, USA

ESONET: The European Seafloor Observatory Network

Priede, M, Solan, M, Univ of Aberdeen, UK; Mienert, J, Univ of Tromso, Norway; Person, R, IFREMER, France; van Weering, T, Royal NIOZ, The Netherlands; Pfannkuche, O, GEOMAR, Germany; O'Neill, N, CSA Group, Ireland; Tselepidis, A, Inst of Marine Biology of Crete, Greece; Thomsen, L, International Univ Bremen, Germany; Favali, P, Istituto Nazionale di Geofisica e Vulcanologia, Italy; Gasparoni, F, Tecnomare, Italy; Zitellino, N, Istituto di Scienze Marine, CNR, Italy; Millot, C, Lab d'Océanogr et de Biogéochimie, France; Gerber, H, TFH Berlin, Germany; Miranda, M, Centro de Geofísica, Portugal; Klages, M, Alfred Wegener Inst, Germany

Construction of the Eardo Marine Observation Base and Its Operation

Sim, J S, KORDI; Chun, I S, Konkuk Univ, Korea

ASSEM: A New Concept of Observatories for Long Term Seabed Monitoring

Blandin, J, Person, R, IFREMER, France; Strout, J M, NGI, Norway; Briole, P, Ballue, V, IPGP, France; Etiope, G, INGV, Italy; Masson, M, CAPSUM, Germany; Golightly, C R, THALES Geosolutions, Belgium; Lykousis, V, NCMR, Greece; Ferentinos, G, Univ of Patras, Greece

ARENA: A New Scientific Cable-network for Real-time and Long-term Underwater Observation

Asakawa, K, Kawaguchi, K, JAMSTEC; Shirasaki, Y, Univ of Tokyo; Kojima, J, KDDI R&D Labs; Muramatsu, J, NEC Corp; Horiuchi, Y, KDDI R&D Labs; Mikada, H, JAMSTEC, ARENA Committee members, Japan

ORION-GEOSTAR-3: A Prototype of Seafloor Multiparametric Network for Geophysical, Oceanographic and Environmental Monitoring

Beranzoli, L, Istituto Nazionale di Geofisica e Vulcanologia; Calore, D, Tecnomare-ENI SpA; Favali, P, Istituto Nazionale di Geofisica e Vulcanologia; Furlan, F, Tecnomare-ENI SpA, Italy; Marvaldi, J, IFREMER; Nicot, M, Orca Instrumentation, France

Advanced Deepwater Intervention with MODUS – Latest Results from Model Tests and Full-scale Operations

Clauss, G, Hoog, S, TU-Berlin; Gerber, H, TFH Berlin, Germany

Operational Experience with the Deep Sea Salvage Tool GRAB and Possible Application for Oil Pumping in Deep Sea Wrecks

Valdy, P, IFREMER, France; Mearns, D, Blue Water Recoveries, UK

79. MATERIALS/WELDING/FATIGUE IV (V. 4)

Thursday May 27 10:40 Raimu 1

Chair: Tomita, Y, Osaka Univ, Japan

Co-Chair: Lee, J S, Univ of Ulsan, Korea

Three-dimensional Thermal-elastic-plastic FEM Analysis for Predicting Residual Stress and Deformation under Multi-pass Welding

Serizawa, H, Osaka Univ; Shibahara, M, Kanazawa Inst of Tech; Oda, I, Murakawa, H, Osaka Univ, Japan

Development of Heat Input Estimation Technique during Line-heating Process Based on Inverse Heat Conduction Analysis

Tomita, Y, Osawa, N, Hashimoto, K, Osaka Univ; Matsuoka, K, Mitsubishi Heavy Industries; Kikuchi, J, Osaka Univ, Japan

Influence of Heat Input Distribution Parameters on Formation of Pear-shaped Bead Cracking in Narrow Gap Welding

Wu, Y M, Osaka Univ; Shibahara, M, Kanazawa Inst of Tech; Nakamura, T, National Inst for Materials Science; Murakawa, H, Osaka Univ, Japan

A Simple Measuring Method of Welding Inherent Deformation Using Inverse Analysis

Liang, W, Sone, S, Serizawa, Murakawa, H, Osaka Univ, Japan

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

80. PIPELINES/RISERS/MOORING V (V. 2)

Thursday May 27 10:40 Raimu 2

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

Co-Chair: Vogel, H, Seaflex, Norway

Defect Acceptance Criteria of Reeled SCR

Hsu, T M, ChevronTexaco Energy Technology, USA

SLOR Vs SCR for Deepwater Applications: Technical Appraisal

McGrail, J, Lim, F, 2H Offshore Engineering, UK

Allowable Tension and Bending Induced SAF Calculation for Riser System Fatigue Design

Huang, K, Zhang, M, Jin, J, ABB Lummus Global, USA

In-service Monitoring of Fatigue Risers

Vogel, H, Seaflex; Nyhus, K A, Subsea 7; Schouw-Hansen, D K, Fugro, Norway

A System Approach to Marine Terminal Design

Van Driel, M, Meijer, A, Liu, P, INTEC Engineering, The Netherlands

Validation of Methods for Assessment of Mooring Line Damping in Deep Water

Hamilton, J, Kitney, N, Kellogg Brown and Root (UK), UK

81. OCEAN & WIND ENERGY IV (V. 1)

Thursday May 27 10:40 Dumont

Chair: Sarmiento, AJNA, Instituto Superior Tecnico, Portugal

Performance of Wave Power Generating System Installed in Breakwater at Sakata Port in Japan

Suzuki, M, Arakawa, C, Univ of Tokyo ; Takahashi, S, Port and Airport Research Inst, Japan

Overtopping Measurements on the Wave Dragon Nissum Bredning Prototype

Frigaard, P, Kofoed, J P, Rasmussen, M R, Aalborg Univ, Denmark

Non-linear Numerical Simulation of Regular Waves Interaction with Overtopping Wave Energy Converters

Alves, M, Lara, J, Sarmiento, A J N A, Losada, I J, Instituto Superior Tecnico, Portugal

Experimental Study of a Compliant Mooring System for a Floating OWC Device

Hong, S W, Kim, J H, Hong, S Y, Hong, S, KRISO/KORDI, Korea

Wave Energy Absorption by a Submerged Sphere of Variable Radius with a Swinging Single Point Moored Tension Line

Cruz, J M B P, Sarmiento, A J N A, Instituto Superior Tecnico, Portugal

Numerical Performance Investigation of an Array of Heaving Wave Power Converters in Front of a Vertical Breakwater

Mavrakos, S A, Katsaounis, G, National Technical Univ of Athens, Greece ; Nielsen, K, RAMBOLL, Denmark

Evaluation of Energy Obtained by Float-type Wave Generation System

Hadano, K, Taneura, K, Nakano, K, Saito, T, Yamaguchi Univ, Japan

82. COMPOSITES & SMART STRUCTURES I (V. 4)

Thursday May 27 10:40 Puget

Chair: Dutta, P K, USACRREL, USA

Co-Chair: Mouring, S E, US Naval Acadmy, USA

Polymer and Composite Fracture under Deep Sea Pressure Conditions

Davies, P, IFREMER, France; Cartii, D D, Cranfield Univ, UK; Peleau, M, IFREMER, France; Partridge, I K, Cranfield Univ, UK

Composite Pressure Vessel Performance at Cryogenic Temperatures, Creating a "Building Block" Database

DeLay, T K, NASA/Marshall Space Flight Center; Patterson, J, HyPerComp Engineering, USA

Shock Loading Effects on the Residual Strength and Stiffness of Composite Panels

Mouring, S E, US Naval Academy, USA; Louca, L A, Imperial College, UK

Response of Polymer Composite Helicopter Blades to Thermal De-icing

Ryerson, C C, Dutta, P K, US Army Cold Regions R&E Lab; Pergantis, G, US Army Research Lab, USA

Evaluation and Use of CFRP in Full-scale Structure

Grace, N F, Lawrence Technological Univ, USA

Development of Composite Prototype Module for the Improved Navy Lighterage System (INLS)

Garala, H J, Naval Surface Warfare Center, USA

Hydroscopic and Low Temperature Effects on Hopkinson-bar Notch Toughness in Glass FRP's

Kellogg, K G, Patil, P E R, Kallmeyer, A R, North Dakota State Univ; Dutta, P K, US Army Cold Regions R&D Lab, USA

Microstructure and Wear Behaviour of Squeeze Cast 7075 Al-A1203 Particle Composites

Daoud, A A Y, Abou El-Khair, M, Central Metallurgical R&D Inst, Egypt

THURSDAY 13:00

83. OFFSHORE X: Offshore Engineering 2 (V. 1)

Thursday

May 27

13:00

Vauban

Chair: Choo, Y S, National Univ of Singapore, Singapore

Introduction of Detailed Structural Design for Prototype Floating Drilling and Production Project

Kim, Y M, Kim, M S, Kim, M S, Daewoo Shipbuilding & Marine Engineering, Korea

MCS Evaluations on Dynamic Responses of an Offshore Structure with Uncertainties

Kawano, K, Kimura, Y, Fukusako, H, Kagoshima Univ; Takeshi, I, Osaka Sangho Univ, Japan

Lifting of Large Ship Hull Block Using 4 Cranes

Choi, K S, Korea Maritime Univ; Kim, D J, Pukyong National Univ, Korea

Sensitivity Analysis on the Governing Constraints for a Conventional Moderate Sized Offshore Float-over Deck Installation

O'Neill, L A, Fakas, M, Univ of Western Australia, Australia

Research of Oil-water Separation Compound Hydrocyclone

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

Experimental Investigation of Resistance and Trim of LiftBoat at 5-9 kts

Latorre, R G, Univ of New Orleans, USA

84. HYDRO Nonlinear Waves III (V.3)

Thursday May 27 13:00 Colbert

Chair: Fraunie, P, Univ Toulon et du Var, France,

Jet-wall Interaction in Shallow Waters

Lalli, F, APAT; Romano, G P, Univ degli Studi di Roma "La Sapienza", Italy

Comparative Analysis of Numerical Wave Models for Wave Propagation over Varying Sloping Bottoms

Fil, L, UNL; Fortes, J, LNEC; Didier, E, UNL; Santos, J A, LNEC, Portugal; Clement, A H, Ecole Centrale de Nantes, France

Linear Stability Analysis of Strongly Nonlinear, Periodic Gravity Waves in Shallow Water

Francius, M, Kharif, C, IRPHE-CNRS, France

Experimental Validation of Prediction Methods for Wave Kinematics in the Coastal Zone

Chevalier, C, Centre Francais du Littoral; Luck, M, Benoit, M, EDF R&D, France

Unsteady Interaction of the Surface Gravity Waves with the Nonuniform Current

Lee, K J, Shugan, I, Kim, K H, Chosun Univ, Korea

Statistical Behaviour of Bound Long Waves in Coastal Regions

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

Modelling and Experimental Validation for Tsunami Generated by Submarine Mass

Enet, F, Grilli, S T, Univ of Rhode Island, USA

85. COASTAL ENG VII: Shoreline Ship Operations (V.3)

Thursday May 27 13:00 Bonaparte

Chair: Aoki, S, Toyohashi Univ of Technology, Japan

Co-Chair: Hiraishi, T, Port and Airport Research Inst., Japan

Time-domain Simulation of Floating Pier and Ship Interaction Induced by Harbor Resonance

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

Research on Relations between Wave Growth and Atmospheric Depressions from Viewpoint of Ship Operations

Sasa, K, Mizui, S, Hiroshima Nat'l College of Maritime Tech; Nagai, T, Port and Airport Research Inst, Japan

Measurement of Wave Direction of Ship Waves Generated by a Small Real Vessel

Shiotani, S, Kobe Univ of Mercantile Marine; Fujii, H, Oshima National College of Maritime Technology; Kouguchi, N, Ishida, H, Kobe Univ of Mercantile Marine, Japan

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

Velocity and Temperature Factor on the Performance of Solid Type Rubber Fender

Yamase, S, Bridgestone Corp; Ueda, S, Tottori Univ, Japan

An Application of Boussinesq Equations to Bragg Reflection of Water Waves

Yang, B D, Hsu, T W, Chou, S E, Ou, S H, National Cheng Kung Univ, Taiwan, China

86. GEOTECH X : Soil & Stability 3 (V.2)

Thursday May 27 13:00 Port cross, Hotel

Chair: Nabeshima, Y, Osaka Univ, Japan

Wave-induced Flow Failure of Anisotropic Ground Bearing Coastal Structure and Its Countermeasure Method

Kawamura, S, Muroran Inst of Technology; Miura, S, Hokkaido Univ; Hayashi, H, North Japan Port and Harbor Consultants, Japan

The Research on the Seawall Enclosing Operation of Huge Reclamation Project

Chiu, C C, Taichung Harbor Bureau; Shyu, J, James Shyu & Associates, Taiwan, China

Predict the Reasonable Pumpage by Quasi 3-dimensional Analysis in Basin Area

Ehi, T, Chuo Fukken Consultants; Matsui, T, Osaka Univ; Hachiya, M, Adachi, T, Chuo Fukken Consultants, Japan

Experimental Investigation of a Novel Perforation Technique in Petroleum Wells – Perforation by Drilling

Rahman, M A, Koksa, M, Islam, R, Dalhousie Univ, Canada

Prediction of Wooden House Damages due to Settlement Induced by Excavation Work and Deformation Characteristics of Braced Walls

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

87. OPTICAL & ACOUSTICAL MAPPING (V.2)

Thursday May 27 13:00 Porquerolles, Hotel

Chair: Cadiou, J F, IFREMER, France

Co-Chair: Nakamura, M, Kyushu Univ., Japan

High Resolution Swath Bathymetric Seabed Mapping with the ROV Victor 6000

Opderbecke, J, Simeoni, P, Allais, A-G, Edy, C, Bisquay, H, IFREMER, France

A Laser-assisted Vision Sensor for AUV Navigation

Dagleish, F R, Tetlow, S, Allwood, R L, Cranfield Univ, UK

Benthic Contour Mapping with a Profiler Sonar

Barat, C, Univ of Nice; Rendas, M-J d, CNRS, France

Seabed Video Mosaicking with MATISSE: A Technical Overview and Cruise Results

Allais, A-G, Borgetto, M, Opderbecke, J, Pessel, N, Rigaud, V, IFREMER, France

250 W Experimental Underwater LD Light

Dacaudin, J M, Light Technologies; Normand, M, Chable, B, DYNASUB; Cadiou, J F, IFREMER, France

Underwater Image Mosaic Correction

Borgetto, M, Jauffret, C, Univ Toulon et du Var; Rigaud, V, IFREMER, France

Multiparametric In-situ Spectroscopic Measuring System for Coastal Monitoring Employed under Field Conditions in the Baltic Sea

Kronfeldt, H-D, Schmidt, H, Maiwald, M, Gallasch, L-H, Konat-Stepowicz, J, TU-Berlin, Germany; Lahaitre, M, LeNoac'h, A, IFREMER, France; Pfannkuche, J, Amann, H, TU-Berlin, Germany; Szymczak-zyla, M, Filipkowska, A, Lubecki, L, Kowalewska, G, Polish Academy of Sciences, Poland; Esteban-Martinez, O, Navarrete, M-C, Diaz-Herrera, N, Univ Complutense Madrid, Spain; Gibson, C, Mac Craith, B, Dublin City Univ, Ireland; Leclercq, M, Jobin Yvon, France

Comparison of Several Methods for *In-situ* Size Measurements of Moving Animals

Cadiou, J F, Trenkel, V M, Rochet, J-M, IFREMER, France

88. MATERIALS/WELDING/FATIGUE V (V. 4)

Thursday May 27 13:00 Raimu 1

Chair: Kern, A, ThyssenKrupp Stahl, Germany

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

Effects of Cutting and Welding on Hardness Values of Duplex and Superduplex Stainless Steel Weldments

Heo, H Y, Sun, H S, Jang, K B, Cho, S H, Jang, T W, Samsung Heavy Industries, Korea

Prediction and Control of Welding Distortions in Stiffened Hull Blocks Using Inherent Strain Approach

Jang, C D, Rhyu, H S, Seoul National Univ; Lee, C H, Samsung Heavy Industries, Korea

Development of Welding Deformation Control Method for Thin Panel Block Structure Using Mechanical Tensioning Method

Kim, S I, Lloyd's Register Asia; Heo, J H, Daewoo Shipbuilding & Marine Engineering, Korea

Management of Weld-induced Deformation for Panel Blocks

Lee, J S, Univ of Ulsan, Ulsan, Korea

Effect of Ambient Pressure on Arc-electrode Behavior

Ogawa, Y, Matsuda, J, Morita, T, National Inst. of AIST, Japan

Seam Tracking in Underwater Welding

Zhong, J, Wang, G R, Liao, X, South China Univ of Technology, China

Effect of Welding Technique on the Weld Morphology and Hardness of Supermartensitic 13% Cr Steels

Neubert, V, DN GmbH, Germany; El-Mahallawy, N, Ain Shams Univ, Egypt; Hoffmeister, H, ISSV; Hoffmann, R, H. Butting Edelstahlrohre, Germany

89. PIPELINES/RISERS/MOORING VI (V. 2)

Thursday May 27 13:00 Raimu 2

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

An Experimental Investigation on the Snap Loading of Marine Cables

Huang, S, Vassalos, D, Univ of Glasgow and Strathclyde; Kourouklis, A, Univ of Paisley, UK

Dynamic Tension on Mooring Lines: Comparison of Numerical and Experimental Results

Simos, A N, Fajarra, A L C, Univ of Sao Paulo, Brazil

Investigation of the Damage-dependence Response of Mooring Ropes

Beltran, J F, Williamson, E B, Univ of Texas at Austin, USA

Assessment of Cable Models for Synthetic Mooring Lines

Ghoreishi, S R, Messenger, T, Cartraud, P, Ecole Centrale de Nantes; Davies, P, IFREMER, France

The Calculation and Analysis for the 3-D Non-linear Mooring Lines in the Time Domain

Xiao, Y, Wang, Y Y, Dalian Univ of Technology, China

90. OCEAN & WIND ENERGY V (V. 1)

Thursday May 27 13:00 Dumont

Chair: Setoguchi, T, Saga Univ, Japan

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

Practical Parametric Study on the Analysis and Design of Impulse Turbine for OWC-type Wave Energy Conversion

Hyun, B S, Korea Maritime Univ ; Lee, Y Y, Hong, S W, KRISO, Korea

A Study of a Wave Energy Conversion System Using Four Ball Screw Type Turbine

Matsuoka, T, Nakazaki, H, Omata, K, Meiji Univ, Japan

The Pelamis Wave Energy Converter: Numerical and Experimental Hydrodynamic Modelling

Retzler, C, Pizer, D, Ocean Power Delivery, UK

Wave Energy Converter with a Linear Generator Subjected to Different Simulated Ocean Waves

Danielsson, O, Thorburn, K, Eriksson, M, Bernhoff, H, Leijon, M, Uppsala Univ, Sweden

Unsteady Flow Phenomena of Wells Turbine in Deep Stall Condition

Setoguchi, T, Kinoue, Y, Mohammad, M, Kaneko, K, Saga Univ ; Takao, M, Matsue National College of Technology, Japan

Effect of Blade Profile on the Performance of Large-scale Wells Turbine

Takao, M, Matsue National College of Technology, Japan ; Thakker, A, Abdulhadi, R, Univ of Limerick, Ireland ; Setoguchi, T, Saga Univ, Japan

91. COMPOSITES & SMART STRUCTURES II (V. 4)

Thursday May 27 13:00 Puget

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

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

Effect of CFRP Repair on the Flexural Behaviour of Corroded RC Beams

Badawi, M, Soudki, K, Univ of Waterloo, Canada

Predicting the Life of Reinforced Concrete Structures in Marine Areas

Yokota, H, Port and Airport Research Inst, Japan; Buenfeld, N R, Imperial College, UK

Effect of Cold Regions Climate on the Repair and Rehabilitation of Concrete with FRP Composites

Dutta, P K, US Army Cold Regions R&E Laboratory, USA

Laboratory Testing of Composite Wrapping Systems

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

Performance-based Design of Reinforced Concrete Panels on the WWW

Hoogenboom, P C J, Coskamp, W, Blaauwendraad, J, Delft Univ of Technology, The Netherlands

