

# CONTENTS

## Offshore Technology:

### Design and Analysis

<b>OMAE2015-41244 .....</b>	1
<b>Simulation of Fluttering and Autorotation Motion of Vertically Hinged Flat Plate</b>	
<i>Ali Bakhshandeh Rostami and Antonio Carlos Fernandes</i>	
 <b>OMAE2015-41249 .....</b>	
<b>An Efficient Erection Simulation Methodology for the Modular Construction of Offshore Platform Based on Points Cloud Data</b>	
<i>Jung Kwan Seo and Deok Eun Kim</i>	
 <b>OMAE2015-41257 .....</b>	19
<b>Effects of Waves and Currents on Extreme Loads on a Jacket</b>	
<i>Kjersti Bruserud and Sverre Haver</i>	
 <b>OMAE2015-41323 .....</b>	29
<b>Estimation of Fluctuating Propeller Torque of Full-Scale Ship Using Free-Running Model in Waves</b>	
<i>Michio Ueno and Yoshiaki Tsukada</i>	
 <b>OMAE2015-41392 .....</b>	35
<b>Response Surface Models for Analyzing Sinkage and Trim Effects on Planing Hull Motions in a Vertical Plane</b>	
<i>Tanvir Mehedi Sayeed, Leonard M. Lye and Heather Peng</i>	
 <b>OMAE2015-41429 .....</b>	44
<b>A New Quantitative Assessment of Current Profile Clustering Methods for Riser Engineering</b>	
<i>Gus Jeans, Richard Gibson and Oliver Jones</i>	
 <b>OMAE2015-41479 .....</b>	53
<b>Real-Time Marine Vessel and Power Plant Simulation</b>	
<i>Torstein I. Bø, Tor A. Johansen, Andreas R. Dahl, Michel R. Miyazaki, Eilif Pedersen, Børge Rokseth, Roger Skjetne, Asgeir J. Sørensen, Laxminarayan Thorat, Ingrid B. Utne, Kevin K. Yum and Eirik Mathiesen</i>	
 <b>OMAE2015-41491 .....</b>	63
<b>Impact Loads From Drop Test of a Circular Section With 42 Force Transducers</b>	
<i>Gunnar Lian, Ole David Økland and Tone M. Vestbøstad</i>	

<b>OMAE2015-41545 .....</b>	73
<b>A Numerical Study on Motion Responses of a Mat-Support Jack-Up During Positioning</b>	
<i>Zhaode Zhang and Yuhong Wang</i>	
<b>OMAE2015-41616 .....</b>	81
<b>A Multi-Body Dynamic Model Based on Bond Graph for Maritime Hydraulic Crane Operations</b>	
<i>Yingguang Chu and Vilmar Æsøy</i>	
<b>OMAE2015-41633 .....</b>	88
<b>Simulations for Design and Reconstruction of Breaking Waves in a Wavetank</b>	
<i>R. Kurnia, T. van den Munckhof, C. P. Poot, P. Naaijen, R. H. M. Huijsmans and E. van Groesen</i>	
<b>OMAE2015-41634 .....</b>	95
<b>A Voxel-Based Numerical Method for Computing and Visualising the Workspace of Offshore Cranes</b>	
<i>Lars I. Hatledal, Filippo Sanfilippo, Yingguang Chu and Houxiang Zhang</i>	
<b>OMAE2015-41703 .....</b>	102
<b>Global Wave Persistence Study for Offshore Operation and Planning</b>	
<i>Chan Kwon Jeong, Alokraj Valsaraj and Harold Velazquez</i>	
<b>OMAE2015-41866 .....</b>	109
<b>Forced Oscillation Model Tests for Determination of Hydrodynamic Coefficients of Large Subsea Blowout Preventers</b>	
<i>Xavier Arino, Jaap de Wilde, Massimiliano Russo, Guttorm Grytøy and Michael Tognarelli</i>	
<b>OMAE2015-41879 .....</b>	117
<b>Wave Impact Loads on Offshore Gravity Based Structure</b>	
<i>Ben de Sonneville, Bas Hofland, Amund Mowinckel and Bo Terp Paulsen</i>	
<b>OMAE2015-41891 .....</b>	127
<b>Experimental RAO's Analysis of a Monolithic Concrete SPAR Structure for Offshore Floating Wind Turbines</b>	
<i>Alexis Campos, Climent Molins, Xavier Gironella, Pau Trubat and Daniel Alarcón</i>	

<b>OMAE2015-42047</b>	136
<b>Real-Time Prediction of Ship Interaction Forces Using Simplified Models</b>	
<i>Gustavo O. Silva, Eduardo A. Tannuri and Felipe Ruggeri</i>	
<b>OMAE2015-42162</b>	146
<b>Artificial Neural Networks for Reducing Computational Effort in Active Truncated Model Testing of Mooring Lines</b>	
<i>Niels Hørbye Christiansen, Per Erlend Torbergse Voie and Jan Høgsberg</i>	
<b>OMAE2015-42274</b>	156
<b>How to Determine the Principal Dimensions of FPSO Vessel</b>	
<i>Ezebuchi Akandu, Atilla Incecik and Nigel Barltrop</i>	

## **Offshore Technology:**

### **Fixed and Floating Platforms**

<b>OMAE2015-41174</b>	164
<b>Nonlinear Analysis of Dynamic Responses of a MOSES TLP in Extreme Conditions</b>	
<i>Fasuo Yan, Hui Yang, Liping Sun and Dagang Zhang</i>	
<b>OMAE2015-41188</b>	171
<b>Investigation on the VIM Mitigation of the HVS Semisubmersible</b>	
<i>Johyun Kyoung, Jang Whan Kim, Hyunchul Jang, Kostas Lambrakos and Jim O'Sullivan</i>	
<b>OMAE2015-41195</b>	181
<b>Wave Slamming Model Test Data and Analysis for a Spar Hull Design</b>	
<i>Bonjun Koo, Ho-Joon Lim, Anil Sablok, Kostas Lambrakos and Oddgeir Dalane</i>	
<b>OMAE2015-41227</b>	189
<b>Long Term Analysis for Estimation of Wave Slamming Pressures for Spar Design</b>	
<i>Ho-Joon Lim, Gunnar Lian, Sverre Haver, Oddgeir Dalane, Bonjun Koo, Anil Sablok and Kostas Lambrakos</i>	
<b>OMAE2015-41236</b>	198
<b>Nonlinear Foundation Spring and Calibration Using Measured Dynamic Response of Structure</b>	
<i>Amir M. Kaynia, Karin Norén-Cosgriff, Knut H. Andersen and Kjell Arvid Tuen</i>	

<b>OMAE2015-41349</b>	204
<b>Ice Loading Decrease at Life Cycle Main Stages for Fixed Offshore Structures</b>	
<i>Valery M. Shaposhnikov, Anatolii V. Aleksandrov, Oleg E. Litonov and Viktor V. Platonov</i>	
 <b>OMAE2015-41362</b>	208
<b>A Parametric Sensitivity Study on TLP Hydrodynamic Performance in South China Sea</b>	
<i>Xiaolong Yang, Hui Shen, Hui Li, Xiaoliang Qi, Guosen Lv and Zhiyong Su</i>	
 <b>OMAE2015-41442</b>	217
<b>Experimental Investigation on Hydrodynamic Performances of a Spar FPSO</b>	
<i>Haining Lu, Jin Wang, Yufeng Kou and Xiaoliang Qi</i>	
 <b>OMAE2015-41461</b>	229
<b>Evaluation of Spar In-Field Performances for Topsides Payload Increase and Operational Changes</b>	
<i>Aldric Baquet, Joe Zhou, Lixin Xu and Yong Chen</i>	
 <b>OMAE2015-41658</b>	235
<b>Response Based Design Metocean Conditions for an FPSO by the Extremum Search Within Joint Metocean PDF</b>	
<i>Y. Drobyshevski, H. Wadhwa and J. R. Whelan</i>	
 <b>OMAE2015-41764</b>	246
<b>Numerical Analysis of Pontoon Effect on Flow-Induced Forces of the Deep Draft Semisubmersible in a Cross-Flow</b>	
<i>Mingyue Liu, Longfei Xiao, Haining Lyu and Longbin Tao</i>	
 <b>OMAE2015-41792</b>	253
<b>Numerical Analysis of a Gravity Substructure for 5MW Offshore Wind Turbines due to Soil Conditions</b>	
<i>Min-Su Park, Youn-Ju Jeong, Young-Jun You, Du-Ho Lee and Byeong-Cheol Kim</i>	
 <b>OMAE2015-41805</b>	261
<b>Extensions and Improvements to the Solutions for Linear Tank Dynamics</b>	
<i>Arild Ludvigsen and Zhi Yuan Pan</i>	
 <b>OMAE2015-41931</b>	274
<b>Comparison of Fatigue Design Codes With Focus on Offshore Structures</b>	
<i>Nahuel Micone and Wim De Waele</i>	