

25th Offshore Symposium 2020

Houston, Texas, USA
27 February 2020

ISBN: 978-1-7138-0813-8

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2020) by Society of Naval Architects and Marine Engineers (SNAME) Texas Section
All rights reserved.

Printed with permission by Curran Associates, Inc. (2020)

For permission requests, please contact Society of Naval Architects and Marine Engineers (SNAME) Texas Section at the address below.

Society of Naval Architects and Marine Engineers (SNAME) Texas Section
99 Canal Center Plaza, Suite 310
Alexandria, VA 22314
USA

Phone: +1-703-997-6701

www.sname.org/texassection

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

ADVANCES IN LARGE OFFSHORE VESSEL APPLICATIONS

Propulsion Solutions for Large Arctic Offshore Vessels	1
<i>S. Hanninen, S. Viherialehto, P. Maattanen, T. Heideman</i>	
Introduction of An ECO-FPSO Concept	10
<i>J. Zou</i>	
Coupled Analysis for Dry Transportation of Large Floating Production Systems	52
<i>J. Wen, A. Wang, O. Dasilva</i>	

DEVELOPMENTS IN MOORING SYSTEM DESIGN AND MONITORING

A Mooring Designer's Approach to Monitoring a Mooring System	61
<i>J. Minnebo, A. Izadparast, A. Duggal</i>	
Offshore Anchoring Systems with Torpedo Piles	75
<i>T. Martins</i>	
Improving Inspection Practices of Offshore Mooring Systems for Optimal Integrity Management	87
<i>M. Van Der Horst, K.-T. Ma, J. Minnebo, S. Wang, M. Barges, A. Argyros, L. Bello</i>	

RENEWABLE ENERGY SYSTEMS

A Sequential Approach to Internal Structural Loads Derivation of FOWT Support Platforms	107
<i>D. Tsiropoulos</i>	
Powering the Growth of Low Carbon Energy	125
<i>R. Robinson, G. Engelmann</i>	

HYDRODYNAMICS AND ADVANCED NUMERICAL ANALYSIS

Reliability Sensitivity Analysis of Dropped Objects Hitting on the Pipeline at Seabed	136
<i>X. Yu, G. Xiang, H. Yu, H. Meng, Y. Li, L. Li</i>	
Numerical Simulation of Fluid Sloshing in a Rolling Tank	147
<i>W.-H. Tsao, S. Kinna</i>	

ANALYSIS OF LARGE VESSELS AND SUBSEA SYSTEMS

The Design of the Deep-Water Jet Sled	162
<i>C. Combs</i>	
Commercial Exploitation and De-risking Deepwater Developments with Early Production Systems	169
<i>R. D'Souza, S. Basu</i>	

COMPUTATIONAL FLUID DYNAMICS

Coupling of Vortex-Lattice Method with RANS for the Prediction of Open or Ducted Propeller/Axisymmetric Hull Interaction	181
<i>K. Cha, S. Kim, S. Kinna</i>	
Flow Past a Rotating Cylinder Predicted by a Vorticity Method	191
<i>C. Wu, S. Kinna</i>	
Application of AMR Meshing for Explosion Analysis on Offshore Structures	208
<i>J. Clutter, A. Staszak</i>	

FRONTIER TECHNOLOGIES IN OFFSHORE / SUBSEA SYSTEMS

A Novel Approach for Subsea Insulation - Nano Composite for Challenging Environments218
W.-T. Wang, N. Wheat, C.-Y. Ma, J. Yun

Automated Site-Specific Assessment of Jack-up Platforms Using The CALYPSO Computer Program237
M. Hoogeveen, R. Rotteveel

Author Index