

# **17th Offshore Symposium**

## **Pushing the Boundaries in the Global Industry**

**Houston, Texas, USA  
2 February 2012**

**ISBN: 978-1-62993-101-2**

**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© (2012) by the Society of Naval Architects and Marine Engineers  
All rights reserved.

Printed by Curran Associates, Inc. (2013)

For permission requests, please contact the Society of Naval Architects and Marine Engineers  
at the address below.

Society of Naval Architects and Marine Engineers  
601 Pavonia Avenue  
Jersey City, New Jersey 07306

Phone: (201) 798-4800

Fax: (201) 798-4975

[www.sname.org](http://www.sname.org)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

**TABLE OF CONTENTS**

**OPENING SESSION PAPERS ..... OPEN-1**

**AURORA BOREALIS, POLAR RESEARCH & DRILLING VESSEL: PROPULSION & STATION KEEPING IN SOLID DRIFT ICE..... OPEN-3**  
DIETMAR DETER, NAUTEX INC., WILLY DOELLING, WAERTSILAE SHIP DESIGN  
GERMANY

**STUDENT DESIGN OF A SEMI-SUBMERSIBLE FLOATING PRODUCTION SYSTEM FOR THE GULF OF MEXICO ..... OPEN-33**  
D. BROZMAN, B. FORD, M. FREYMAN, A. MEDELLIN, A. VALLE, C. VITTONI,  
OCEAN ENGINEERING PROGRAM AT TEXAS A&M UNIVERSITY

**SESSION A PAPERS .....A-1**

**THE USE OF DRAG EMBEDMENT ANCHORS IN ARCTIC CONDITIONS.....A-3**  
RODERICK RUINEN, VRYHOF ANCHORS BV

**DP VESSEL PASSIVE QUICK RELEASE CONTINGENCY MOORING SYSTEMS.....A-7**  
JASON PASTERNAK, PE, DANIEL ALONSO, ROBERT GARRITY, PE, JOHN SHELTON,  
PE, DELMAR SYSTEMS

**PREDICTIVE MODEL FOR DRAG EMBEDMENT ANCHOR PERFORMANCE IN CLAY SEABED .....A-27**  
RYAN BEEMER, CHARLES AUBENY, ROBERT RANDALL, AARON DRAKE, OCEAN  
ENGINEERING PROGRAM AT TEXAS A&M UNIVERSITY

**SESSION C PAPERS .....C-1**

**DRY TREE PAIRED-COLUMN SEMISUBMERSIBLE PLATFORM FOR ULTRA-DEEPWATER OFFSHORE BRAZIL .....C-3**  
JUN ZOU, HOUSTON OFFSHORE ENGINEERING, LLC

**OFFLOADING AVAILABILITY ANALYSIS FOR SIDE-BY-SIDE FLNG AND LNGC .....C-23**  
AYMAN B. MAHFOUZ, PH.D., P.ENG, GVA NORTH AMERICA

**COUPLED DYNAMIC ANALYSIS OF A FLOATING OFFSHORE WIND TURBINE .....C-39**  
C. PENG, OCEAN ENGINEERING PROGRAM, ZACHRY DEPARTMENT OF CIVIL  
ENGINEERING, TEXAS A&M UNIVERSITY, F.S. YAN, DEEPWATER ENGINEERING  
RESEARCH CENTER, HARBIN ENGINEERING UNIVERSITY, J. ZHANG, OCEAN  
ENGINEERING PROGRAM, ZACHRY DEPARTMENT OF CIVIL ENGINEERING, TEXAS  
A&M UNIVERSITY

**NUMERICAL AND EXPERIMENTAL STUDIES OF OSCILLATING FLOW AROUND A CYLINDER.....C-49**  
XIANGMING YU, SPYROS A. KINNAS, AND LIWEI HAN, OCEAN ENGINEERING  
GROUP, DEPARTMENT OF CIVIL, ARCHITECTURE AND ENVIRONMENTAL  
ENGINEERING, THE UNIVERSITY OF TEXAS AT AUSTIN

<b>SESSION D PAPERS</b> .....	<b>D-1</b>
<b>A STUDY OF FLOATOVER INSTALLATION ONTO JACKET WITH TWO BARGES</b> .....	<b>D-3</b>
XIN XU, JIANMIN YANG, XIN LI, LONGFEI XIAO, STATE KEY LAB OF OCEAN ENGINEERING, SHANGHAI JIAO TONG UNIVERSITY	
<b>HYDRODYNAMIC OPTIMIZATION OF MARINE CURRENT TURBINES</b> .....	<b>D-15</b>
DAVID H. MENÉNDEZ ARÁN AND SPYROS A. KINNAS, OCEAN ENGINEERING GROUP, DEPARTMENT OF CIVIL, ARCHITECTURAL AND ENVIRONMENTAL ENGINEERING, THE UNIVERSITY OF TEXAS AT AUSTIN	
<b>DRIFT-OFF AND DRIVE-OFF ASSESSMENT OF A DYNAMICALLY POSITIONED DRILLSHIP</b> .....	<b>D-23</b>
SUE WANG, ABS, SIVIA DONNARUMMA, UNIVERSITY OF GENOA	
<b>CLOSING SESSION PAPERS</b> .....	<b>CLOSE-1</b>
<b>THE ROLE OF SNAME OC 7 IN THE DEVELOPMENT OF THE ISO FOR SITE ASSESSMENT OF JACK-UPS</b> .....	<b>CLOSE-3</b>
JOHN STIFF, ABSG CONSULTING, MIKE HOYLE, GL NOBLE DENTON, DAVID LEWIS, LEWIS ENGINEERING GROUP	
<b>A PACIFIC PARTNERSHIP – PAST, PRESENT AND FUTURE COOPERATION BETWEEN SNAME AND SHANGHAI SNAME</b> .....	<b>CLOSE-15</b>
PETER NOBLE, PRESIDENT –ELECT, SNAME	
<b>PROGRAM SPONSORS AND ADVERTISERS</b> .....	<b>SPONSORS-1</b>