Proceedings of ASME 2021 40th International Conference on Ocean, Offshore and Arctic Engineering

(OMAE2021)

Volume 1

June 21-30, 2021 Virtual, Online

Conference Sponsor
Ocean, Offshore and Arctic
Engineering Division

Two Park Avenue * New York, N.Y. 10016

© 2021, The American Society of Mechanical Engineers, 2 Park Avenue, New York, NY 10016, USA (www.asme.org)

All rights reserved. Printed in the United States of America. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the publisher.

INFORMATION CONTAINED IN THIS WORK HAS BEEN OBTAINED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS FROM SOURCES BELIEVED TO BE RELIABLE. HOWEVER, NEITHER ASME NOR ITS AUTHORS OR EDITORS GUARANTEE THE ACCURACY OR COMPLETENESS OF ANY INFORMATION PUBLISHED IN THIS WORK. NEITHER ASME NOR ITS AUTHORS AND EDITORS SHALL BE RESPONSIBLE FOR ANY ERRORS, OMISSIONS, OR DAMAGES ARISING OUT OF THE USE OF THIS INFORMATION. THE WORK IS PUBLISHED WITH THE UNDERSTANDING THAT ASME AND ITS AUTHORS AND EDITORS ARE SUPPLYING INFORMATION BUT ARE NOT ATTEMPTING TO RENDER ENGINEERING OR OTHER PROFESSIONAL SERVICES. IF SUCH ENGINEERING OR PROFESSIONAL SERVICES ARE REQUIRED, THE ASSISTANCE OF AN APPROPRIATE PROFESSIONAL SHOULD BE SOUGHT.

ASME shall not be responsible for statements or opinions advanced in papers or . . . printed in its publications (B7.1.3). Statement from the Bylaws.

For authorization to photocopy material for internal or personal use under those circumstances not falling within the fair use provisions of the Copyright Act, contact the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, MA 01923, tel: 978-750-8400, www.copyright.com.

Requests for special permission or bulk reproduction should be addressed to the ASME Publishing Department, or submitted online at: https://www.asme.org/publications-submissions/journals/information-for-authors/journalguidelines/rights-and-permissions

ISBN: 978-0-7918-8511-6

CONTENTS

Proceedings of ASME 2021 40th International Conference on Ocean, Offshore and Arctic Engineering

OFFSHORE TECHNOLOGY

Artificial Intelligence and Neural Networks in Offshore Technology
OMAE2021-61525
Mohamad Alremeihi, Rosemary Norman, Kayvan Pazouki, Arun Dev, and Musa Bashir
OMAE2021-62413
OMAE2021-62674
OMAE2021-62979
OMAE2021-62991
OMAE2021-63018
CFD Modeling Practice and Verification
OMAE2021-63710
OMAE2021-63785

OMAE2021-63800
OMAE2021-63807
OMAE2021-63884
OMAE2021-66612
Design and Analysis
OMAE2021-62762
OMAE2021-62813
OMAE2021-63713
FLNG Technology
OMAE2021-62276
Yuriy Drobyshevski, and Ewoud van Haaften
OMAE2021-62279
OMAE2021-66564
Hydrodynamics
OMAE2021-61679

OMAE2021-62655
Gulf of Mexico Raehyoung Yuck, Daehoon Kang, Ik-seung Han, Eungsu Kim, Munsung Kim, Ki-young Shin, Jong-woo Park, Tae-min Kim, and Sang-gu Kang
OMAE2021-62889
Offshore Platforms
OMAE2021-62281
OMAE2021-62670. Hybrid Verification of a Deepwater FPSO Using Truncated Model Tests and Numerical Simulations Xiangbo Liu, Ching Theng Liong, Nitesh Kumar, Kie Hian Chua, Allan Ross Magee,
and Yoo Sang Choo OMAE2021-63037
OMAE2021-63178
OMAE2021-63218
OMAE2021-63459
OMAE2021-63608
OMAE2021-63778
OMAE2021-63796
Station Keeping
OMAE2021-60739

OMAE2021-62772 Validation of Mooring Simulations (for Mooring Integrity Assessment) With In-Service Tension	V001T01A032
Measurements Willemijn Pauw, Remco Hageman, Joris van den Berg, Pieter Aalberts, Hironori Yamaji, and Alex Ong	
OMAE2021-63326	V001T01A033
OMAE2021-63885	V001T01A034
Numerical Ocean Wave-Basin (NOW): A Numerical Solution for FSRU Mooring Design Analysis Jang Kim, Hyunchul Jang, Ho-Joon Lim, Lawrence Lai, Arnida Latifah, Erwan Auburtin, Nicolas Tcherniguin, and Francois Petrie	
Wave Loading and Motions in Extreme Seas	
OMAE2021-61270. Underdeck Wave Slamming Model Tests for a Drilling Semi-Submersible Unit Lixin Xu, Xiaoqing Teng, Jinguang Wang, Sing-Kwan Lee, Jiancheng Liu, Yinghao Guo, and Longfei Xiao	V001T01A035
Underdeck Wave Slamming Model Tests for a Drilling Semi-Submersible Unit Lixin Xu, Xiaoqing Teng, Jinguang Wang, Sing-Kwan Lee, Jiancheng Liu, Yinghao Guo, and Longfei Xiao OMAE2021-62256.	
Underdeck Wave Slamming Model Tests for a Drilling Semi-Submersible Unit Lixin Xu, Xiaoqing Teng, Jinguang Wang, Sing-Kwan Lee, Jiancheng Liu, Yinghao Guo, and Longfei Xiao OMAE2021-62256. Efficient Calculation of Spatial and Temporal Evolution of Hydrodynamic Loads on Offshore Wind	
Underdeck Wave Slamming Model Tests for a Drilling Semi-Submersible Unit Lixin Xu, Xiaoqing Teng, Jinguang Wang, Sing-Kwan Lee, Jiancheng Liu, Yinghao Guo, and Longfei Xiao OMAE2021-62256.	
Underdeck Wave Slamming Model Tests for a Drilling Semi-Submersible Unit Lixin Xu, Xiaoqing Teng, Jinguang Wang, Sing-Kwan Lee, Jiancheng Liu, Yinghao Guo, and Longfei Xiao OMAE2021-62256. Efficient Calculation of Spatial and Temporal Evolution of Hydrodynamic Loads on Offshore Wind Substructures Csaba Pakozdi, Arun Kamath, Weizhi Wang, Tobias Martin, and Hans Bihs OMAE2021-62738.	V001T01A036
Underdeck Wave Slamming Model Tests for a Drilling Semi-Submersible Unit Lixin Xu, Xiaoqing Teng, Jinguang Wang, Sing-Kwan Lee, Jiancheng Liu, Yinghao Guo, and Longfei Xiao OMAE2021-62256. Efficient Calculation of Spatial and Temporal Evolution of Hydrodynamic Loads on Offshore Wind Substructures Csaba Pakozdi, Arun Kamath, Weizhi Wang, Tobias Martin, and Hans Bihs	V001T01A036
 Underdeck Wave Slamming Model Tests for a Drilling Semi-Submersible Unit Lixin Xu, Xiaoqing Teng, Jinguang Wang, Sing-Kwan Lee, Jiancheng Liu, Yinghao Guo, and Longfei Xiao OMAE2021-62256. Efficient Calculation of Spatial and Temporal Evolution of Hydrodynamic Loads on Offshore Wind Substructures Csaba Pakozdi, Arun Kamath, Weizhi Wang, Tobias Martin, and Hans Bihs OMAE2021-62738. On the Validity of CFD for Simulating a Shallow Water CALM Buoy in Extreme Waves 	V001T01A036