

5th International Conference on Coastal and Ocean Engineering (ICCOE 2018)

IOP Conference Series: Earth and Environmental Science
Volume 171

Shanghai, China
27 – 29 April 2018

ISBN: 978-1-5108-6781-9
ISSN: 1755-1307

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© (2018) by the Institute of Physics
All rights reserved. The material featured in this book is subject to
IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2018)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.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: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

Table of contents

Volume 171

2018 5th International Conference on Coastal and Ocean Engineering (ICCOE 2018)

27–29 April 2018, Shanghai, China

Accepted papers received: 19 June 2018

Published online: 19 July 2018

Preface

[2018 5th International Conference on Coastal and Ocean Engineering \(ICCOE 2018\)](#)

[Conference Committee](#)

[Peer review statement](#)

Papers

Marine Geology

[Experimental Study on Suspended Sediment Concentration and Powder Bed Deformation under Wave-Only and Wave-With-Current Scenarios](#)

Zhaohui Wu, Bo Yang, Yang He, Fuxiang Huang, Bingchen Liang and Dang Zhao.....1

[Experiment Research on Geometry and Evolution Characteristics of Sand Wave Bedforms Generated by Waves and Currents](#)

Xiaohuan Zhu, Zhenlu Wang, Zhaohui Wu, Feilong Liu, Bingchen Liang, Yang He and Fuxiang Huang.....7

[Analysis of the Structure Suffered Submarine Landslides Using SPH and CEL Methods](#)

Lei Qi, Zhenwen Liu, Hao Xu, Haifeng Deng and Chun Li.....14

Ocean Observation and Information Technology

[Analysis and Optimization on the Flow Ability of Wave Buoy Based on AQWA](#)

Jinpeng Hu, Ling Zhu and Shihui Liu.....22

[A Capable Smart Sensor Interface Module for Interoperable Ocean Observatories](#)

Shijun Lin and Feng Lyu.....31

[Switching High Voltage DC Power in Branching Units of Large-scale Cabled Seafloor Observatories](#)

Shaoduo Zheng and Feng Lyu.....38

[Impacts of Coastal Development on the Shoreline Change of the Eastern Gulf of Thailand](#)

B Bidorn and C Rukvichai.....45

[Study on the Influence of Small Attitude Angle on Lidar Wind Measurement Results](#)

Peilin Dou, Xin Zhang, Xiaochen Han and Yangyang Xue.....53

[A Method for Estimating the Distance of Near-Ocean-Bottom Sources by Combining VLF Underwater Acoustic Field and Scholte Wave Field](#)

Han Zhao, Guiqing Sun, Hanhao Zhu and Junxin Yuan.....59

[Construction Method of Telecommunication System for Corrective Information Distribution](#)

V V Karetnikov, S F Shahnov and A A Ageeva.....67

Wave Mechanics and Fluid Mechanics

[The Experimental Study on the Hollow Wave Dissipation Structure of a Semi-Submersible Embedded Ball Box in the Specification Spectrum Wave](#)

Danian Liu, Zichang Shangguan and Zhiyun Wang.....74

[Influence Analysis of Blade Fracture of Ducted Propellers of offshore platforms on Flow Field](#)

L J Ou and W Zhang.....79

[Laboratory Study of the Spatial Distribution of Extreme Overtopping Events at Vertical Structures](#)

S Dong and J M Pearson.....86

[A Preliminary Study on Numerical Waves and Its Impact on Horizontal Plate Based on Fluent](#)

Jinpeng Hu, Shihui Liu and Ling Zhu.....95

[Numerical Modelling of Interaction between Solitary Wave and Sloped Seawall](#)

Rui You and Guanghua He.....102

[Numerical Study on Influence of Water Exchange for Artificial Island Group](#)

Tao Liu, Yuehong Liu and Zhiqiang Hou.....108

[Numerical Simulation of Wind Wave in Bohai Sea Induced by Cold Wave](#)

Chen Chun and Huang Yu Xin.....115

Offshore and Deep-sea Engineering

[A New Concept of Jackup Combined Semisubmersible Multifunction Platform](#)

T Y Wang.....120

[Bayesian-Networks-Based Risk Evaluation Approach of Offshore Platform](#)

Xiaobing Yuan, Baoping Cai, Xiaoyan Shao, Xiangdi Kong, Yonghong Liu and Guoming Chen.....129

[Effect of Touchdown Trench Modelling on SCR Fatigue Life](#)

G. Hu, C. Shi and Y. Zhao.....137

[Effect of Different Rotational Speed on the Cavitation of Deep- Sea Mining Pump under Multiphase Flow](#)

Hai-Liang Xu, Cong Xu, Fang-qiong Yang and Wei Chen.....146

[Exploration Application of BIM technology on artificial island engineering](#)

Chao Dai, Dong Hao, Zhigang Zuo, Hailiang Zhao and Zhihui Shang.....157

[Research of Statistical Characteristics of Target Strength of a Single-layer Cylindrical Shell with Random Coating](#)

Hu Bo.....164

Marine Environment and Climate

[The Effect of Increased Temperature and Coral Acclimation of *Sinularia dura*](#)

Z S Juhi and K A Rabbani.....172

[Numerical Simulation of the Oil Spilling Impact on Water Environment](#)

Shanshan Yao, Peng Zhang and Qixiu Pang.....177

[Variation Characteristics of Tropical Cyclones Making Landfall over China between 1951 and 2015 and Their Relationship with ENSO](#)

Chenglin Gu, Jiancheng Kang, Guodong Yan, Zhiwei Chen and Mingxing Niu.....185

[The Variation of Extreme Low Temperature Events in the Northwest Pacific under the Global Warming](#)

Zhiwei Chen, Jiancheng Kang, Chenglin Gu, Yong Xu, Ming Tang and Kai Lu.....193

[The Climatic Characteristics of Surface Salinity in the South China Sea and the Adjacent Northwest Pacific Ocean](#)

Mingxing Niu, Jiancheng Kang and Zhiwei Chen.....197

[Yanliao Beach Nourishment Methods](#)

Hsing-Yu Wang, Hui-Ming Fang and Yun-Chih Chiang.....203

Water Resources Management and Utilization

[Influence of Economic Structure Optimization on Water Consumption in Shanxi, China](#)

Wei Li, Jiahong Liu and Xifeng Wang.....211

[Aquifer/Water Sources Drip Factor as Alternative to Measure Climatic Effects on Disponibility of Water Agricultural Irrigation in Semi-arid/Arid Zones](#)

Norzagaray-Campos Mariano, Llanes-Cárdenas Omar, Muñoz-Sevilla Patricia, Ruiz-Guerrero Rosario, Ladrón de Guevara-Torres María and Armenta-Cabrera José.....216

[An Examination of the Validity of MRPS Method for the Detection of Label-free E. Coli and Enterococci in Ships Ballast Water](#)

M M Maw, J S Wang, K Z Yu, Y J Wang, B W Dai, X D Wu and X X Pan.....223

[Research on Status Quo of Water Rights Trading in China](#)

Xin Wang and Shizhong Yang.....232

[Developing a Portable Hydroelectric Generator Using Axiomatic Design Method](#)

H Soewardi and E A Putra.....239

[Microbial Protein Enrichment and Treatment of Winery Residue from Fungi and Yeast by Syntrophic Fermentation](#)

Rui Gao, Qiuying He, Yuanyuan Chen, Yuting Duan and Li Xie.....247

[Utilization of Shrimp Shell Waste as Matrix Controller by Using Ionotropic Gelation Method in Slow Release Fertilizer Based on Environmental Conservation](#)

W D P Rengga, M A Mubarak and N S Cahyarini.....254

[Kitchen Waste as a Novel Available Substrate for Prodigiosin Production by *Serratia Marcescense*](#)

Shunxiang Xia, Enjelia Veony and Qiyin Yang.....262

[Isolation of Pectin from Carrot Peel as Biosorbent of Pb\(II\) ion](#)

Budi Hastuti, Saptono Hadi and Fian Totiana.....269

Environmental and Chemical Engineering

[Functionalization of Recycled Diatomite for Green, Stable, and High-performance Phase Change Material \(PCM\) Composite](#)

Yeng-Fong Shih, Chih-Hung Wang, Zong-Gi Tson, Yu-Cheng Zhang and Hong-Yuan Lian.....274

[Eco-friendly Modification for the Cellulose Nanofibers Derived from Pineapple Leaves for High-performance Nanocomposite](#)

Yeng-Fong Shih, Zong-Gi Tsou, Chih-Hung Wang and Hong-Yuan Lian.....280

[An Approach for Analysis of Natural Hazard Impacts on Activated Sludge Wastewater Treatment](#)

P Zlateva and N Dimitrova.....286

[Esterification of \$\alpha\$ -Pinene from Turpentine Oil Using Natural Zeolite Catalyst](#)

N. Wijayati, Supartono and E. Kusumastuti.....294

[Research on Green Remediation Technology of Oil Spill By Biosorbent](#)

Dan Peng, Lei Nie, Fan Ouyang and Liuchun Zheng.....300

[Fabrication of Superhydrophobic-Superoleophilic Cement-Coated Meshes and Their Applications for Oil/Water Separation](#)

Shude Li, Sun Jing, Jinlong Song and Ziai Liu.....305

Waterway Transport Management

[The Influence of the Storage Strategy on the Complexity of the Container Selection Procedure](#)

A Kuznetsov, A Kirichenko and O Izotov.....313

Building Materials

[Study on the Shear Performance of Different Gradation Types of Asphalt Mixture Based on Triaxle Test](#)

Xiao-yan Wang, Kai Gong and Shi-jie Ma.....318

A Study on Mixing Proportion of Roller-Compacted Concrete Pavement Made of EAF Slag Aggregate and Fly Ash by Using Taguchi Method

My Ngoc-Tra Lam, Saravut Jaritngam and Duc-Hien Le.....323