

38th International Conference on Coastal Engineering (ICCE 2024)

Rome, Italy
8-14 September 2024

Volume 1 of 3

ISBN: 979-8-3313-3796-4

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© (2024) by International Conference on Coastal Engineering (ICCE)
All rights reserved.

Printed with permission by Curran Associates, Inc. (2026)

For permission requests, please contact International Conference on Coastal Engineering (ICCE)
at the address below.

International Conference on Coastal Engineering (ICCE)
c/o Patrick Lynett
3620 South Vermont Avenue
Los Angeles CA 90089-2531
KAP 224D

Phone: (213) 740-3133
Fax: (213) 744-1426

plynett@usc.edu

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 1

PALAEOPORTOLOGY, ANCIENT HARBOURS AND COASTAL GEOMORPHOLOGY: WHAT CAN WE LEARN?	1
<i>Arthur De Graauw</i>	
THE ELUSIVENESS OF SEDIMENT TRANSPORT PREDICTIONS	33
<i>Jesper S. Damgaard, Richard L. Soulsby</i>	
DISASTER PREVENTION FUNCTION OF NOURISHED BEACH DURING 50 YEARS UNDER CONDITIONS OF SEA LEVEL RISE AND LAND SUBSIDENCE.....	44
<i>Yoshiaki Kuriyama, Hiroyuki Hayashi, Souichi Yamagata, Toshihiro Shimizu, Akiyoshi Katano, Haruo Mori, Shusei Ogawa</i>	
ANALYSIS OF IMPULSIVE TSUNAMI FORCE ACTING ON TIDAL BARRIER BEHIND COASTAL DUNE.....	54
<i>Tetsuya Hiraishi</i>	
CALIBRATION AND VALIDATION OF PRACTICAL MODELS FOR CHANNEL SILTATION	62
<i>Mark Klein, Leo Van Rijn</i>	
NUMERICAL MODELLING OF WAVE OVERTOPPING EVENTS AT RUBBLE MOUND BREAKWATERS WITH A CREST ELEMENT	73
<i>Mónica G. Aguilera Chaves, Marcel R. A. Van Gent, Patricia Mares-Nassar, Menno De Ridder</i>	
WIND EFFECTS ON WAVE OVERTOPPING DISCHARGES AT DIKES AND BREAKWATERS WITH A CREST WALL	85
<i>Marcel R. A. Van Gent, Ruben J. Van Der Bijl, Sam J. Dijkstra, Lars F. Van Vliet, Davide Wüthrich</i>	
ACCURACY VERIFICATION OF A REAL-TIME PREDICTION SYSTEM FOR WAVE RUNUP HEIGHTS	97
<i>Kazuki Himeno, Naoki Fukuhara, Fuminori Kato</i>	
ICELANDIC-TYPE BERM BREAKWATER: COASTAL STRUCTURE WITH A LOW- CONSTRUCTION CARBON FOOTPRINT	106
<i>Majid Eskafi, Sigurdur Sigurdarson</i>	
BEACH NOURISHMENT AND SEDIMENT MANAGEMENT FRAMEWORK FOR HATTERAS ISLAND, NORTH CAROLINA, USA	117
<i>Haiqing Liu Kaczkowski, Stephen Kaczkowski</i>	
SYSTEMATIC TESTING OF A NOVEL BREAKWATER ARMOUR TOE SOLUTION: THE ACCROBERMTM I.....	127
<i>Fernando Roca, Alberto Gutierrez, Pauline Berte, Yoann Bonte, Iman Safari, Cyril Giraudel</i>	
EFFECTS OF BOTTOM DEPTH AND ARTIFICIAL SAND NOURISHMENTS ON OVERTOPPING.....	138
<i>Carlos Coelho, Márcia Lima, Raul Pires, Andrei Zinca, Margarida Ferreira</i>	

A FIELD EXPERIMENT ON GRAVITY WAVES: EFFECTS OF THE WAVE STEEPNESS AND EFFECTIVE WATER DEPTH ON THE WAVE PROFILE AND BREAKING LIMIT	148
<i>George Spiliotopoulos, Vanessa Katsardi, Vincenzo Fiamma, Carlo Ruzzo, Alessandra Romolo, Felice Arena</i>	
CFD MODELLING OF WAVE-MANGROVE INTERACTION VIA RANS AND VARANS APPROACHES	162
<i>David M. Kelly, Frederick Mann, Azin Lamei, Douglas Pender, Florian Bellafont, Hans Bihs, Widar Wang, Gaurav Savant</i>	
A STUDY ON DAMAGE PROCESSES OF A RUBBLE MOUND BREAKWATER BASED ON ADVECTION DIFFUSION EQUATION.....	175
<i>Daiki Sakai, Gozo Tsujimoto</i>	
STABILITY AND HYDRODYNAMICS OF THE REEF ENHANCING BREAKWATER: A PHYSICAL MODEL STUDY	183
<i>Daan Houtzager, Jaime Ascencio, Bas Hofland, Edgar Mendoza, Rodolfo Silva Casarin, Marcel Van Gent</i>	
MODELLING OF NEARSHORE NOURISHMENTS IN THE MEDIUM-TERM.....	196
<i>Ana Margarida Ferreira, Carlos Coelho, Paulo A. Silva</i>	
REPAIR OPTIMIZATION AND PERFORMANCE ANALYSIS OF THE ASPHALT PROTECTION LAYER OF THE SOUTHERN BREAKWATER IN FRONT OF THE PORT OF AMSTERDAM	208
<i>Stefan Van Den Berg, Rolf Bruins, Arnaud Casteleijn, Niek Leguit, Peter Brand</i>	
WAVE-DRIVEN VORTEX PATTERNS AT AN OPEN BEACH.....	225
<i>Andreas Bondehagen, Volker Roeber, Henrik Kalisch, Marc P. Buckley, Michael Streßer, Marius Cysewski, Jochen Horstmann, Maria Bjørnstad, Olufemi E. Ige, Hege G. Frøysa, Ruben Carrasco-Alvarez</i>	
REPAIR AND REHABILITATION OF CUBE-ARMORED MOUND BREAKWATERS.....	238
<i>Josep R. Medina, Jorge Molines, Jose A. González-Escrivá, M. Esther Gómez-Martín</i>	
ASSESSMENT OF COASTAL PROTECTION PROVIDED BY SEAGRASS BEACH CAST DEPOSITS: LABORATORY EXPERIMENTS.....	247
<i>Joan Pau Sierra, Vicente Gracia, Carlos Astudillo, Ivan Cáceres, Cesar Möso, Agustín Sánchez-Arcilla</i>	
COASTAL HAZARD ASSESSMENT AND CLIMATE ADAPTATION USING HYBRID SHORELINE EVOLUTION MODELS FOR REMOTE COMMUNITIES IN ALASKA	258
<i>Ashwin Gadgil, Kathryn De Rego Semiao, Phil Osborne, Keyvan Mahlujy</i>	
IMPROVING TRANSITIONS AT GRASS COVERED DIKE SLOPES USING THE WAVE OVERTOPPING SIMULATOR.....	273
<i>Jentsje Van Der Meer, Bianca Hardeman, Jan Valk, Stanley Versteeg, Martijn Huis In 'T Veld, Werner Halter, André Van Hoven, Roy Mom</i>	
BREAKWATER OVERTOPPING AND TRANSMISSION CHARACTERISTICS ASSOCIATED WITH LIVING SHORELINE FUNCTIONAL ATTRIBUTES	286
<i>Jack Cox, Tim Pullen</i>	
DEVELOPMENT OF A FRAMEWORK FOR COMPOUND FLOODING RISK ASSESSMENT DUE TO TSUNAMI AND HIGH RIVER FLOW	294
<i>Reo Minami, Masaya Toyoda, Shigeru Kato, Nobuki Fukui, Takuya Miyashita, Nobuhito Mori, Sooyoul Kim</i>	

CONSIDERATION OF A NON-HYDROSTATIC ATMOSPHERE-OCEAN COUPLED MODEL FOR SIMULATING TROPICAL CYCLONES.....	306
<i>Tomoki Shirai, Taro Arikawa</i>	
SIMULATION OF IMPULSIVE WAVE ACTION ON SUBMERGED HORIZONTAL PLATE USING A WATER-AIR TWO-PHASE FLUIDS NUMERICAL MODEL.....	314
<i>Xiao Shi, Qin Jiang, Jie Hao</i>	
RESPONSE OF TIDAL AND SEDIMENT DYNAMICS OF THE JIAOJIANG RIVER ESTUARY TO RECLAMATION, CHINA.....	323
<i>Afei Hou, Jianfeng Tao</i>	
EROSION PROCESS OF A CLAY REVETMENT WITH GRASS COVER ON COASTAL FLOOD DEFENCES BASED ON LARGE SCALE PHYSICAL MODEL TESTS	333
<i>Vera Van Bergeijk, Suzanna Zwanenburg, Jan-Willem Nieuwenhuis, Kees De Jong, Martin Van Der Meer, Werner Halter, Paul Buring, Mark Klein Breteler</i>	
HYDROMORPHOLOGICAL DYNAMICS OF CANADIAN ARCTIC DELTAS : AN HYDROLOGICAL MODEL OF THE COPPERMINE DELTA	343
<i>L. Lafosse, J. Stolle, S. Coulombe, S. Binette, N. Canham, R. Akana, D. Didier</i>	
A COUPLED FDM-MPM METHOD FOR MODELING MULTIPLE PHENOMENA OF FLUID AND AND SOIL	356
<i>Yota Enomoto, Taro Arikawa</i>	
UNDERSTANDING WAVE ENERGY TRANSFORMATION THROUGH CONSTRUCTED OYSTER REEFS	364
<i>Amy Bredes, Jon Miller, Matt Janssen</i>	
RAISING THE ALARM: HOW THINGS GO WRONG	376
<i>Chris Brown</i>	
BACTON SANDSCAPING: QUANTIFIED BENEFITS 4 YEARS AFTER CONSTRUCTION	391
<i>Ruben Borsje, Jaap Flikweert, Caroline Price, Nick Everington</i>	
TOWARDS AN INDEX OF COASTAL RESILIENCE: A METRIC TO SUPPORT ADAPTATION PLANNING IN A CHANGING CLIMATE.....	401
<i>Demetra Cristaudo, Doug Pender, Laura Hodgkinson, Alan Fraser</i>	
ANALYSIS OF RIP CURRENT GENERATION USING AI-BASED DETECTION DATA	413
<i>Toshinori Ishikawa, Ryo Shimada, Tsutomu Komine</i>	
INTEGRATION OF CFD MODELLING AND UAV PHOTOGRAMMETRY FOR DAMAGE PROGRESSION ASSESSMENT OF A RUBBLE MOUND BREAKWATER.....	424
<i>Elisa Leone, Antonio Francone, Agostino Lauria, Andrea Paglialunga, Felice D'Alessandro, Giuseppe Roberto Tomasicchio</i>	
SIMULATING POTENTIAL STORM SURGES FROM SUPER TYPHOON DOKSURI (2023) IN NORTHERN PHILIPPINES	435
<i>Justin Joseph Valdez, Tomoya Shibayama</i>	
MULTI-FRACTION SEDIMENT TRANSPORT MODELLING IN MIKE 3 FM	443
<i>Maycon Fontana, Athanasios Petridis, Kasper Kærgaard</i>	
THE TRANSPORT OF PLASTIC DEBRIS IN COASTAL SEAS: RESULTS OF PHYSICAL MODELING.....	455
<i>C. Faraci, G. Bonanno, G. Passalacqua, F. Cucinotta, C. Iuppa</i>	

COMPARATIVE ANALYSIS OF ALTERNATIVE LAYOUTS FOR THE NEW DEEPWATER BREAKWATER OF GENOA PORT	466
<i>Paolo De Girolamo, Leopoldo Franco, Alberto Noli, Alberto Scotti, Antonio Lizzadro, Marco Tartaglini, Marco Del Bianco, Paolo Sammarco, Paolo Contini</i>	
SEDIMENT TRANSPORT SIMULATION APPLICABLE TO A WIDE CONCENTRATION RANGE	474
<i>Nicolas Eko Saputra, Takaaki Shigematsu, Gozo Tsujimoto</i>	
ASSESSING THE PERFORMANCE OF ECO-RETROFITTED SEAWALLS IN MITIGATING WAVE OVERTOPPING DISCHARGE – A NUMERICAL MODELLING STUDY	486
<i>Xihang Xu, Jennifer Keenahan, M. A. Habib, Hanxiao Ma, M. Salauddin</i>	
CROSS-SHORE MODELLING FEATURES: CALIBRATION WITH EXTENSIVE DATABASES	500
<i>Frederico Romão, Carlos Coelho, Márcia Lima, Ana Margarida Ferreira</i>	
GRASS SOD PULLING TESTS TO DETERMINE THE EROSION RESISTANCE AGAINST WAVE OVERTOPPING OF VARIOUS TYPES OF GRASS COVERS: AN ADJUSTED ANALYSIS METHOD.....	511
<i>Roy Mom, Gosse Jan Steendam, Rens Van Der Meijden, Jord Warmink, André Van Hoven, Jentsje Van Der Meer</i>	
RESONANCE AMONG WAVES, CURRENT, AND RIPPLED BOTTOMS IN COASTAL ZONES – FLOW FIELD RESPONSE UNDER INTENSIVE RESONANCE.....	521
<i>Jun Fan, Aifeng Tao, Jinhai Zheng</i>	
NUMERICAL SIMULATION OF THE PLASTIC DEBRIS TRANSPORT IN NEARSHORE ZONE	531
<i>Claudio Iuppa, Carla Faraci</i>	
IMPLEMENTING INNOVATIVE SEA STATE MONITORING SYSTEM BASED ON MICROSEISM	541
<i>Alfio Marco Borzì, Vittorio Minio, Raphael De Plaen, Thomas Lecocq, Flavio Cannavò, Giuseppe Ciraolo, Sebastiano D'Amico, Carlo Lo Re, Carmelo Monaco, Gabriele Nardone, Marco Picone, Giovanni Scardino, Giovanni Scicchitano, Francesco Panzera, Andrea Cannata</i>	
SCOUR PROTECTION CALCULATIONS FOR AN OFFSHORE ENERGY ISLAND USING DETAILED WAVE AND CFD FLOW MODELING	555
<i>Floris De Wit, Eelco Bijl, Sam Bom, Yannick Steenman, Leen Baelus, Koen Van Doorslaer, Pierre-Yves Guillermin</i>	
SHORELINE CHANGE PROJECTION CONSIDERING THE UNCERTAINTY CAUSED BY MULTIPLE FACTORS UNDER CLIMATE CHANGE.....	567
<i>Kunihiro Watanabe, Fuminori Kato, Akiyoshi Katano, Yoji Tanaka</i>	
OPTIMAL LAYOUT OF LIMESTONE SUBSTRATES FOR OYSTER BEDS AS NATURE- BASED SOLUTIONS FOR COASTAL MANAGEMENT.....	579
<i>Renata Archetti, Mariano Buccino, Isabella Casadei, M. Gabriella Gaeta, Sara Tuozzo, Massimo Ponti</i>	
EXTREME VALUE ANALYSIS OF COASTAL INUNDATION FOR THE DESIGN OF COASTAL PROTECTION IN CAMARINES SUR, PHILIPPINES.....	592
<i>Elias A. Garcia, Eric C. Cruz, Vince Rainer A. Abrigonda, Andrei Raphael P. Dita</i>	
EXTREME STORM SURGE AND WAVE HEIGHT ANALYSIS IN THE ADRIATIC SEA	606
<i>S Corvaro, F Marini, S Rocchi, C Lorenzoni</i>	

VALIDATION OF A SPECTRAL WAVE MODEL USING WAVE HEIGHT MEASUREMENTS FROM SATELLITE MISSIONS.....	616
<i>Andrei Armani A. Adame, Eric C. Cruz, Edgardo P. Kasilag II</i>	
NUMERICAL SIMULATION OF VOLCANOGENIC TSUNAMI WAVE INUNDATION IN TONGA.....	628
<i>Gede Pringgana, Lee S. Cunningham, Benedict D. Rogers</i>	
WAVE ATTENUATION EFFECTS BY MANGROVES USING THREE-DIMENSIONAL NUMERICAL CALCULATIONS	639
<i>Mei Yoshida, Hinano Ohara, Yota Enomoto, Taro Arikawa</i>	
EFFECTIVENESS OF DECISION TREE AND KERNEL-BASED MACHINE LEARNING ALGORITHMS IN PREDICTING OVERTOPPING RATES FOR SLOPING STRUCTURES.....	648
<i>M. A. Habib, J. J. O'Sullivan, S. Abolfathi, M. Salauddin</i>	

VOLUME 2

VERTICAL SEAWALLS PROTECTED BY RUBBLE MOUND STRUCTURES: PREDICTION TOOLS AND PHYSICAL INSIGHT.....	657
<i>Sara Tuozzo, Angela Di Leo, Margherita Carmen Ciccaglione, Fabio Dentale, Luis Cordova Lopez, Mario Calabrese, Mariano Buccino</i>	
REDUCING INUNDATION RISK AT BARRIER ISLANDS UNDER A RISING SEA LEVEL	668
<i>Anna Kroon, Ype Attema, Lennard Spaans, Tom Pak, Bas Van Leeuwen, Kevin Van Der Giessen, Dano Roelvink</i>	
COMPARATIVE ASSESSMENT OF PLUNGING JET SCOUR DEPTH PREDICTIVE FORMULAE UNDER VARIABLE SOIL MOISUTURE CONDITIONS.....	679
<i>Nilakshan Balasubramaniam, Ravindra Jayaratne, Taeksang Kim, Jeremy Bricker</i>	
DUNE PERFORMANCE IN 2050 AND 2100 SUBJECTED TO EXTREME AND NUISANCE EROSION EVENTS	690
<i>Matthew S Janssen, Jon K. Miller, Audrey C. Fanning, Ian J. Day</i>	
EXPANDING MIKE MS HYBRID WAVE DOWNSCALING: OVERCOMING STATIONARY ASSUMPTIONS FOR CLIMATE STUDIES	703
<i>Gabriel Vieira De Carvalho, Aline Kaji, Pierre Brink Swiegers, Johan Henrik Andersson, Jacob Tornfeldt Sørensen</i>	
COST-BENEFIT MEETS COASTAL MANAGEMENT: THE PORTUGUESE PARADIGM SHIFT.....	714
<i>Márcia Lima, Carlos Coelho</i>	
WAVE OVERTOPPING AT VERTICAL WALLS IN SHALLOW WATER CONDITIONS: A PREDICTIVE FORMULA	724
<i>Sara Tuozzo, Mario Calabrese, Mariano Buccino</i>	
COMPUTATIONAL SIMULATION OF EROSION AT COPACABANA BEACH – RJ - BRAZIL, UNDER THE INFLUENCE OF STORM WAVES: COASTAL PROTECTION STRATEGIES.....	735
<i>Diana Pinho, Rodrigo Silva, Paulo Rosman</i>	
NON-LINEAR WAVE PROPAGATION OVER A SUBMERGED BAR	745
<i>Stefania Rocchi, Francesco Marini, Carlo Lorenzoni, Sara Corvaro, Alessandro Mancinelli</i>	

PROPOSAL OF IMAGE PROCESSING FOR RIP CURRENT VERIFICATION	755
<i>Ryo Shimada, Toshinori Ishikawa, Tsutomu Komine</i>	
STUDY OF SEDIMENTATION PROBLEM AT KIASHAHR FISHERY PORT	764
<i>Zahra Javanmard, Mohsen Soltanpour, Tomoya Shibayama, Zahra Ranji</i>	
USE OF FORECAST WAVES FOR SEDIMENT TRANSPORT SHORT TERM PREDICTION DURING THE OPERATIONAL PHASES OF A BEACH NOURISHMENT: EXAMPLE OF EMILIA ROMAGNA PROJECT 2022	773
<i>F. Lupino, M. G. Gaeta, R. Archetti, C. Morolli</i>	
MODELLING THE CATASTROPHIC MAY 2023 FLOODS ALONG THE EMILIA ROMAGNA LITTORAL WITH THE COASTS GIS-BASED TOOL	785
<i>Barbara Zanuttigh, Paola Pareschi</i>	
CAMERA: A WEBCAM NETWORK TO IMPROVE THE REGIONAL COASTAL EARLY WARNING SYSTEM IN EMILIA-ROMAGNA (ITALY).....	796
<i>Andrea Valentini, Silvia Unguendoli, Tonino Liserra, Luis Germano Biolchi, Simone Righi, Andrea Serra, Lucio Magherini, Renata Archetti</i>	
PROJECTIONS OF FLOODING AND EROSION IN COASTAL ZONES OF ANDALUCÍA (SPAIN) FOR THE XXI CENTURY: A PROBABILISTIC APPROACH.....	806
<i>Pedro Otiñar, Marcus Santana, Manuel Cobos, Pedro Magaña, Agustín Millares, David Gutiérrez, Jorge Martín, Andrea Lira-Loarca, Asunción Baquerizo</i>	
WAVE, WAVE RUN-UP AND OVERTOPPING MEASUREMENTS IN THE FIELD USING LASER SCANNERS.....	819
<i>Patrick Oosterlo, Maarten Overduin, Chris Wauben, Jentsje W. Van Der Meer, Gosse Jan Steendam</i>	
TSUNAMI GENERATION PROCEDURE USING NAVIER-STOKES SOLVER AND AN INVESTIGATION INTO THE RUN- UP.....	821
<i>Peiwei Xie, Yan Du</i>	
WAVE ATTENUATION IN A PARTIALLY VEGETATED WAVE FLUME	823
<i>Yufei Wang, Jiarui Lei</i>	
ANALYSIS OF DIRECTIONAL WAVE SYSTEMS AND CROSSING SEAS IN THE MEDITERRANEAN SEA	825
<i>De Leo Francesco, Corrales-Gonzalez Manuel, Cremonini Giulia, Besio Giovanni</i>	
PROPERTIES OF EXTREME WAVE GROUPS BASED ON MEASURED WAVE DATA.....	826
<i>Ruili Fu, Gang Wang, Jinhai Zheng, Aifeng Tao</i>	
THEORY OF FIFTH-ORDER STOKES WAVES IN A LINEAR SHEAR CURRENT.....	828
<i>Philip L.-F. Liu, Haiqi Fang, Pengzhi Lin</i>	
STEADY STREAMING GENERATED BY A MONOCHROMATIC SURFACE WAVE CLOSE TO A ROUGH BOTTOM	829
<i>Giovanna Vittori, Paolo Blondeaux, Maurizio Brocchini, Lorenzo Melito, Matteo Postacchini</i>	
PROTECTING VALLETTA'S GRAND HARBOUR AGAINST ADVERSE WAVE CONDITIONS	831
<i>Franck Mazas, Christopher Farrugia</i>	

SMOOTHED PARTICLE HYDRODYNAMICS MODELLING OF WAVES, SHEARED CURRENTS AND LOADS	833
<i>Yong Yang, Samuel Draycott, Peter Stansby, Benedict D Rogers, Eugeny Buldakov, Dimitris Stagonas</i>	
EVALUATION OF THE ACCURACY OF THE GENERATED WAVE FIELDS IN THE COASTAL AND OCEAN BASIN (COB)	834
<i>Maximilian Streicher, Yuri Pepi, Wietse Stroobant, Timothy Vervaet, Laurens Cromheeke, Ivandito Herdayanditya, Evert Lataire, Tim Aertsens, Pieter Rauwoens, Jaak Monbaliu, Tomohiro Suzuki, Dieter Vanneste, Karim Bellafkih, Peter Troch</i>	
DEVELOPMENT OF ACCURATE, RELIABLE AND ROBUST ESTIMATION METHOD OF DIRECTIONAL SPECTRUM FROM FIELD DATA OBSERVED WITH ULTRASONIC DOPPLER-TYPE DIRECTIONAL WAVE METER	836
<i>Noriaki Hashimoto, Koji Kawaguchi, Takashi Fujiki, Masao Mitsui</i>	
SIMULATION OF THE ENERGETIC PROCESSES INVOLVED IN THE GENERATION OF WAVES BY HIGH MOBILITY SUBAERIAL LANDSLIDES.....	838
<i>Amir Parvin, Stéphane Abadie, Kamal El Omari, Yves Le Guer</i>	
LARGE-SCALE INFRAGRAVITY WAVE-RESOLVING FLOOD HAZARD MODELLING.....	839
<i>Tim Leijnse, Ap Van Dongeren, Maarten Van Ormondt, Jeroen Aerts, Sanne Muis, Dano Roelvink</i>	
LABORATORY EXPERIMENTS ON THE RUNUP OF LEADING-DEPRESSION N-WAVES	841
<i>Peter H.-Y. Lo, Wen-Yu Chen, Chun-Jui Huang</i>	
WAVE CHARACTERISTICS FROM SPARSE DATA WITH IMPLICATIONS TO DERIVE COASTAL BATHYMETRY FROM REMOTE SENSING	843
<i>Rafael Almar, Erwin Bergsma, Patrick Marchesiello, Rachid Benshila, Ehouarn Simon</i>	
RECENT ADVANCES OF LBM FOR TSUNAMI MODELLINGS: AN ENHANCEMENT OF IMPACT PRESSURE CALCULATION BY FOURTH-ORDER CUMULANT MODEL.....	844
<i>Kenta Sato, Shunichi Koshimura</i>	
EVOLUTION OF NONLINEAR WAVES OF MULTIPLE SYSTEMS IN TWO-DIMENSIONAL DIRECTIONAL CROSSING SEAS ON A SLOPE.....	845
<i>Zuorui Lyu, Nobuhito Mori, Hiroaki Kashima</i>	
AI-BASED FAST COMPUTATION OF NONLINEAR WAVE ENERGY TRANSFER.....	847
<i>Auriane Laurent, Yoshimitsu Tajima</i>	
MODELLING NONLINEAR SHORT-WAVE GROUPS AND INFRAGRAVITY WAVES IN PHASE-RESOLVED SIMULATIONS	849
<i>Jinghua Wang</i>	
NON-EQUILIBRIUM WAVE STATISTICS IN COASTAL AREA ASSOCIATED WITH STRONG VARIATIONS OF WATER DEPTH AND AMBIENT CURRENT	851
<i>Jie Zhang, Yuxiang Ma, Michel Benoit</i>	
AN EFFICIENT HYBRID DOWNSCALING OF NEARSHORE DIRECTIONAL WAVE SPECTRA FOR LONG-TERM SHORELINE MODELLING	853
<i>Laura Cagigal, Fernando Méndez, Alba Ricondo, Kristen Splinter</i>	
THE DEPTH SEMI-AVERAGED MODEL: AN ALTERNATIVE APPROACH TO THE DESCRIPTION OF COASTAL DYNAMICS.....	854
<i>Matteo Antuono, Maurizio Brocchini</i>	

CASCADE FREQUENCY DOWNSHIFTING IN THE WAVE SPECTRA IN THE COASTAL ZONE	856
<i>Yana Saprykina, Kuznetsov Sergey</i>	
NONLINEAR ASPECTS OBTAINING OF ORBITAL VELOCITIES FROM WAVES RECORDS	857
<i>Sergey Kuznetsov, Yana Saprykina</i>	
ASSESSING THE SPATIAL-TEMPORAL WAVE ENERGY CHARACTERISTICS ALONG THE SOUTHEAST COAST OF CHINA IN A WAVE SIMULATION STUDY	858
<i>Jie Yang, Chen Wang</i>	
FIELD INVESTIGATION OF INFRAGRAVITY WAVE RESPONSE UNDER SINGLE-PEAKED AND DOUBLE-PEAKED SPECTRAL SEA STATES	860
<i>Lidian Guo, Xiaozhou Ma, Zhenjun Zheng, Guohai Dong</i>	
SPH NUMERICAL MODELLING OF A U-OWC WAVE ENERGY CONVERTER	862
<i>Beatrice Mina, Giovanni Malara, Corrado Altomare, Felice Arena</i>	
TWO-DIMENSIONAL SIGNIFICANT WAVE FORECAST BY USING CONVOLUTIONAL LSTM AND ERA5 DATA.....	864
<i>Yuma Sato, Ryota Nakamura</i>	
A FIELD OBSERVED PHENOMENON OF WAVE PEAK FREQUENCY DOWN-SHIFTING IN A REEF AREA.....	866
<i>Po-Chien Lin, Zhi-Cheng Huang</i>	
IMPROVING WAVE TRANSFORMATIONS ON ROUGH BOTTOM IN A 3D PHASE RESOLVED MODEL WITH LABORATORY AND FIELD CAMPAIGNS	868
<i>Héloïse Michaud, Patrick Marsaleix, Emile Guélard Ancilotti, Damien Sous</i>	
FULLY NONLINEAR SIMULATION OF FLOW KINEMATICS BENEATH REGULAR AND IRREGULAR WAVES PROPAGATING OVER SUBMERGED SILLS	870
<i>Michel Benoit, Jie Zhang</i>	
WAVE DECAY BY RIGID VEGETATION UNDER ORTHOGONAL WAVE-CURRENT CONDITIONS.....	872
<i>Zichen Xu, Jiarui Lei</i>	
ROLE OF LAMB WAVE AND ATMOSPHERIC GRAVITY WAVE FOR THE 2022 HUNGA TONGA-HUNGA HA?APAI METEOTSUNAMIS	874
<i>Ai Nishino, Takuya Miyashita, Tomohiro Yasuda, Tomoya Shimura, Nobuhito Mori</i>	
VOID FRACTION IN HIGHLY UNSTEADY AIR-WATER FLOWS	876
<i>Dorette Regout, Jonas Matsch, Davide Wüthrich</i>	
PLUNGING WAVES IN THE INNER SURF ZONE AND BURGERS-LIKE TURBULENCE.....	878
<i>Francesca De Serio, Michele Mossa, Diana De Padova, Mouldi Ben Meftah</i>	
ANALYSIS AND MODELLING OF ISSUES RELATED TO WAVE AGITATION CAUSED BY LONG-PERIOD WAVES IN A TOURISTIC MARINA.....	880
<i>Luis Alberto Cusati, Andrea Pedroncini, Giovanni Besio, Angela Celeste Taramasso, Stefano Puppo</i>	
PREDICTING ONE-DAY AHEAD WAVE HEIGHTS USING A HYBRID MODEL OF LONG-SHORT TERM MEMORY AND ARTIFICIAL NEURAL NETWORK WITH RESAMPLING METHODS.....	882
<i>Ryota Kobayashi, Sooyoul Kim, Hajime Mase, Ken Watanabe</i>	

NUMERICAL INVESTIGATION OF WAVE ATTENUATION IN MANGROVE FORESTS USING THE IMMERSED BOUNDARY METHOD	884
<i>Fan Chen, Huan-Feng Duan, Jinghua Wang</i>	
MODELING THE OPTICAL SIGNATURE INDUCED BY WAVE BREAKING USING A BOUSSINESQ MODEL	886
<i>Matt Malej, Fengyan Shi</i>	
EXPERIMENTAL STUDY OF INTERNAL SOLITARY WAVES INTERACTION WITH SURFACE SOLITARY WAVES	887
<i>Jen-Ping Chu, Patrick Lynett, Mitul Luhar</i>	
PHASE-RESOLVING MODELING AND OBSERVATIONS OF NEARSHORE WAVE TRANSFORMATIONS IN A COMPLEX REEF ENVIRONMENT	889
<i>Camilla Tognacchini, Assaf Azouri, Fatima-Zahra Mihami, Ning Li, Volker Roeber, Martin D. Guiles, Douglas S. Luther</i>	
THE GENERATION OF ROGUE WAVES FROM SURF ZONE INFRAGRAVITY MOTIONS PENETRATING A BAR-BUILT SHALLOW ESTUARY	891
<i>Rodrigo Cienfuegos, Patricio Catalán, Raúl Flores, Maricarmen Guerra, Felipe Lucero, Paola Díaz, Rodolfo Gómez, César Esparza</i>	
ADVANCES IN PHASE-RESOLVED MODELING FOR MAPPING AND FORECASTING OF WAVE- DRIVEN COASTAL PHENOMENA.....	893
<i>Assaf Azouri, Martin Guiles, Volker Roeber, Ning Li, Camilla Tognaccini, Fatima-Zahra Mihami, Douglas S. Luther</i>	
TESTING THE TWO-DIMENSIONAL RESPONSE OF A METAMATERIAL-BASED DEVICE FOR ATTENUATING SURFACE GRAVITY WAVES	895
<i>Michele Mossa, Paolo Pezzutto, Miguel Onorato</i>	
SPECTRAL MODELLING OF COASTAL WAVES USING QUADWAVE1D	897
<i>Gal Akrish, Ad Reniers, Marcel Zijlema, Pieter Smit</i>	
LABORATORY STUDY OF WAVE NONLINEARITY EVOLUTION OVER COASTAL FLEXIBLE VEGETATION.....	899
<i>Zhong Peng, Ying Zhao, Xianjin Chen, Qing He</i>	
PERFORMANCE STUDY OF A LOW-PASS FILTER TO MODEL ENERGY DISSIPATION DUE TO MULTIDIRECTIONAL WAVE BREAKING IN HOS-NWT	900
<i>Tim Aertsens, Guillaume Ducrozet, Jaak Monbaliu, Alessandro Toffoli</i>	
SHIP WAVES GENERATED BY A CRUISE SHIP: FIELD OBSERVATION AND NUMERICAL REPRESENTATION USING GREEN'S FUNCTIONS	902
<i>Yoshimitsu Tajima, Jumpei Morioka, Yusuke Yamanaka, Björn Almström, Magnus Larson</i>	
TRACKING AND SPATIOTEMPORAL CHARACTERISTICS ANALYSIS OF OCEAN WAVE SYSTEMS: A CASE STUDY OF THE SOUTHEAST PACIFIC OCEAN	904
<i>Huawei Dong, Xiaozhou Ma, Zhenjun Zheng, Guohai Dong</i>	
A GENERALIZED TOOL FOR WAVE-BY-WAVE ESTIMATION OF NEARSHORE WAVE BREAKING DISSIPATION FROM OPTICAL IMAGERY	906
<i>Francisco J. Sáez Rosales, Patricio A. Catalán, Carlos Valle, Harold Díaz, Florent Fournier</i>	
TYPHOON-INDUCED EFFECTS ON WAVE EVOLUTION ACROSS COASTAL WETLANDS	908
<i>Ying Zhao, Zhong Peng</i>	

INVESTIGATING THE IMPACT OF MANGROVES ON WAVE ATTENUATION THROUGH PHYSICAL AND NUMERICAL MODELING.....	910
<i>Che-Wei Chang, Yu-Lin Tsai, Nobuhito Mori</i>	
EXPERIMENTAL BASIN STUDY OF WAVE-DRIVEN HYDRODYNAMICS OVER ARTIFICIAL REEFS	911
<i>Renan Silva, Ryan Lowe, Jeff Hansen, Alex Atkinson, Nick Naderi, Matthew Allen</i>	
DEEP LEARNING TO UNRAVEL NONLINEARITY IN WAVE BREAKING USING WAVE FLUME VIDEO IMAGES	913
<i>Miyoung Yun, Kideok Do, Jinah Kim, Tae-Soon Kang</i>	
IMPACT OF DATA ASSIMILATION FOR TYPHOON-GENERATED EXTREME WAVE BASED ON DRIFTING WAVE BUOY OBSERVATION	915
<i>Gota Yamasaki, Tomoya Shimura, Takuya Miyashita, Nobuhito Mori</i>	
EFFICIENT WAVE CONDITION PREDICTIONS FOR COASTAL STRUCTURES BASED ON MACHINE LEARNING AND PHASE-RESOLVING NUMERICAL SIMULATIONS	917
<i>Widar Weizhi Wang, Konstantinos Christakos, Hans Bihs</i>	
WAVE SKEWNESS AND ASYMMETRY STUDY USING WAVE PHASE RESOLVING MODEL	919
<i>Gugum Gumbira, Ming Li, Yan Zhou</i>	
PREDICTION OF OCEAN WAVE HEIGHTS BASED ON A CONVOLUTIONAL-LSTM	921
<i>Donghwi Son, Jeseon Yoo, Sung-Hwan Park</i>	
LONGTERM TRENDS OF THE WAVE CLIMATE OFF THE COAST OF ROME	923
<i>Giancarlo Milana, Giuseppe Vella, Marco Del Bianco, Giorgio Bellotti, Leopoldo Franco</i>	
REVIEW OF WAVE ATTENUATION BY ARTIFICIAL OYSTER REEFS BASED ON EXPERIMENTAL ANALYSIS	925
<i>Wei Xu, Aifeng Tao, Jun Fan</i>	
NUMERICAL MODELLING OF TSUNAMI PROPAGATION IN IDEALISED CONVERGING CHANNELS.....	927
<i>Zhiwen Chen, Valentin Heller, Riccardo Briganti</i>	
FREE-SURFACE SYNTHETIC SCHLIEREN IMPLEMENTATION ON A WAVE FLUME	929
<i>Carlos Echeverría, Edgar Gerardo Mendoza, Daniela Patricia Morales</i>	
LONG-TERM TRENDS OF EXTREME WAVES BASED ON 55 YEARS OF OBSERVATION DATA FROM THE COASTAL SEA AREA OF CHINA	931
<i>Liwei Cao, Aifeng Tao, Shufang Qin, Qiuhua Liang</i>	
NONLINEAR WAVE GROUP INTERACTION IN THE LONG -TIME WAVE EVOLUTION PROCESS.....	933
<i>Shuya Xie, Aifeng Tao, Jun Fan</i>	
AN OVERVIEW OF MULTI-SCALE CAPABILITIES OF THE SPECTRAL WAVE MODEL (WAVEWATCH III) FOR GLOBAL AND COASTAL APPLICATIONS. CASE STUDY: 2022 ATLANTIC HURRICANE SEASON	935
<i>Ali Abdolali, Aron Roland, Ty Hesser, Martha Scho`nau, Heloise Michaud, Mary Bryant, David Honegger, Jane Smith</i>	

ENERGY TRANSFER MECHANISMS OF TSUNAMIS GENERATED BY SUBAERIAL LANDSLIDES: A NUMERICAL STUDY IN OPENFOAM®	937
<i>Alessandro Romano, Javier Lara, Gabriel Barajas, Giorgio Bellotti, Iñigo Losada</i>	
WAVE ATTENUATION DUE TO VEGETATION USING THE FULLY NONLINEAR BOUSSINESQ MODEL	939
<i>Yu-Lin Tsai, Che-Wei Chang, Nobuhito Mori</i>	
WAVE BASIN MODELLING OF WAVE ENERGY CONVERTER ARRAYS TO EXPLORE IMPACTS ON NEARSHORE PROCESSES AND SHORELINE REALIGNMENT.....	941
<i>Nadav Cohen, Francois Flocard, Ian L. Turner</i>	
STUDY ON EXTREMELY LARGE STORM WAVES, SURGES AND CURRENTS AROUND THE EASTERN COAST OF HAINAN ISLAND	943
<i>Zhiheng Yang, Xiaojing Niu</i>	
ASSESSING THE LIMITATIONS AND QUALIFICATION CRITERIA OF CFD-BASED NUMERICAL WAVE TANKS USING HIGH-PERFORMANCE COMPUTING (HPC)	945
<i>Milad Abdollahpour, Federico Domenichini, Lorenzo Cappiotti</i>	
PROBABILITY DENSITY FUNCTIONS AND THEIR POSITIVE TAILS TO ANY ORDER IN NONLINEARITY FOR THE SURFACE ELEVATION IN IRREGULAR SEAS	946
<i>Mathias Klahn, Yanyan Zhai, David R. Fuhrman</i>	
PHYSICAL MODELING OF TSUNAMI WAVE PROPAGATION IN A MEANDERING CHANNEL.....	947
<i>H. Anil Ari Guner, Cem Yilmazer, Yalcin Yuksel, Mehmet Ozturk, Cihan Sahin, G. Guney Dogan, Ahmet Cevdet Yalciner</i>	
A SPATIAL ANALYSIS OF THE DEPENDENCE BETWEEN WAVE HEIGHTS AND WATER LEVELS USING COPULAS IN THE DUTCH DELTA	949
<i>Ligaya Maria Wopereis, Elisa Ragno, Alessandro Antonini</i>	
HYDRODYNAMIC EFFICIENCY OF U-OWC WEC THROUGH GEOMETRIC INVESTIGATION: A DESIGN FORMULATION APPROACH	951
<i>Gunay Gazaloglu, John Samuel, Hasan Gokhan Guler, Keri Collins, David Simmonds</i>	
STRENGTH AND WEAKNESSES OF THREE APPROACHES TO FAST MODELLING OF THE SPECTRAL WAVE ACTION BALANCE	953
<i>Menno Pieter De Ridder, Marlies Van Der Lugt, Dano Roelvink, Maarten Van Ormondt</i>	
IMPROVED SEMI-EMPIRICAL MODEL FOR THE SPECTRAL WAVE PERIOD ON SHALLOW FORESHORES	955
<i>Vincent Gruwez, Bas Hofland, Christopher H. Lashley, Tomohiro Suzuki, Corrado Altomare, Peter Troch</i>	
WAVE BREAKING ONSET AND DISSIPATION IN A FULLY NON-LINEAR, STAGGERED GRID BOUSSINESQ MODEL.....	957
<i>Maria Fotia, James T. Kirby, Morteza Derakhti, Stephan T. Grilli</i>	
NUMERICAL SIMULATION OF NEARSHORE WAVES AT MYANMAR COAST: AN INTEGRATED USAGE OF ERA-5, MIKE 21 AND SATELLITE DATA	958
<i>Thit Oo Kyaw, Aykut Pamuk, Tomoya Shibayama</i>	
A WAVE HINDCAST FOR THE GREAT BAY AREA (CHINA) BASED ON WWMIII WAVE MODEL.....	960
<i>Tiziano Bagnasco, Alessandro Stocchino</i>	

MODELING WIND WAVE DEVELOPMENT BASED ON PHASE-RESOLVING WAVE MODEL AND ITS APPLICATION TO TYPHOON JEBI IN 2018	961
<i>Shoko Sato, Takuya Miyashita, Tomoya Shimura, Nobuhito Mori, Patrick Lynett</i>	
SIMULATION OF ROGUE WAVE FORMATION IN FINITE DEPTH IRREGULAR WAVES WITH A FULLY NONLINEAR MODEL.....	963
<i>Yanyan Zhai, Mathias Klahn, David R Fuhrman</i>	
POROUS ARTIFICIAL REEFS: THE ROLES OF REFLECTION, BREAKING AND DRAG IN WAVE ATTENUATION.....	965
<i>Justin Edward Geldard, Ryan Lowe, Scott Draper, Marco Ghisalberti, George Ellwood, Matthew Allen</i>	
AN ASSESSMENT OF WAVE ATTENUATION BY MANGROVE ROOT SYSTEMS	967
<i>Diana Carolina Vargas Ortega, Marco Ghisalberti, Arnold Van Rooijen, Ryan Lowe</i>	
MULTIVARIATE ASSIMILATION METHOD FOR WAVE DYNAMICAL DOWNSCALING	969
<i>Sebastian Solari, Rodrigo Alonso</i>	
ADVANCES IN MODELING FLOW ATTENUATION PROVIDED BY SALTMARSHES AS A FUNCTION OF THEIR BIOMASS	971
<i>Maria Maza, Isabel Gallego, Fernando Lopez-Arias, Javier L. Lara</i>	
IMPLICATIONS OF DECOUPLED PHYSICAL PROCESS ANALYSIS FOR HYBRID SOLUTIONS.....	973
<i>Mariana Roldán, Maria Maza, Javier Lara, Gabriel Barajas</i>	
FUTURE WAVE CLIMATE IN THE MEDITERRANEAN SEA FROM AN ENSEMBLE OF 33 GCM-RCMS	975
<i>Tim Toomey, Andrea Lira-Loarca, Marta Marcos, Giovanni Besio, Alejandro Orfila</i>	
A NEW THEORETICAL ENVELOPE FRAMEWORK IN THE HAMILTONIAN THEORY OF NONLINEAR DEEP- AND FINITE-WATER SURFACE GRAVITY WAVES	977
<i>Yan Li, Wenye Lv</i>	
NUMERICAL MODELLING OF PRIMARY SHIP WAVES IN SHALLOW COASTAL AREAS USING CFD.....	978
<i>Ahmet Soydan, Fabian Knoblauch, Widar Weizhi Wang, León-Carlos Dempwolff, Nils Goseberg, Hans Bihs</i>	
MODELLING WAVE REFLECTION BY IMPLEMENTING ARTIFICIAL NEURAL NETWORKS IN PORT AREAS	980
<i>Anastasios Metallinos, Andreas Papadimitriou, Michalis Chondros</i>	
UNSTRUCTURED WAVEWATCH III DEVELOPMENTS FOR MULTISCALE MODELING	982
<i>Jane McKee Smith, Ali Abdolali, Aron Roland, Heloise Michaud, Tyler J. Hesser, Mary Anderson Bryant</i>	
MODELING WAVE CONDITIONS AT THE ERICEIRA WORLD SURF RESERVE USING THE NON-HYDROSTATIC NAVIER-STOKES SOLVER REEF3D::NHFLOW	984
<i>Hans Bihs, Widar Weizhi Wang, Ronja Ehlers, Tiago Gomes, Guilherme Vaz</i>	
EXPECTED WAVE ENERGY FLUX OF PREDICTED SEA STATES	986
<i>Paolo Pezzutto</i>	

MODELING INFRAGRAVITY WAVES WITH SWAN	988
<i>Ad Reniers, Gal Akrish, Dirk Rijnsdorp, Marcel Zijlema, Jantien Rutten, Floris De Wit, Marion Tissier</i>	
GEOMETRY EVALUATING PIECEWISE LINEAR INTERFACE COMPUTATION (GE-PLIC) TAILORED TO THE NUMERICAL SIMULATION OF BREAKING WAVES	990
<i>Fabian Knoblauch, Ahmet Soydan, Widar Weizhi Wang, Hans Bihs</i>	
WAVE SPECTRUM TRANSFORMATION OVER A SALT MARSH UNDER EXTREME STORM CONDITIONS	992
<i>Dimitrios Dermentzoglou, Jos Muller, Stijn Lakerveld, Bas Borsje, Bas Hofland, Marion Tissier, Alessandro Antonini</i>	
WAVE-INDUCED WINDS FOR SHOALING WAVES: A LABORATORY STUDY	994
<i>Fabio Addona</i>	
DATA-DRIVEN DYNAMIC MODELS FOR SPATIAL INTERPOLATION OF WAVE ENERGY SOURCE CHARACTERISTICS: PRELIMINARY EXPERIMENTAL VALIDATION.....	996
<i>Edoardo Pasta, Leonardo Gambarelli, Giuseppe Giorgi, Francesco Ferri</i>	
3D DEPTH-LIMITED BREAKING WAVES OVER VARIABLE BATHYMETRY IN FULLY NON-LINEAR POTENTIAL FLOW	998
<i>Jeffrey Clark Harris, Sunil Mohanlal, Marissa Yates, Stephan Grilli</i>	
LAMINAR-TO-TURBULENT TRANSITION IN OSCILLATORY WAVE BOUNDARY LAYERS	1000
<i>Selman Baysal, V. S. Özgür Kirca, B. Mutlu Sumer</i>	
COMPREHENSIVE MEASUREMENTS AND ANALYSIS OF SHIP WAVES IN THE ELBE ESTUARY, GERMANY	1002
<i>Arne Seemann, Nils Goseberg</i>	
EXPERIMENTAL INVESTIGATION OF EXTREME CREST HEIGHTS OVER SLOPING BEDS.....	1004
<i>Vasileios Bellos, Ioannis Karmpadakis, Chris Swan</i>	
GENERATION OF NONLINEAR RANDOM WAVES WITH BOTTOM WAVE MAKER USING EXTENDED BOUSSINESQ EQUATIONS: EFFICIENT METHOD TO ABSORB REFLECTED WAVE ENERGY	1006
<i>Minh Thang Tran, Changhoon Lee</i>	
LABORATORY STUDY OF SWELL WAVES PROPAGATING IN A WINDY DOMAIN.....	1008
<i>Luca Chiapponi, Fabio Addona, Sandro Longo</i>	
SURFACE/INTERNAL WAVES GENERATED BY AIR PRESSURE WAVES OVER SEABED TOPOGRAPHY	1010
<i>Taro Kakinuma, Jungo Kosugi</i>	
NUMERICAL ANALYSIS OF PERFORMANCE OF WAVEBREAKERS EXPOSED TO REGULAR WAVES IN STATIC AND FLOATING CONFIGURATION	1012
<i>Giacomo Rismondo, Vincenzo Armenio</i>	
MOBILITY AND BURIAL OF VARIABLE DENSITY MUNITIONS IN THE SURF ZONE.....	1014
<i>Jack A. Puleo, Temitope Idowu, Emily Chapman</i>	
MECHANISMS OF SURFONE MIXING IN A 3D WAVE RESOLVING MODEL	1015
<i>Patrick Marchesiello, Simon Treillou</i>	

WAVE FRICTION FACTOR OVER ROUGH SEABEDS.....	1016
<i>Damien Sous, Solène Déalbéra, Denis Morichon, Héloïse Michaud</i>	
IMPACTS OF INCIDENT WAVE CONDITIONS AND NEARSHORE BATHYMETRY ON SURFZONE VORTICITY	1018
<i>Ciara Dooley, Steve Elgar, Britt Raubenheimer, Levi Gorrell</i>	
FIELD OBSERVATIONS OF WATER CONTENT AND MICROTOPOGRAPHIC CHANGES DURING TIDAL CYCLES IN THE SWASH ZONE.....	1020
<i>Takayuki Suzuki, Tomoki Hayashi, Masayuki Banno, Daniel Cox</i>	
LX-ST: INTEGRATED SHORELINE AND TOPO-BATHYMETRIC ANALYSIS MODEL.....	1022
<i>Mohammad Traboulsi, Déborah Idier, Bruno Castelle, Arthur Robinet, Vincent Marieu</i>	
SWASH, MOISTURE, AND BEACH GROUNDWATER INTERACTIONS	1024
<i>Marie-Pierre C. Delisle, Britt Raubenheimer, Steve Elgar</i>	
EXPERIMENTAL INVESTIGATION OF CROSS-SHORE BEACH PROFILE PATH TO EQUILIBRIUM UNDER RAPID WAVE REGIME CHANGE	1025
<i>Marius Aparicio, Laurent Lacaze, Rafael Almar</i>	
IMPROVED HIGHER-ORDER BOUNDARY CONDITIONS FOR WAVE GENERATION IN THE NON-HYDROSTATIC MODEL SWASH.....	1027
<i>Panagiotis Vasarmidis, Georgios Klonaris, Marcel Zijlema, Vasiliki Stratigaki, Peter Troch</i>	
ALONGSHORE SWASH FLOW VARIABILITY	1028
<i>Alexandra C. Muscalus, Britt Raubenheimer, Steve Elgar</i>	
QUANTIFYING THE ROLE OF OFFSHORE BAR MORPHOLOGY ON RUNUP AND DUNE EROSION.....	1030
<i>Michael Itzkin, Stefano Conti, Kristen Splinter, Ian L Turner</i>	
THE IMPACT OF DISSIPATION BY VEGETATION ON MEAN WATER LEVEL.....	1032
<i>Bradley Johnson, Daniel Cox</i>	
SLOPE STABILITY METHODS PERFORMANCE IN PREDICTING SCARP FAILURES IN THE ABSENCE OF NOTCHING	1034
<i>Stefano Conti, Kristen Splinter, Ian Turner</i>	
NUMERICAL MODELLING OF EXTREME WAVES ON VARIOUS BED SLOPES.....	1036
<i>Umniya Al Khalili, Ioannis Kampadakis, Marios Christou, Vasileios Bellos</i>	
PARTICLE ACCELERATION AS A DIAGNOSTIC FOR WAVE BRAKING IN THE SURF ZONE	1038
<i>Rosa Maria Vargas-Magana, Henrik Kalisch, Maria Bjørnstad, Marc Buckley, Tessa Gronemann, Karoline Holand, Jochen Horstmann, Michael Streßer</i>	
EXTREME WAVE RUN-UP ON STEEP ROCK SHORES	1040
<i>Volker Roeber, Henrik Kalisch, Francesco Lagona</i>	
FIELD OBSERVATIONS AND NUMERICAL MODELING OF SWASH TRANSFORMATION IN THE PRESENCE OF AN ARTIFICIAL VEGETATION PATCH	1042
<i>Maqsood Mansur, Qin Chen, Julia Hopkins, Reza Salatin, Tyler McCormack, Patrick Dickhudt</i>	

PREDICTION OF WAVE RUN-UP AFFECTED BY DUNE SCARP: A LARGE-SCALE TWO-DIMENSIONAL MOVABLE BED EXPERIMENT	1044
<i>Eunju Lee, Hai Van Dang, Sungwon Shin, Jeseon Yoo, Hyoungsu Park</i>	
COASTAL FLOOD PROTECTION: THE PHYSICS BEHIND OPTIMAL BERM STRUCTURES	1046
<i>Michael Angelis Jr., Timu Gallien</i>	
MODELING BEACH GROUNDWATER SUPERELEVATION DUE TO WAVE RUNUP AND OVERTOPPING AT A REFLECTIVE BEACH	1047
<i>Margit Maple, Timu Gallien</i>	
NUMERICAL SIMULATION OF THE IMPACT FORCES GENERATED BY A SWASH-TYPE FLOW ON AN OVERTOPPED OBSTACLE.....	1048
<i>Mohamed Rozki, Stéphane Abadie, Denis Morichon</i>	
BUOYANT DRIFTWOOD DYNAMICS IN THE SURF ZONE.....	1050
<i>Enda Murphy, Ioan Nistor, Andrew Cornett</i>	
VIDEO-BASED FLOOD AND SWASH MAPPING – AN APPLICATION OF DEEP-LEARNING TO NEARSHORE RESEARCH.....	1052
<i>Qin Chen, Reza Salatin, Britt Raubenheimer, Steve Elgar, Navid Jafari, Xin Li</i>	
RESHAPING THE UNDERSTANDING OF BEACH RESPONSE TO SEA-LEVEL RISE FOR EQUILIBRIUM SHORELINE MODELLING	1054
<i>Maurizio D'Anna, Sean Vitousek, Bruno Castelle, Deborah Idier, Francesca Ribas, Albert Falques, Marissa Yates, Goneri Le Cozannet</i>	
HOW RELEVANT ARE UNCERTAINTIES IN GLOBAL MODELS FOR ASSESSING STORM EROSION ON BARRIER ISLANDS?	1056
<i>Valeria Fanti, Óscar Ferreira, Carlos Loureiro</i>	
HYBEAT: A HYBRID MODEL FOR SURF-ZONE HYDRODYNAMICS.....	1058
<i>Beatriz Pérez-Díaz, Laura Cagigal, Manuel Zornoza, Alba Ricondo, Sonia Castanedo, Fernando Méndez</i>	
THE TURBULENCE LENGTH SCALES OF SWASH FLOWS GENERATED BY SOLITARY WAVES ON A PLANAR SLOPE.....	1060
<i>In Mei Sou, Jinghua Wang, Yun-Ta Wu, Philip L-F Liu</i>	
SEDINTERFOAM: A MULTI-PHASE NUMERICAL MODEL FOR SEDIMENT TRANSPORT AND ITS APPLICATION TO SWASH ZONES.....	1062
<i>Narayan Kumar, Antoine Mathieu, Benjamin Tsai, Tianjian Hsu, Jack Puleo, Julien Chauchat</i>	
SPH MODELLING OF VEGETATION-INDUCED WAVE DISSIPATION: IMPLEMENTATION AND APPLICATIONS.....	1064
<i>Joe El Rahi, Vasiliki Stratigaki, Tomohiro Suzuki, Peter Troch</i>	
DEVELOPMENT OF A WAVE ROLLER AREA MEASUREMENT METHOD IN THE LABORATORY SURF ZONE	1066
<i>Yuefeng Wu, Qinghe Zhang, Jinfeng Zhang</i>	
INTERACTION BETWEEN MICROPLASTIC PARTICLES AND SUBMERGED VEGETATION CANOPIES IN WAVES PLUS CURRENT ENVIRONMENTS	1068
<i>R. Ilayda Tan, Giovanni Passalacqua, Stefan Carstensen, Claudio Iuppa, Carla Faraci, Bjarke Eltard Larsen, Nils B. Kerpen, Torsten Schlurmann, David R. Fuhrman</i>	

COMPARISON OF SURF ZONE TURBULENCE AND FLOW STRUCTURES IN SPILLING AND PLUNGING WAVES.....	1070
<i>Kessie Govender, Gary Mocke</i>	
MONITORING AND MODELING COASTAL MORPHOLOGICAL CHANGES USING VIDEO DATA AND XBEACH MODEL	1072
<i>Yasser Assaf, Maria Francesca Bruno, Leonardo Damiani, Alessandra Saponieri</i>	
SPH NUMERICAL SIMULATIONS OF WAVE BREAKING OVER A BARRED BEACH	1074
<i>Pietro Scandura, Corrado Altomare, Ivan Cáceres, Giacomo Viccione, Dominic Van Der A</i>	
FULL-SCALE VALIDATION OF THE RANS K-EPSILON TURBULENCE CLOSURE MODEL FOR CAPTURING WHITEWATER REFORM IN THE SURF ZONE.....	1076
<i>Adam Fincham, Michal Pieszka</i>	
A NUMERICAL MODEL TO SIMULATE CROSS-SHORE BEACH PROFILE EVOLUTION.....	1077
<i>Jie Zhang, Magnus Larson</i>	
ROLE OF WAVE-INDUCED OSILLATORY MOTIONS IN DEVELOPPMENT OF SANDY- MUDDY TRANSITIONAL BEACHES ON SOUTH CHINA COASTS.....	1078
<i>Yuan Li, Chi Zhang, Shaohua Zhao, Hongshuai Qi</i>	
COST-EFFECTIVE SHOALING REDUCTION ALTERNATIVES FOR A NAVIGATION CHANNEL NEAR AN INLET	1080
<i>Michael B. Kabiling</i>	
YEARLY EVOLUTION OF A NOURISHED SAND BEACH IN THAILAND	1082
<i>Jirat Laksanalamai, Nobuhisa Kobayashi</i>	
THE ROLE OF SEEPAGE RESPONSE IN TSUNAMI SCOUR	1084
<i>Yuzhu Li, Zhengyu Hu</i>	
SIMULATING LONGSHORE SHORELINE CHANGE: IMPROVING PERFORMANCE OF ONE-LINE MODELS	1086
<i>Oxana Repina, Rafael C. Carvalho, Giovanni Coco, Lucas De Freitas, Iñaki De Santiago, Colin D. Woodroffe</i>	
INVESTIGATING THE FETCH EFFECT ON AEOLIAN SEDIMENT TRANSPORT ON A SANDY BEACH.....	1088
<i>Glenn Strypsteen, Irene Delgado-Fernandez, Jennifer Derijkere, Pieter Rauwoens</i>	
PATCH SIZE EFFECT ON SEDIMENTATION BY SUBMERGED AQUATIC VEGETATION	1090
<i>Keisuke Nakayama, Keita Matsumura, Tetsuya Shintani</i>	
MUNITIONS MOBILITY AND BURIAL IN A MICRO-TIDAL ESTUARY.....	1091
<i>Agnese Baldoni, Matteo Postacchini, Carlo Lorenzoni, Lorenzo Melito, Francesco Marini, David Scaradozzi, Daniele Costa, Nicolò Ciuccoli, Maurizio Brocchini</i>	
MEASURING COASTAL SEDIMENT GRAIN SIZE INSTANTLY USING INSTAGRAIN, A HAND-HELD CAMERA WITH ON-DEVICE MACHINE LEARNING	1093
<i>Evan B. Goldstein, Jacob Stasiewicz</i>	
EXPERIMENTS ON THE STEADY STREAMING GENERATED BY A MONOCHROMATIC SURFACE WAVE OVER SMOOTH AND ROUGH BOTTOMS	1094
<i>Lorenzo Melito, Matteo Postacchini, Maurizio Brocchini, Giovanna Vittori, Paolo Blondeaux</i>	

EXPERIMENTAL STUDY ON THE IMPACT OF VEGETATION FLEXIBILITY ON SUSPENDED SEDIMENT CONCENTRATION UNDER OSCILLATORY FLOW	1096
<i>Kristian Ions, Dominic Reeve, Harshinie Karunaratna, Xin Wang, Jose M. Horrillo Caraballo</i>	
QUANTIFYING WAVE-INDUCED PRESSURES ON A SALT MARSH CLIFF: AN EXPERIMENTAL STUDY	1098
<i>Jos Muller, Pieter Faber, Dimitrios Dermentoglou, Bas Borsje, Jebbe Van Der Werf, Alessandro Antonini, Bas Hofland, Suzanne Hulscher</i>	
STUDY OF AEOLIAN MASS FLUX ESTIMATION ON COASTAL ENVIRONMENTS USING IMAGE ANALYSIS	1100
<i>Young-Min Kim, Hosahng Rhew, Hyun-Doug Yoon</i>	
MECHANISMS OF SEDIMENT TRANSPORT AND SEAWATER EXCHANGE IN THE KARAVASTA LAGOON, ALBANIA	1101
<i>Daiki Tsujio, Koji Asano, Sajmir Hoxha</i>	
CALIBRATION OF SHORELINE PREDICTION MODEL USING ENSEMBLE KALMAN FILTER	1103
<i>Xinyu Chen, Tomoya Shimura, Takuya Miyashita, Masayuki Banno, Nobuhito Mori</i>	
TIDALLY-DRIVEN BEACH CHANGE: INSIGHTS FROM LONG-TERM AND LIDAR MONITORINGS	1105
<i>Masayuki Banno, Takayuki Suzuki, Shin-Ichi Yanagishima, Satoshi Takewaka, Yoshiaki Kuriyama</i>	
THE EFFECTS OF REGULAR AND IRREGULAR WAVES ON THE EVOLUTION OF A SUBMERGED BERM IN A LOW-ENERGY BEACH	1107
<i>Yi Pan</i>	
FORM ROUGHNESS INDUCED BY TIDAL SAND WAVES: A MODELLING STUDY	1108
<i>Laura Portos-Amill, Pieter C. Roos, Johan H. Damveld, Suzanne J. M. H. Hulscher</i>	
ON A METHODOLOGY TO MEASURE WAVE BOUNDARY LAYER PARAMETERS UNDER IN SITU SURFACE WAVES	1110
<i>Noémie Fritsch, France Floc'H, Guillaume Fromant</i>	
MOZES: RESEARCH ON THE MORPHOLOGICAL INTERACTION BETWEEN THE SEA BOTTOM AND THE BELGIAN COASTLINE	1112
<i>Toon Verwaest, Arvid Dujardin, Abdel Nnafie, Rik Houthuys, Björn Röbbke</i>	
OBSERVATIONS OF VORTEX-INDUCED PRESSURE FORCES ACTING ON SAND GRAINS OVER RIPPLES	1114
<i>Donya Frank-Gilchrist, Margaret Palmsten, Allison Penko, Joseph Calantoni</i>	
PREDICTING SEDIMENT PATHWAYS ACROSS THE NEARSHORE-DUNE SYSTEM	1116
<i>Bart Van Westen, Matthieu De Schipper, Arjen Luijendijk</i>	
LINKING BERM ACCRETION TO ONSHORE BAR MIGRATION AND ASYMMETRIC WAVE PROPAGATION	1118
<i>Florian Grossmann, Agustín Sánchez-Arcilla, José M. Alsina</i>	
CONTINUOUS FIELD MEASUREMENTS OF DUNE SLUMPING DURING STORM SURGES	1120
<i>Paul Van Wiechen, Ryan Mieras, Jantien Rutten, Christine Baker, Katherine Anarde, Marion Tissier, Ad Reniers, Sierd De Vries</i>	

SOLVING A 40-YEAR OLD COASTAL SEDIMENT TRANSPORT PROBLEM USING INTEGRATED FIELD AND MODELLING APPROACH	1122
<i>Rain Männikus, Riko Noormets, Hannes Tõnisson</i>	
FLOOD AND COASTAL SEDIMENT SUPPLY OF THE RIVER TENRYU, JAPAN, ANALYZED BY X-BAND RADAR OBSERVATION AND XBEACH COMPUTATION	1124
<i>Satoshi Takewaka, Ivan Human, Zhiyuan Luo</i>	
EFFECT OF 30 YEARS OF RISK MANAGEMENT USING SAND NOURISHMENT	1126
<i>Simone Signe Dons Weiling, Sofie Agger, Nikolai Heath Sørensen, Per Sørensen</i>	
RANS MODELLING OF SEDIMENT TRANSPORT AND MORPHODYNAMICS OF A NOURISHED SHOREFACE	1128
<i>Joost Kranenburg, Jebbe Van Der Werf</i>	
EROSION FROM DISPLACEMENT WAVES ALONG THE MALAMOCCO MARGHERA CHANNEL	1129
<i>Grith Christoffersen, Andrea Pedroncini, Berry Elfrink, Paolo Menegazzo</i>	
USING A SUBMERGED ARTIFICIAL REEF AS COASTAL PROTECTION IN A BI- DIRECTIONAL WAVE CLIMATE	1131
<i>Bjarke Eltard Larsen, Kasper Kærgaard, Erik Damgaard Christensen</i>	
SEDIMENT DISTRIBUTION IN AN UNMAINTAINED COASTAL BRUSHWOOD GROUYNE FIELD.....	1133
<i>Christina Bischoff, Dorothea Bunzel, Maike Paul</i>	
AIR FLOW AND SAND TRANSPORT PERTURBATION OVER A HUMAN-MADE FOREDUNE UNDER OFFSHORE WIND USING COMPUTATIONAL FLUID DYNAMICS.....	1135
<i>Antoine Lamy, Thomas A. G. Smyth, Nicolas Robin, Patrick A. Hesp</i>	
STORM IMPACT ON BEACH NOURISHMENT MORPHOLOGY IN A SHALLOW BAY	1137
<i>Anna Adell, Gregor Luetzenburg, Aart Kroon, Björn Almström, Caroline Hallin</i>	
NUMERICAL STUDY ON THE INFLUENCE OF COASTAL FOREDUNES ON STORM- INDUCED EROSION.....	1139
<i>Constantin Schweiger, Björn Mehrrens, Thea Bölker, Oliver Lojek, Lukas Ahrenbeck, David Schürenkamp, Nils Goseberg</i>	
MODELLING MARINE DUNES INTERACTING WITH A WIND FARM OFFSHORE DUNKIRK.....	1141
<i>Noemie Durand, Pablo Tassi, Olivier Blanpain, Alice Lefebvre</i>	
SEDTRAILS: SIMULATING AND VISUALIZING COASTAL SEDIMENT PATHWAYS	1142
<i>Stuart Pearson, Johan Reyns, Maarten Van Ormondt, Natascia Pannozzo, Bram Van Prooijen, Edwin Elias</i>	
RECESSION BY RANDOM WAVES: INSIGHTS FROM PHYSICAL MODELING OF CONSOLIDATED SANDY BLUFF	1144
<i>Ali Farhadzadeh, Tao Xiang, Mohammad Khosravi, Ali Khosravi</i>	
A NEW APPROACH ACCOUNTING FOR SPECIES-SPECIFIC PLANT CHARACTERISTICS ON SAND CAPTURE EFFICIENCY IN AN AEOLIAN TRANSPORT MODEL	1146
<i>Quentin Laporte-Fauret, Meagan Wengrove, Peter Ruggiero, Sally D Hacker, Nicholas Cohn</i>	

MODELED INFLUENCE OF LARGE-SCALE TREE COVER ON THE EROSION PROCESS OF COASTAL DUNES.....	1148
<i>Oliver Lojek, Björn Mehrrens, Viktoria Kosmalla, Lukas Ahrenbeck, Constantin Schweiger, David Schürenkamp, Nils Goseberg</i>	
COMPARING BEACH MORPHOLOGICAL CHANGES BETWEEN GRAVEL AND SANDY COASTS.....	1151
<i>Yuta Nishida, Tomoya Shibayama, Takahito Mikami, Miguel Esteban</i>	
THE IMPACT OF TURBULENCE ON SEDIMENT EROSION AROUND SUBMERGED AQUATIC VEGETATION.....	1153
<i>Xinya Liang, Jiarui Lei</i>	
MECHANISMS UNDERLYING THE FORMATION OF CROSS-SHORE PARALLEL TIDAL CHANNEL SYSTEMS	1155
<i>Zeng Zhou</i>	
SEDIMENT TRANSPORT BY DAM-BREAK WAVES RELATING TO WAVE RUNUP AND TSUNAMI.....	1156
<i>Peter Nielsen</i>	
A CONCEPTUAL STUDY OF INFRA-GRAVITY DRIVEN CROSS-SHORE TRANSPORT	1158
<i>Andreas Bondehagen, Henrik Kalisch, Volker Roeber</i>	
DISCRETE ELEMENT MODELLING OF MOISTURE-LIMITED AEOLIAN SEDIMENT TRANSPORT.....	1160
<i>Xiuqi Wang, Geert H. P. Campmans, Thomas Weinhart, Anthony R. Thornton, Stefan Luding, Kathelijne M. Wijnberg</i>	
TURBULENCE CHARACTERISTICS IN THE BOTTOM WAVE-CURRENT BOUNDARY LAYER.....	1162
<i>Xuan Zhang, Jinhai Zheng, Chi Zhang</i>	
PROBABILISTIC LONG-TERM AND REGIONAL SHORELINE EVOLUTION MODELING USING WAVE CLIMATE EMULATOR	1163
<i>Yan Ding, Dylan Anderson</i>	
LONG-TERM ECO-MORPHOLOGY MODELLING FOR ASSESSING RISK REDUCTION BY LARGE-SCALE RESTORATION OF SEAGRASS IN ARCACHON BAY (FRANCE).....	1164
<i>Rémi Caillibotte, Soazig Mahe, Julien Fornasari, Alexis Beudin, Christophe Brière</i>	
MONITORING COASTAL DYNAMICS AFTER WORKING WITH NATURE PRACTICES IN THE RHONE DELTA	1166
<i>Morgane Jolivet, Cécile Puigserver, Olivier Boutron, François Sabatier, Samuel Meulé, Philippe Larroudé, Loïc Willm, Emilie Luna-Laurent</i>	
MONITORING A BEACH NOURISHMENT PROJECT IN BENIDORM (E SPAIN) USING REMOTE SENSING.....	1168
<i>Carlos Cabezas-Rabadán, Josep E. Pardo-Pascual, Jesús Palomar-Vázquez, Andrew Cooper</i>	
CONTRASTING SHORELINE DYNAMICS IN GEOLOGICALLY CONTROLLED BARRIERS	1170
<i>Vincent Kümmerer, Carlos Loureiro, Óscar Ferreira</i>	
USING DISTRIBUTED FIBER-OPTIC SENSING TO RECORD SANDBAR MIGRATION UNDER CALM AND ENERGETIC CONDITIONS	1172
<i>Hannah Glover, Meagan Wengrove</i>	

IMPLEMENTATION AND VALIDATION OF AN INTRA-WAVE SEDIMENT TRANSPORT MODULE IN A DEPTH-AVERAGED NON-HYDROSTATIC WAVE MODEL.....	1174
<i>Anouk De Bakker, Menno De Ridder, Robert McCall</i>	
INFLUENCE OF MORPHOLOGY ON WIND FLOW AND SEDIMENT TRANSPORT PATTERNS ON TWO AQUITAINE COASTAL DUNES (SW, FRANCE).....	1176
<i>Nicolas Robin, Camille René, Antoine Lamy, Emma David, Olivier Raynal, Alexandre Nicolae-Lerma, Bruno Castelle, David Rosebery</i>	
INFLUENCE OF THE INITIAL TOPOBATHYMETRY IN BACKSHORE-NEARSHORE INTERACTIONS DURING EXTREME EVENTS.....	1178
<i>Nil Carrion-Bertran, Daniel Calvete, Francesca Ribas</i>	
A MASS CONSERVATION MODEL TO PREDICT THE BEHAVIOUR OF COASTAL SOFT- CLIFFS DRIVEN BY SEA LEVEL RISE OVER MULTI-CENTURY TIMESCALES	1180
<i>Matthew Robert Appleton, Riccardo Briganti, Nicholas Dodd, Andrés Payo</i>	
INVESTIGATING THE PAST AND FUTURE EFFICACY OF SAND RECYCLING IN ADELAIDE, SOUTH AUSTRALIA USING THE ONE-LINE MODEL ‘SHORELINES’	1182
<i>Ben Perry, Bas Huisman, Dano Roelvink, Patrick Hesp, Graziela Miot Da Silva</i>	
MODELLING 2DH COASTAL MORPHODYNAMICS INCLUDING THE SEDIMENT SUPPLY FROM RIVERS AND NATURAL STREAMS	1184
<i>Theofanis Karambas, Achilleas Samaras</i>	
FIELD OBSERVATIONS AND NUMERICAL MODELLING OF HEADLAND BYPASSING IN A HIGH-ENERGY COMPLEX COASTAL ENVIRONMENT	1186
<i>Charlotte Frederike Kerstin Uphues, Graziela Miot Da Silva, Arnold Van Rooijen, Patrick Hesp</i>	
ACOUSTIC BACKSCATTER MODEL FOR A MIXTURE OF SAND AND SHELL SEDIMENTS.....	1188
<i>Guillaume Fromant, France Floc'H, Oriana Yon--Campaner, Nicolas Le Dantec, Emmanuel Augereau, Marion Jaud</i>	
IN-SITU OBSERVATION OF HYDRO-SEDIMENT DYNAMICS ON STEEPLY SLOPING SEABED IN DEEP WATER	1190
<i>Takenori Shimozono, Takashi Yamano, Yoshimitsu Tajima</i>	
BEACH RECOVERY ACCELERATION BY NATURE-ASSISTED BEACH ENHANCEMENT TECHNIQUES	1192
<i>Erica Pellón, Íñigo Aniel-Quiroga, Mauricio González, Raúl Medina</i>	
THE ROLE OF VEGETATION STRUCTURE ON REDUCING DUNE EROSION AND WAVE OVERTOPPING.....	1194
<i>Jessica Esparza-Miss, Gabriela Mendoza-González, Camilo Rendón-Valdez, Alec Torres- Freyermuth</i>	
SEDIMENT MODEL FOR LANDSLIDE TSUNAMIS USING SMOOTHED PARTICLE HYDRODYNAMICS.....	1196
<i>Chiaki Tsurudome, Naoto Kihara</i>	
EXTRACTION OF TRANSVERSAL AND LITTORAL SEDIMENT TRANSPORT VECTORS FROM SHORELINE OBSERVATION DATA.....	1198
<i>Changbin Lim</i>	

INTELLIGENT BEACH NOURISHMENT: THE FUTURE OF SOUTHERN BALTIC COASTAL PROTECTION	1200
<i>Michał Bojan, Piotr Szmytkiewicz</i>	
A HOLISTIC MODEL TO SIMULATE LONG-TERM EVOLUTION OF CATCHMENT-ESTUARY-COASTAL SYSTEMS	1202
<i>Janaka Bamunawala, Roshanka Ranasinghe, Jeewanthi Sirisena</i>	
AEOLIS: MODELLING AEOLIAN SEDIMENT TRANSPORT PROCESSES FOR PREDICTING DUNE DEVELOPMENT AND NBS DESIGN	1204
<i>Sierd De Vries, Bart Van Westen, Caroline Hallin, Glenn Strypsteen, Christa Van Ijzendoorn, Nicholas Cohn</i>	
OBSERVATION AND PREDICTION OF ALONGSHORE TRANSPORT OF COBBLES ON NATURAL AND ENGINEERED COMPOSITE BEACHES	1206
<i>Hailey Bond, Meagan Wengrove, Greg Wilson, Luis Perez Squeo</i>	
ENHANCED DUNE EROSION DUE TO ATTENUATION OF COASTAL ICE PHENOMENA	1208
<i>Krzysztof Pilczynski, Piotr Szmytkiewicz</i>	
SEDIMENT TRANSPORT DYNAMICS ACROSS SHORE-ATTACHED SAND RIDGES.....	1210
<i>Jeff Hansen, Michael Cuttler</i>	
BEACH NOURISHMENT TO REDUCE THE BREACHING RISK OF A SAND SPIT A CASE STUDY FROM CARNARVON, WESTERN AUSTRALIA.....	1212
<i>Oliver Nickson</i>	
SCOUR AROUND VERTICAL WALL BREAKWATERS UNDER RANDOM AND SOLITARY WAVES.....	1213
<i>Cüneyt Baykal, Kadir Karakas, Mehmet Emre Yildirim</i>	
SANDY BEACH DYNAMICS IN ATOLL ENVIRONMENTS UNDER OBLIQUE LOW ENERGY WAVES AND SEA LEVEL RISE: A CASE STUDY IN ADDU CITY, THE MALDIVES	1215
<i>David Heineke, Dennis Van Kester, Bart-Jan Van Der Spek, Stijn Dijsselbloem, Leon Brok, Nils Van Der Ent</i>	
OBSERVATIONS AND MODELING OF CROSS-SHORE SEDIMENT TRANSPORT ON A LOW ENERGY, FETCH-LIMITED BEACH.....	1217
<i>Marlies A. Van Der Lugt, Matthieu A. De Schipper, Ad J. H. M. Reniers, Noémie Fritsch</i>	
WATER CIRCULATION AND SEDIMENT TRANSPORT MODELING IN FETHIYE BAY FOR DREDGING OPERATIONS AND POLLUTION CONTROL	1219
<i>Bilge Karakütük, Gözde Güney Dogan, Ahmet Cevdet Yalciner, Aysen Ergin</i>	
PREDICTING 3D INTERACTIONS BETWEEN OFFSHORE ACTIVITIES AND SAND WAVE RECOVERY.....	1221
<i>Pauline Overes, Zeta Tam, Arjen Luijendijk, Bas Borsje, Suzanne Hulscher</i>	
NATURE-BASED INTERVENTIONS IN VENICE TO RESTORE COASTAL WETLANDS.....	1223
<i>Luca Sittoni, Jane Da Mosto, Tomas Stercks, Alessandro Gasparotto, François De Keuleneer</i>	
MONITORING A NATURAL COBBLE BERM TO INFORM NATURE-BASED SOLUTIONS FOR HIGH-ENERGY COASTS.....	1225
<i>Michelle Gostic, George M. Kaminsky, Heather Weiner, Amanda Hacking, Gabby Alampay, Heather Maran</i>	

HYDRODYNAMICS AND SEDIMENT FLUXES AT AN INNER SHELF WITH SHOREFACE CONNECTED SAND RIDGES.....	1227
<i>Muhammed Said Parlak, Bilal Umut Ayhan, John Warner, Tarandeep Kalra, Ilgar Safak</i>	
ANALYZING UPSCALED NOURISHMENT SCENARIOS FOR SEA LEVEL RISE MITIGATION	1228
<i>Tosca T. Kettler, Matthieu A. De Schipper, Arjen P. Luijendijk</i>	
EXPERIMENTAL STUDY OF THE WAVE-INDUCED GROUNDWATER DYNAMICS UNDER DIFFERENT PERIODS	1230
<i>Donghui Zhao, Yihao Zheng, Haijiang Liu</i>	
APPLICATION OF A DREDGED TRENCH TO INFLUENCE SHORELINE LONGSHORE SEDIMENT TRANSPORT	1232
<i>Mariana Ferreira Oliveira, Donna Habib, James Walker, Francesco Ciardulli</i>	
IMPACT OF SAND DUNE MORPHOLOGY ON MACRO-TIDAL CURRENT DYNAMICS: INSIGHTS FROM PIV MEASUREMENTS.....	1234
<i>Gaetano Porcile, Dominique Mouazé, Pierre Weill, Anne-Claire Bennis, Aurélien Gangloff</i>	
THE CONDITIONS FOR SEDIMENT ACCRETION ON SALT MARSHES.....	1235
<i>Thomas Van Veelen, Heidi Nepf, Suzanne Hulscher, Bas Borsje</i>	
BRAZOS RIVER FLOOD GATE PROJECT: UNDERSTANDING HYDRODYNAMICS AND SEDIMENTATION USING NUMERICAL AND PHYSICAL MODELS.....	1237
<i>Himangshu Shekhar Das, Aaron Aaron Buesing, Chris Miller, Roham Roham Bakhtyar, Michael Ritz, Rob Dauenhauer, Orlando Ramos</i>	
SEDIMENT TRANSPORT AT THE BALTIC COAST USING A NON-HYDROSTATIC S-GRID MODEL.....	1239
<i>Ronja Ehlers, Widar Weizhi Wang, Rain Männikus, Tarmo Soomere, Hans Bihs</i>	
THE IMPACT OF SILT CONTENT ON THE FLOCCULATION PROCESS OF CLAY-SILT MIXTURES.....	1241
<i>Chunyang Xu</i>	
SEA DEFENCE BY GRAVEL NOURISHMENT AND SUBMERGED BREAKWATERS: A CASE STUDY	1243
<i>Amanda Zannella, Andrea Esposito, Irene Simonetti, Lorenzo Cappietti</i>	
SMALL-SCALE EXPERIMENTAL EVIDENCE ON JOINT-BOUNDED BLOCK TRANSPORT BY RAPID FLOWS	1245
<i>N. A. K. Nandasena</i>	
COMPARISON BETWEEN PARTICLE-BASED AND SEMI-EMPIRICAL SEDIMENT TRANSPORT SIMULATIONS OF SCOUR AROUND A VERTICAL CYLIND.....	1247
<i>Alexander Thomas Hanke, Widar Weizhi Wang, Hans Bihs</i>	
ENHANCING COASTAL FLOODING RESILIENCE IN IZMIR BAY DUE TO SEA LEVEL RISE USING SOFT MEASURES	1249
<i>Onur Deniz Türkseven, Dogan Kisacik, Isikhan Guler, Cuneyt Baykal</i>	
REASSESSMENT OF THE COASTAL PROTECTION DUNES AS NATURE BASED SOLUTIONS IN THE BALTIC SEA FOR CLIMATE ADAPTION.....	1251
<i>Dirk Fleischer, Jürgen Stamm, Arne Arns, Simon Beckmann</i>	

DECADAL SCALE PREDICTION OF COASTAL DUNE EVOLUTION AT LONG BEACH, WA, USA.....	1253
<i>Selwyn Swift Heminway, Nicholas Cohn, Christa Van Ijzendoorn, Peter Ruggiero, Meredith Leung, Dylan Anderson</i>	
INFLUENCE OF HIGH-ANGLE WAVE INSTABILITY ON LARGE SCALE SHORELINE PROJECTIONS UNDER MEAN SEA LEVEL RISE. LLOBREGAT DELTA CASE STUDY.	1255
<i>Albert Falques, Francesca Ribas, Miquel Negre, Lucas Lopez</i>	
THE RELATIVE CONTRIBUTIONS OF WAVE POWER AND SEA LEVEL TO COASTAL EROSION IN REEF-FRONTED SANDY BEACHES.....	1257
<i>Thalles Araujo, Jeff Hansen, Michael Cuttler, Ryan Lowe</i>	
SIMULATING BEACH AND DUNE EVOLUTION DUE TO LONGSHORE TRANSPORT, AEOLIAN TRANSPORT AND DUNE EROSION.....	1259
<i>Dano Roelvink, Anna Kroon, Ype Attema, Anouk De Bakker, Bas Huisman</i>	
MITIGATION OF BEACH EROSIONAL HOTSPOTS WITH COASTAL STRUCTURES: THE USE OF MORPHOLOGICAL MODELS TO OPTIMIZE THE BALANCE BETWEEN SAND RETENTION AND DOWNDRIFT IMPACTS.....	1261
<i>Lindino Benedet, Thomas Pierro, Morjana Signorin</i>	
MODELLING THE DECADAL EVOLUTION OF A DELTAIC COAST UNDER DIFFERENT SOFT INTERVENTIONS FOR CLIMATE CHANGE ADAPTATION	1263
<i>Francesca Ribas, Albert Falqués, Daniel Calvete, Ruth Duran</i>	
XBEACH MODELLING OF A MIXED SAND AND GRAVEL SHORELINE: EAST VANCOUVER ISLAND.....	1265
<i>Laura Ramsden, Pauline Martens, Grant Lamont, Wil Hilsen, Phil Osborne, Neville Berard</i>	
NUMERICAL MODELLING OF RESIDUAL LIQUEFACTION AROUND SUBMARINE PIPELINES AND OFFSHORE CABLES.....	1267
<i>Selahattin Utku Yilmaz, V. S. Özgür Kirca, B. Mutlu Sumer, Ranjith Khumar Shanmugasundaram, Henrik Ruche, Christian Windt, Nils Goseberg</i>	
OBSERVATIONS AND MODELING OF A HYBRID-DUNE LIVING SHORELINE OVERWASH EVENT AT A LONG-PERIOD SWELL DOMINATED BEACH	1269
<i>Maria A. Winters, Margit Maple, Timu W. Gallien</i>	
DAILY BEACH EVOLUTION WITH STEREO PHOTOGRAMMETRY AT AN UNDEVELOPED BARRIER ISLAND.....	1271
<i>Christine Marie Baker, Katherine Anarde, Joseph Long, Andrea Hawkes, Colby Lyon</i>	
BREAKING WAVES IN SOFT ROCK CLIFF RECESSION IN SOUTH-WEST SARDINIA, IT	1273
<i>Andrea Sulis, Paolo E. Orrù, Valentino Demurtas, Andrea Atzeni</i>	
TRANSPORT OF ALIEN PARTICLES IN SAND BEDS MOBILISED BY WAVES.....	1275
<i>Otto Neshamar, Dominic Van Der A, Tom O'Donoghue, Jos Derksen</i>	
CONDITION CHARACTERISATION OF COASTAL INFRASTRUCTURE USING EXPERIMENTAL MODAL ANALYSIS	1276
<i>Michael O'Shea, William Flynn, Lison Soumille, Rory Sharvin, Darragh O'Donovan</i>	
REVTMENT DAMAGE PROGRESSION ANALYSIS CONSIDERING REDUCTION IN SEA ICE COVER DUE TO CLIMATE CHANGE, KIVALINA, ALASKA	1278
<i>Arturo Jimenez-Martinez</i>	

MODELING TIME-VARYING SURGE BARRIERS: THE IMPACT OF CLOSURE TIME AND DURATION ON FLOOD PROTECTION	1280
<i>Mary Cialone, Greg Slusarczyk, Robert Hampson</i>	
ADAPTION OF ESTUARINE WATERWAY INFRASTRUCTURE TO MITIGATE THE EFFECT OF LONG-PERIOD SHIP-INDUCED WAVES	1281
<i>Leon-Carlos Dempwolff, Christian Windt, Gregor Melling, Hans Bihs, Ingrid Holzwarth, Nils Goseberg</i>	
PREDICTION OF CORE STONE DAMAGE THROUGH THINNED ARMOR LAYER	1283
<i>Michele Strazzella, Nobuhisa Kobayashi</i>	
WAVE TRANSFORMATION ACROSS MODULAR POROUS ARTIFICIAL REEFS.....	1284
<i>Jianjun Huang, Ryan J. Lowe, Marco Ghisalberti, Jeff E. Hansen</i>	
WAVE IMPACT ON BREAKWATER ARMOR BLOCKS USING IBM-DEM CFD COUPLING	1286
<i>Matthieu Barcet, William Benguigui, Jérôme Laviéville, Michel Benoit, Clément Buvat, Thomas Bonometti, Pascal Fede</i>	
WAVE OVERTOPPING OVER A SEA DIKE WITH STILLING WAVE BASIN AND SHALLOW FORESHORE.....	1288
<i>Dieter Vanneste, Marc Willems, Sieglie De Roo, Tomohiro Suzuki, Maximilian Streicher, Peter Troch</i>	
PROBABILISTIC MODELLING OF THE ARMOR DAMAGE EVOLUTION OF ROCK-ARMORED GROYNES UNDER SHIP- WAVE ATTACK BASED ON FIELD DATA	1290
<i>Patricia Mares-Nasarre, Oswaldo Morales-Nápoles, Gregor Melling</i>	
STABILITY OF MULTI-LAYER TETRAPOD MOUND BREAKWATERS AGAINST SOLITARY WAVES USING THE SMOOTHED PARTICLE HYDRODYNAMICS MEHTOD (SPH).....	1292
<i>Alejandro Crespo, Bonaventura Tagliaferro, Jun Mitsui, Corrado Altomare, José Manuel Domínguez, Iván Martínez-Estévez, Tomohiro Suzuki, Shinichi Kubota, Moncho Gómez-Gesteira</i>	
EXPERIMENTAL STUDY OF THE BREAKING WAVE IMPACT ON RIGID AND ELASTIC PLATES.....	1294
<i>Zhengyu Hu, Yuzhu Li</i>	
EXPERIMENTAL STUDY OF THE EFFECT OF VEGETATION ON WAVE OVERTOPPING UNDER STRONG WINDS	1296
<i>Yudai Aoki, Kosuke Sasaki, Ryota Nakamura, Kunihiro Ishibashi, Katsuhiro Yamamoto</i>	
NEW SIMPLE AND EXPLICIT FORMULA FOR WAVE REFLECTION ON MOUND BREAKWATERS USING NEURAL NETWORK MODELING	1298
<i>Pilar Díaz-Carrasco, Jorge Molines, Esther Gómez-Martín, Josep R. Medina</i>	
CONTRIBUTION OF MOMENTUM IN TSUNAMI LOADING ON A VERTICAL SEAWALL	1300
<i>Keith Adams, David McGovern, Tiziana Rossetto, Ian Chandler</i>	
STUDY ON PARAMETERS TO EVALUATE IMPACT PROBABILITY OF TSUNAMI SHIP DEBRIS ON SEAWALLS.....	1302
<i>Takuya Toriyama, Nobuo Ishida, Kei Yamashita, Yukinobu Oda</i>	
COHERENCE OF WAVE IMPACT INDUCED PRESSURES ON A VERTICAL SEAWALL	1304
<i>Dimitris Stagonas</i>	

HYDROELASTIC THEORY FOR FLOATING PLATES OF VARIABLE FLEXURAL RIGIDITY	1305
<i>Simone Michele, Siming Zheng, Emiliano Renzi, Alistair Borthwick, Deborah Greaves</i>	
CALCULATING WAVE OVERTOPPING VOLUMES THROUGH IMAGE CLUSTERING ANALYSIS.....	1307
<i>Corrado Altomare, Sara Mizar Formentin, Barbara Zanuttigh</i>	
COASTAL HAZARD MITIGATION VIA STRUCTURAL SHAPE MODIFICATION: INVESTIGATING THE INFLUENCE OF CURVED STRUCTURAL CROSS-SECTIONS ON WAVE FORCES USING SPH MODELING	1309
<i>Gaoyuan Wu, Krisna Adi Pawitan, Maria Garlock</i>	
A NUMERICAL STUDY OF ARMOUR BLOCK PERFORMANCE AGAINST TSUNAMI FLOWS BY DUALSPHYSICS	1311
<i>Takashi Yamamoto, Tomohiro Yasuda, Corrado Altomare</i>	
BIOLOGICAL PERFORMANCE OF AN ECO-ENGINEERED ARMORING UNIT, THE COASTALOCK	1313
<i>Yaeli Rosenberg, Jorge Gutiérrez Martínez, Andrew Rella, Philippe Leblanc</i>	
WAVE-INDUCED IMPACT ON MONOPILE-TYPE OFFSHORE WIND TURBINE RESPONSE.....	1315
<i>Hiroaki Kashima, Haruo Yoneyama</i>	
A NEW FORMULA FOR PRESSURE TRANSMISSION INSIDE RUBBLE MOUND BREAKWATERS PROTECTING LAND RECLAMATIONS.....	1317
<i>Aggelos Dimakopoulos, William Allsop, Ian Chandler, Tim Pullen</i>	

VOLUME 3

WAVE FORCES ON CROWN WALLS OF MOUND BREAKWATERS USING WAVE OVERTOPPING DISCHARGES.....	1319
<i>Jorge Molines, Pilar Díaz-Carrasco, Enrique Ripoll, Esther Gómez-Martín, Josep R. Medina</i>	
LARGE SCALE PHYSICAL MODEL EXPERIMENTS OF HYBRID GREEN-GRAY STRUCTURE PERFORMANCE FOR OVERTOPPING MITIGATION	1321
<i>Tori Tomiczek, Margaret Libby, Dan Cox, Pedro Lomonaco, Dan McMann, Jordan Keck</i>	
STABILITY ANALYSIS OF A CAISSON UNDER BREAKING WAVE BY MEANS OF A GRADUAL APPROACH.....	1323
<i>Bruno Conte, Cloe Savary, Frederic Andrian, Sophie Desprez, Marie Coutos Thevenot</i>	
NUMERICAL MODELING OF WAVE OVERTOPPING OF COASTAL BREAKWATERS FOR BIMODAL SEA STATES WITH DEPTH-AVERAGED MODELS	1325
<i>Guillaume Coulaud, Michel Benoit, Maria Teles</i>	
ON THE UNCERTAINTIES IN ROCK-ARMOURED BREAKWATERS STABILITY	1327
<i>Giulio Scaravaglione, Jeffrey A. Melby, Leonardo Damiani, Alessandra Saponieri, Giuseppe Roberto Tomasicchio</i>	
EXPERIMENTAL AND NUMERICAL INVESTIGATION OF A FLOATING OFFSHORE WIND TURBINE PLATFORM.....	1329
<i>Umutcan Inal, Mehmet Utku Ogur, Yalcin Yuksel, Ferdi Cakici, Cihan Sahin, Serdar Beji</i>	
NUMERICAL MODELLING OF FLUID-STRUCTURE INTERACTION INVOLVING TSUNAMI BORE AND DEBRIS IMPACT	1331
<i>Kenshiro Ishiki, Lee S. Cunningham, Benedict D. Rogers</i>	

STABILITY OF HIGH DENSITY CUBES ON BREAKWATER ROUNDHEADS	1333
<i>Yalcin Yuksel, Esin Cevik, Marcel Van Gent, Cihan Sahin, Mehmet Ozturk, Anil Ari Guner, Baran Polat, Burak Rehber, Chingiz Mustafazade, Umutcan Inal, M. Utku Ogur</i>	
PHYSICAL MODELLING OF THE WOLF ROCK LIGHTHOUSE	1335
<i>Alison Caroline Raby, Darshana Dassanayake, Alessandro Antonini, Edward Ransley, Kieran Monk, Deborah Greaves</i>	
HAIFA BREAKWATER RETROFIT DESIGN	1337
<i>Atilla Bayram, Bill Paparis, Daniela Ostrovsky</i>	
BLADE DYNAMICS IN ORTHOGONAL WAVE-CURRENT CONDITIONS	1339
<i>Zichen Xu, Jiarui Lei</i>	
DESIGN AND LAYOUT OPTIMIZATION OF ROCK-FILLED MATTRESS SOLUTIONS FOR SCOUR PREVENTION BY MEANS OF SAND BED DEFORMATION TESTING UNDER MULTIPLE PROPELLER JET INDUCED FLOWS.....	1341
<i>Gianluca Brocca, Arne Van Der Hout, Paolo Di Pietro, Helena I. S. Nogueira, Christian Van Nieuwenhuizen, Alessandro Cavagni, Marco Vicari</i>	
OPTIMIZATION OF BREAKWATER SYSTEM USING A 3D PHYSICAL MODEL.....	1342
<i>Nick Stefani, Jack Cox, Alejandra Lira-Pantoja, Margaret Boshek</i>	
REALISTIC NUMERICAL PLACEMENT OF ARMOR LAYERS OF MOUND BREAKWATERS	1343
<i>Sergio Muñoz-Palao, Pilar Díaz-Carrasco, Jorge Molines, M. Esther Gómez-Martín, Josep R. Medina</i>	
EVALUATION OF REPAIR METHODS FOR DAMAGED ROCK ARMoured SLOPES	1345
<i>Seth Smith, Tom Shand, Colin Whittaker</i>	
EXPERIMENTAL TESTING OF WAVE TRANSMISSION COEFFICIENTS FOR OYSTER SHELL-FILLED BAG BERMS.....	1347
<i>Amanj Rahman, Mitch Provan, Enda Murphy</i>	
OVERTOPPING HAZARD MITIGATION: EXPERIMENTAL INVESTIGATION OF LIVE SALTMARSH GRASS EXPOSED TO BORE FLOW.....	1349
<i>Joshua Bagg, Mark Battley, Colin Whittaker, Tom Allen, Tom Shand</i>	
MEASUREMENT AND CFD MODELLING OF A FLOATING PARABOLIC BEACH SHAPED BREAKWATER	1351
<i>Carlos Fernandez, Tom Baldock</i>	
AN EXPERIMENTAL BENCHMARKING STUDY ON HYBRID COASTAL DUNE REINFORCEMENT VARIANTS	1353
<i>Björn Mehrtens, Oliver Lojek, Lukas Ahrenbeck, Constantin Schweiger, Viktoria Kosmalla, David Schürenkamp, Nils Goseberg</i>	
APPLICATION OF THE LONGSHORE TRANSPORT CURVE AS AN ENGINEERING TOOL FOR DESIGN OF COASTAL STRUCTURES	1355
<i>Thomas P. Pierro, Thomas J. Campbell, Morjana Signorin, Lindino Benedet</i>	
A COMPREHENSIVE HYDRODYNAMIC ANALYSIS OF WATER WAVES INTERACTION WITH SUBMERGED BREAKWATERS: NUMERICAL AND EXPERIMENTAL STUDY	1357
<i>Yasmine Ben Belkacem, Paul Tournant, Gaële Perret, Julie Lebunetel, Grégory Pinon</i>	

EXPERIMENTAL STUDY ON THE EFFECTS OF A CANAL ON THE TSUNAMI BORE-INDUCED FORCES EXERTED ON A COLUMN	1358
<i>Reza Arefi, Ioan Nistor, Abdolmajid Mohammadian</i>	
EFFECT OF WATER LEVEL CHANGE ON WAVE OVERTOPPING VOLUME BASED ON EXPERIMENT SIMULTANEOUS OCCURRENCE OF STORM SURGES AND WAVES.....	1360
<i>Tomohiro Yasuda, Kenta Matsuki, Yurika Koda, Testuya Hiraishi, Nobuhito Mori</i>	
PHYSICAL AND NUMERICAL STUDIES ON THE EFFICACY OF MANGROVE FORESTS FOR WAVE ATTENUATION AND STRUCTURAL IMPACT	1362
<i>Hai Van Dang, Sungwon Shin, Daniel Cox, Hyoungsu Park, Tori Tomiczek</i>	
UNREAL XBLOCPLUS - USE OF A MULTI-MODEL APPROACH TO ASSESS SEISMIC AND POST-SEISMIC PERFORMANCE OF A SINGLE LAYER ARMOUR REVETMENT.....	1364
<i>Tom Shand, Verity Taylor, Mikias Yohannes, Brian Davis, Francois Flocard, Pieter Bakker</i>	
HYDRAULIC PERFORMANCE OF HOMOGENEOUS LOW-CRESTED STRUCTURES FOR BEACH PROTECTION IN CORAL REEF AREAS.....	1366
<i>Enrique Ripoll, Pilar Díaz-Carrasco, Jorge Molines, Mireille Escudero, Jose A. González-Escivá, Josep R. Medina</i>	
OBSERVATIONS OF WAVE RUNUP REDUCTION BY POROUS STRUCTURES	1368
<i>Arnold Van Rooijen, Julia Schwab, Ryan Lowe, Renan Silva</i>	
COUNTERMEASURES AGAINST SEA LEVEL RISE USING SEAWALL WITH MULTIPLE WAVE OVERTOPPING MEASURES (SMO)	1370
<i>Tatsuki Suzuki, Kojiro Suzuki</i>	
HYDRAULIC PERFORMANCE OF ECOFRIENDLY BREAKWATER ARMOUR UNITS.....	1372
<i>Serim Dogac Sayar, Scott Baker, Ioan Nistor, Jorge Gutierrez Martinez</i>	
PASSING VESSEL AND TIDAL FLOW IMPACTS ON SUBMERGED TUNNEL ELEMENTS DURING INSTALLATION	1374
<i>John Stewart Alderson, Henry Cruickshank, Boudewijn Decrop, Tijs Cornu</i>	
LARGE-SCALE EXPERIMENTS OF WAVE OVERTOPPING AT A DIKE WITH VEGETATED FORESHORE.....	1376
<i>Xianjin Chen, Zhong Peng, Ying Zhao</i>	
FIELD EXPERIMENTS ON WAVE FORCES ACTING ON A HORIZONTAL CYLINDER COVERED BY BARNACLES	1377
<i>Federico Casella, Pasquale Giuseppe Fabio Filianoti, Francesco Aristodemo</i>	
DELLANERA OFFSHORE BREAKWATER STUDY: A MULTIPLE MODEL STRATEGY TO OPTIMIZE BREAKWATER LOCATION AND SHAPE.....	1379
<i>Patrick Corbitt Kerr, Emily Perron, Russell Nasrallah, Jacob Garrett, Taira Baldauf, Kimberly Danesi, Sheryl Rozier, Coraggio Maglio</i>	
THE IMPACT OF AEOLIAN SEDIMENT TRANSPORT ON DYNAMIC COBBLE REVETMENT DESIGN	1381
<i>Christa Van Ijzendoorn, Hailey Bond, Meagan Wengrove, Peter Ruggiero</i>	
CORRECTION OF THE SHIMOSAKO SLIDING DISTANCE ANALYTICAL SOLUTION OF A RIGID CAISSON UNDER A TRIANGULAR IMPULSIVE FORCE	1383
<i>Francesco Ranaldi, Paolo De Girolamo, Myrta Castellino</i>	

EXPERIMENTAL AND NUMERICAL STUDY ON WAVE REDUCTION BY TWO PERMEABLE SUBMERGED BREAKWATERS	1385
<i>Weoncheol Koo, Eun-Hong Min, Sanghun Lee, Minju Maeng, Sanghwan Heo</i>	
EXPLORING THE INFLUENCE OF SEAFRONT LAYOUT AND WATER LEVEL ON EXTREME OVERTOPPING EVENTS: A STUDY BASED ON FOCUSED WAVE GROUPS.....	1387
<i>Corrado Altomare, Xavier Gironella, Joaquim Sospedra, Andrea Marzeddu, Xuexue Chen, Tomohiro Suzuki, Barbara Zanuttigh, Alison Raby, Luigi Berardi</i>	
STUDY ON EARTH PRESSURE INFLUENCE OF INNER CORE RUBBLE IN FRONT OF CAISSON OF BREAKWATER UNDER TSUNAMIS	1389
<i>Shiro Yamagata, Kojiro Suzuki, Naoki Tsuruta, Yuhi Nakazawa, Norihito Nishinosono, Tetsuya Yamaguchi</i>	
HYDRAULIC PERFORMANCE AND STABILITY OF COMBINED RECURVED WALLS	1391
<i>David Schürenkamp, Nils B. Kerpen, Benedikt Bratz, C. Gabriel David, Stefan Schimmels, Torsten Schlurmann, Nils Goseberg</i>	
THE DYNAMICS OF THE VENICE GATE BARRIERS AND THE EXTREME EVENT OF NOVEMBER 22ND, 2022	1393
<i>Paolo Sammarco, Piera Fischione, Alessandro Romano, Giorgio Bellotti, Sergio Dalla Villa</i>	
BREAKWATERS ON VERY SOFT SOILS. DESIGN, CONSTRUCTION AND GEOTECHNICAL MONITORING FOR FIUMICINO NEW SEAPORT	1395
<i>Alberto Marconi, Renato Marconi, Barbara Doronzo, Giulio Galimberti, Giovanni Ercolani</i>	
EXPERIMENTAL STUDY ON WAVE OVERTOPPING ON BREAKWATERS CO-LOCATED WITH SEAWEED AQUACULTURE SYSTEMS.....	1397
<i>Filipe Miranda, Barbara Proença, Raylton Bendô, Diogo Fonseca, Diogo Mendes, Piet Haerens, Sudath Siriwardane, Dimitrios Pavlou, Paulo Rosa Santos, Francisco Taveira Pinto, Tiago Fazeres Ferradosa</i>	
SCOUR INDUCED SPAN SHOULDER MIGRATION AROUND SUBMARINE PIPELINE WITH WAVE AND CURRENT LOADING.....	1399
<i>Titi Sui, Qi Yang, Chi Zhang, Jinhai Zheng, David R. Fuhrman</i>	
INVESTIGATION OF HYPERBOLIC PARABOLOID FACE PROFILE EFFICACY FOR FREE-SURFACE BREAKWATERS	1400
<i>Hamid Sami Eldarwich, Krisna Adi Pawitan, Maria M. Garlock</i>	
A CASE STUDY ON THE MAJOR DAMAGE AT A PORT: DAMAGE ASSESSMENT AND UPGRADE OF THE BREAKWATER.....	1402
<i>Hasan Gokhan Guler, Cagil Kirezci, Berkay Akyol, Gunay Gazaloglu, Emre Can Isik, Cuneyt Baykal, Gulizar Ozyurt Tarakcioglu, Jentsje Van Der Meer, Ahmet Cevdet Yalciner, Isikhan Guler, Aysen Ergin</i>	
2D PHYSICAL MODELLING OF WAVE-INDUCED FORCES AND OVERTOPPING ON VERTICAL CAISSONS WITH RETREATED CROWN WALL.....	1404
<i>Matteo Centorami, Alessandro Romano, Claudia Cecioni, Leopoldo Franco, Giorgio Bellotti</i>	
WAVE OVERTOPPING AT VERTICAL WALLS WITH LARGE FREEBOARDS AND VARIABLE WATER DEPTH	1406
<i>Leopoldo Franco, Tom Bruce, Claudia Cecioni, Yuri Pepi, Jentsje Van Der Meer</i>	
THE NEW BREAKWATER OF THE PORT OF GENOVA (ITALY)	1408
<i>Enrico Pellegrini, Andrea Isola, Davide Palmigiano</i>	

A SELF-DEVELOPED ALGORITHM BASED ON THE MOVING PARTICLE SEMI-IMPLICIT METHOD FOR INVESTIGATING DAM BREAK	1410
<i>Zhen Zhang, Aifeng Tao</i>	
THE NEW OFFSHORE RAVENNA LNG TERMINAL (IT): COMPARISON BETWEEN EXPERIMENTAL AND NUMERICAL SIMULATIONS.....	1412
<i>Myrta Castellino, John Alderson, Gabriele Lanza, Pierluigi Russo, Fabio Capozzi, Marco Del Bianco, Monica Moroni, Paolo De Girolamo</i>	
USING STILLING WAVE BASIN FOR ADAPTATION MEASURES TO SEA LEVEL RISE IN COASTAL AREAS	1414
<i>Nisa Bahadiroglu, Dogan Kisacik, Lorenzo Cappietti</i>	
NUMERICAL MODELING OF RUBBLE MOUND BREAKWATERS TO SUPPORT PREDICTIVE MAINTENANCE ACTIONS: AN EXAMPLE OF THE SPANISH COASTS	1416
<i>Bonaventura Tagliaferro, Corrado Altomare, Agustín Sánchez Arcilla, Antonio Tomás, Gabriel Barajas, Pablo Bengochea, Lohitzune Solabarrieta, Mario Hernaez, Iván Martínez-Estévez, José M. Domínguez, Alejandro Crespo</i>	
STABILITY VERIFICATIONS OF MARITIME GRAVITY STRUCTURES: THE ITALIAN REFERENCE STANDARDS.....	1418
<i>Riccardo Faccini, Antonio Lizzadro, Andrea Cappelletti, Giulia Bragantini, Marco Tartaglino, Marco Del Bianco, Paolo De Girolamo</i>	
NUMERICAL MODELLING OF EXTREME WAVE INTERACTIONS WITH A VERTICAL CYLINDER USING A PARTICLE-BASED METHOD.....	1420
<i>Taiga Kanehira, Yuchen He, Amin Chabchoub, Nobuhito Mori</i>	
NUMERICAL MODELLING OF EUROPEAN BRUSHWOOD GROYNES	1422
<i>Felix Spröer, Oliver Lojek, Christina Bischoff, Dorothea Bunzel, Maike Paul, Nils Goseberg</i>	
EFFECTS OF DIFFERENT ARMOUR UNITS AND PLACEMENT METHODS ON WAVE LOADS ACTING ON CROWN WALLS	1424
<i>Furkan Demir, Alperen Mulayim Korkmaz, Berkay Erler, Baris Ufuk Senturk, Hasan Gokhan Guler, Cuneyt Baykal, Gulizar Ozyurt Tarakcioglu, Dogan Kisacik, Isikhan Guler, Ahmet Cevdet Yalciner, Aysen Ergin</i>	
SCOUR ONSET IN PIPELINES UNDER WAVES AND CURRENT: NEW MODEL APPLICATION	1426
<i>Francesco Marini, Matteo Postacchini, Claudia Pizzigalli, Maurizio Badalini, Sara Corvaro, Maurizio Brocchini</i>	
DEVELOPMENT OF INTEGRATED TIDAL POOLS FOR AN XBOCPLUS ARMOUR LAYER.....	1428
<i>Tim Janssen, Giel Demmers, Tim Ruwiel, Pieter Bakker, Bas Reedijk</i>	
A LARGE PERCHED BEACH SCHEME IN DEEP WATERS	1430
<i>Merel Kroeders, Leopoldo Franco, Marco Del Bianco, Jentsje Van Der Meer, Maysara Tahan, Ahmed Yehia</i>	
WAVE FORCES ACTING ON VERTICAL STRUCTURES WITH RETREATED WALL: NUMERICAL MODELLING WITH OPENFOAM®.....	1432
<i>Edardo Zavani, Alessandro Romano, Giorgio Bellotti</i>	
NUMERICAL MODELLING OF WAVE DISTURBANCE IN A HARBOUR IN THE PRESENCE OF A FLOATING BREAKWATER	1434
<i>Marco Del Bianco, Marco Tartaglino, Leopoldo Franco, Paolo De Girolamo, Piero Ruol, Andrea Padovan</i>	

CFD MODELING OF THE EFFECT OF ANTIFER UNITS USED IN THE ARMOR LAYER OF MOUND BREAKWATERS ON WAVE OVERTOPPING	1436
<i>Baris Ufuk Senturk, Furkan Demir, Berkay Erler, Alperen Mulayim Korkmaz, Hasan Gokhan Guler, Cuneyt Baykal, Gulizar Ozyurt Tarakcioglu, Dogan Kisacik, Isikhan Guler, Ahmet Cevdet Yalciner, Aysen Ergin</i>	
NUMERICAL AND EXPERIMENTAL INVESTIGATION OF WAVE LOADS ON MOUND BREAKWATER HEADS	1438
<i>Cem Sevindik, Baris Ufuk Senturk, Furkan Demir, Hasan Gokhan Guler, Cuneyt Baykal, Gulizar Ozyurt Tarakcioglu, Isikhan Guler, Ahmet Cevdet Yalciner, Aysen Ergin</i>	
EFFECTS OF DIFFERENT UNITS AND PLACEMENT METHODS ON WAVE OVERTOPPING ON MOUND BREAKWATERS	1440
<i>Alperen Mulayim Korkmaz, Berkay Erler, Furkan Demir, Baris Ufuk Senturk, Hasan Gokhan Guler, Cuneyt Baykal, Gulizar Ozyurt Tarakcioglu, Dogan Kisacik, Isikhan Guler, Ahmet Cevdet Yalciner, Aysen Ergin</i>	
WAVE OVERTOPPING PERFORMANCE ANALYSIS OF THE RESEARCH DIKE RAVERSIJDE, BELGIUM	1442
<i>Peter Troch, Vincent Gruwez, Marc Willems</i>	
MORPHOLOGICAL IMPACT OF COASTAL STRUCTURES IN THE ONE-LINE ‘SHORELINES’ MODEL	1444
<i>Bastiaan Huisman, Dano Roelvink, Vassia Dagalaki, Ahmed Elghandour</i>	
EFFECTS OF “DYNAMIC AMPLIFICATION” ON SMALL-SCALE EXPERIMENTAL MEASUREMENTS OF COASTAL STRUCTURES AND THEIR IMPLICATIONS.....	1446
<i>Darshana Tharindra Dassanayake, Alison Raby, Edward Ransley, Alessandro Antonini, Kieran Monk, Deborah Greaves</i>	
ANALYSIS OF THE CAUSES OF RECLAMATION EMBANKMENT COLLAPSE AFTER FINAL CLOSURE	1448
<i>Yeong-Su Nam, Kyu-Han Kim, Kyu-Tae Shim</i>	
REEFENSE: PERFORMANCE OF A MODULAR OYSTER REEF HABITAT FOR COASTAL PROTECTION APPLICATIONS.....	1449
<i>Ryan Lowe, Marco Ghisalberti, Justin Geldard, Rebecca Morris, Alex Goad, Kelly Kibler, David Bushek</i>	
HYDRAULIC TESTS ON A XBLOCPLUS ARMoured COASTAL REVETMENT	1451
<i>Isikhan Güler, Cem Sevindik, Alperen Mülayim Korkmaz., Alperen Turgut, Hasan Gökhan Güler, Cüneyt Baykal, Gülizar Özyurt Tarakcioglu, Ahmet Cevdet Yalçiner, Aysen Ergin</i>	
THE NEW INSTALLATION OF THE U-OSCILLATING WATER COLUMN BREAKWATER IN THE PORT OF SALERNO FOR THE WAVE ENERGY EXPLOITATION.....	1453
<i>Alessandra Romolo, Vincenzo Fiamma, Giovanni Malara, Valentina Laface, Antonino Simone Spanò, Bruna Timpano, Elena Valentino, Gianluigi Lalicata, Fausto Caputo, Felice Arena</i>	
FLOATING BREAKWATERS COMBINED WITH SHEET PILES. AN APPLICATION FOR THE DEFENSE OF SAN MARCO SQUARE (VENICE, IT)	1455
<i>Luca Martinelli, Matteo Volpato, Piero Ruol, Chiara Favaretto</i>	
HYBRID MODELLING OF SUBMERGED RUBBLE-MOUND BREAKWATERS AS PASSIVE HARMONIC FILTER FOR SELECTIVE WAVE TRANSMISSION	1457
<i>Nasrin Hassanpour, Pasquale Contestabile, Javier L. Lara, Diego Vicinanza</i>	

INVESTIGATION OF STILLING WAVE BASIN AS AN OVERTOPPING DEVICE-TYPE WAVE ENERGY CONVERTER	1459
<i>Semih Can, Dogan Kisacik, Lorenzo Cappiatti</i>	
FIELD MEASUREMENT OF IMPACT PRESSURES ON A VERTICAL STRUCTURE GENERATED BY OVERTOPPING WAVES ON A SHALLOW FORESHORE	1460
<i>Erwan Imbertie, Denis Morichon, Matthias Delpey, Benoît Larroque, Camille Lavayssière</i>	
SPATIAL ASSESSMENT OF THE FAILURE PROBABILITY OF RUBBLE-MOUND BREAKWATERS	1462
<i>Rosaria Ester Musumeci, Martina Stagnitti, Enrico Foti</i>	
NEW SHORE PROTECTION WORKS ALONG THE ROMAN SANDY BEACHES	1464
<i>Marco Pittori, Stefano Miliani, Anna Di Gialleonardo, Paolo Contini, Giuseppe Vella, Andrea Sanzone</i>	
REEFENSE X-REEFS: HYBRID BIOLOGICAL AND ENGINEERED REEF STRUCTURES FOR NATURE-BASED COASTAL DEFENSE	1466
<i>Borja Reguero, Benjamin Norris, Brian Haus, Joseph Bartolai, Landolf Rhode-Barbarigos, Camila Gaido, Taylor Squires, Mike Yukish, Michael W. Beck</i>	
CHARACTERIZATION OF DAMAGE PROGRESSION USING THE ALTERNATIVE SIMILARITY PARAMETER IN RUBBLE MOUND BREAKWATERS	1468
<i>Miguel Santamaría, Antonio Moñino, María Clavero</i>	
SIMPLE SCOUR ASSESSMENT FOR SEMI-CLOSED PORTS IN THE SOUTH BALTIC SEA	1470
<i>Piotr Szmytkiewicz, Jan Schönhofner, Bartosz Zablocki, Michal Bojan, Krzysztof Pilczynski, Magdalena Stella-Bogusz</i>	
MULTIVARIATE ANALYSIS FOR THE COMPOUND ASSESSMENT OF COASTAL STRUCTURES: THE MILFORD-ON-SEA (UK) CASE STUDY	1472
<i>Antonio Francone, Gianfausto Salvadori, Fabrizio Durante, Giuseppe Roberto Tomasicchio, Felice D'Alessandro, Elisa Leone</i>	
RUN-UP AT RUBBLE MOUND BREAKWATERS WITH SUBMERGED BERM: AN EXPERIMENTAL STUDY	1473
<i>Daniele Celli, Myrta Castellino, Davide Pasquali, Carmine Di Nucci, Paolo De Girolamo, Marcello Di Risio</i>	
A NOVEL BIM OPENSOURCE PLATFORM TO SUPPORT DESIGN AND MAINTENANCE OF MARITIME STRUCTURES	1475
<i>Valerio Gianforte, Daniele Celli, Davide Pasquali, Tommaso Impicciatore, Nicola Bernabei, Marcello Di Risio</i>	
MODELLING WAVE HYDRODYNAMICS AROUND POROUS ARTIFICIAL REEF WITH COUPLED MESH-BASED AND MESHLESS NUMERICAL METHODS	1477
<i>Chao Tang, Ryan Lowe, Jeff Hansen, Renan Silva, Corrado Altomare</i>	
PHYSICAL MODELLING FOR THE PRINCESS ELISABETH ISLAND, OVERTOPPING DESIGN FOR A CAISSON WITH A DOUBLE WAVE WALL GEOMETRY	1479
<i>Koen Van Doorslaer, Panagiotis Vasarmidis, Koen Schepens, Bart Van Olst, Luc Van Koelen, Eelco Bijl, Michiel Weygers, Pierre-Yves Guillermin, Maximilian Streicher, Martin Diken</i>	
WAVE-TRANSMISSION OF VERY LARGE AND FIXED BOTTOM-DETACHED BREAKWATERS IN A NUMERICAL WAVE FLUME	1481
<i>Zihan Liu, Nils Goesberg, Lorenzo Cappiatti</i>	

DEEP LEARNING FRAMEWORK TO USE COMPLEX MODELS IN OPERATIONAL FORECAST SYSTEMS.....	1483
<i>Ana Catarina Zózimo, Liliana Pinheiro, Anika Manz, Juan L. Garzón, Conceição Fortes</i>	
MODAL ANALYSIS OF THE VENICE LAGOON INLETS AND THE EFFECT OF LONG WAVES RESONANCE ON THE MO.S.E. SYSTEM BARRIER GATES	1485
<i>Giorgio Bellotti, Paolo Sammarco, Piera Fischione, Alessandro Romano</i>	
ANALYSES OF HYDRODYNAMIC AND TYPHOON WAVE LOADINGS FOR THE SUBSTRUCTURE SCOUR PROTECTION DESIGN OF PANGUIL BAY BRIDGE PROJECT	1487
<i>Eric C. Cruz</i>	
NEGATIVELY BUOYANT DEBRIS IMPACT UNDER TSUNAMIS-LIKE CONDITIONS	1488
<i>Jaril Deschamps, Jacob Stolle, Damien Pham Van Bang</i>	
TIME-DEPENDENT ANALYSIS OF WAVE OVERTOPPING: DISTRIBUTION OF INDIVIDUAL VOLUMES IN VARIABLE WATER LEVELS.....	1490
<i>Yuri Pepi, Maximilian Streicher, Leopoldo Franco, Giorgio Bellotti, Steven Hughes, Peter Troch</i>	
UNDERSTANDING THE WAVE ATTENUATION CAPACITY OF A VEGETATED FLOATING CANOPY	1492
<i>Jesse Nathaniel Beckman, Julia Hopkins, Andrew Winter, Gabriel Cira, Louiza Wise</i>	
INNOVATIVE DRAFT-VARYING HYBRID FLOATING BREAKWATER-WAVE ENERGY CONVERTER: AN EXPERIMENTAL STUDY	1494
<i>Sara Russo, Pasquale Contestabile, Diego Vicinanza, Claudio Lugni</i>	
THE IMPACTS OF A MANGROVE PATCH ON WAVE PRESSURES ON THE SEA DIKE	1496
<i>Rong Zhang, Jiaxin Lei, Yongping Chen</i>	
PHYSICAL MODEL EXPERIMENTS ON TSUNAMI DEBRIS IMPACT AND DAMMING FORCES ON SLENDER COLUMNS.....	1497
<i>Pedro Lomonaco, Hyounghsu Park, Sabarethinam Kameshwar, Daniel Cox, Kellen Doyle, Myung Jin Koh, Ravindu Jayasekara</i>	
MONITORING DAMAGE EVOLUTION OF CONSTRUCTED RUBBLE MOUND STRUCTURES	1499
<i>Christina Tsaimou, Michalis Chondros, Vasiliki Tsoukala</i>	
LESSONS LEARNT ON THE DESIGN OF A DYNAMIC COBBLE REVETMENT	1501
<i>Gabriella Mauti, Amaury Camarena</i>	
RECONSTRUCTION OF THE TRANSMITTED WAVE SPECTRA BEHIND A SUBMERGED SMOOTH OBSTACLE.....	1503
<i>Sara Corvaro, Stefania Rocchi, Francesco Marini, Carlo Lorenzoni, Alessandro Mancinelli</i>	
HIGH-RESOLUTION ADCP MEASUREMENTS OF TURBULENT FLOWS NEAR A LARGE STREAM GROUYNE	1505
<i>Maximilian Herbst, Jan Visscher, Torsten Schlurmann</i>	
COMPARISON BETWEEN A PERCHED BEACH AND AN ARTIFICIAL REEF IN TERMS OF WAVE ATTENUATION.....	1507
<i>Iason Chalmoukis, Georgios Leftheriotis, Athanassios A. Dimas</i>	

NUMERICAL MODELLING OF BREAKWATER IN TSUNAMIS: TROUGH-LEAD WAVE AND SEEPAGE EFFECT	1509
<i>Zulaika Nur Jannah, Tiziana Rossetto, Susana Lopez-Querol</i>	
A SIMPLE METHOD TO MEASURE INSTANTANEOUS WAVE OVERTOPPING	1510
<i>Marcello Di Risio, Daniele Celli, Carmine Di Nucci, Davide Pasquali</i>	
EXPERIMENTAL AND NUMERICAL STUDY OF THE HYDRO-SEDIMENTARY DYNAMICS ON THE LAND SIDE OF A COASTAL DIKE.....	1512
<i>Ravindra Jayaratne, Adewale Abimbola, Nilakshan Balasubramaniam</i>	
SCOUR AROUND AND SINKING OF SUBSEA STRUCTURES EXPOSED TO CURRENT AND WAVES	1514
<i>Roghayeh Ghasempour, V. S. Özgür Kirca, B. Mutlu Sumer</i>	
APPLICATION OF RAINFLOW TECHNIQUES FOR THE ANALYSIS OF THE DYNAMIC RESPONSE OF MARINE FLOATING ELEMENTS	1516
<i>Rafael Molina Sánchez, Carmen Castillo, Javier Abanades</i>	
SPH MODELLING OF HORIZONTAL AND VERTICAL TSUNAMI EFFECTS ON DECK GIRDER BRIDGES	1518
<i>Claudia Reis, Denis Istrati, André R. Barbosa</i>	
THE CRADLE OF PORT ENGINEERING IN VENTOTENE ISLAND	1520
<i>Leopoldo Franco, Arthur De Graauw</i>	
BIO-CEMENTATION OF COASTAL SEDIMENT FEATURES AND ROCK REVETMENTS TO REDUCE EROSION AND FLOOD RISK	1522
<i>Jens Figlus, Jaclynn Turnbaugh, Manoj Kamalanathan</i>	
STABILITY ASSESMENT OF ROCK BAGS AND ROCK ARMOUR AS PROTECTION OF SUBSEA CABLES LANDFALL AT AN OFFSHORE ENERGY ISLAND	1524
<i>Eelco Bijl, Leen Baelus, Tomas Impens, Simon Van Schoten, Søren Løgstrup Sørensen</i>	
FLOATING CITIES FOR CLIMATE CHANGE ADAPTATION: EXPLORING MOTION PERCEPTION THRESHOLDS VIA IMMERSIVE VIRTUAL REALITY	1526
<i>Shengzhe Wang, Bing Han</i>	
NUMERICAL STUDY OF THE EFFECT OF SHIPPING CONTAINER STORAGE YARD LAYOUTS ON THEIR TRANSPORT IN EXTREME HYDRODYNAMIC EVENTS	1528
<i>Gioele Ruffini, Riccardo Briganti, Jacob Stolle, Paolo De Girolamo</i>	
CLIMATE CHANGE IMPACTS ON STORM SURGE LEVELS IN THE MEDITERRANEAN SEA	1530
<i>Filippo Giaroli, Andrea Lira Loarca, Giovanni Besio</i>	
PROTOTYPING AN ENGINEERED ALGAE FIELD TO ATTENUATE LONG SWELLS	1532
<i>Felipe Hurtado, Jean Pierre Toledo, Jesús López, Víctor Zamora, Milton Magnere, Alexandra Bruna, Jorge Pérez, Pablo Córdova, Sebastián Correa, Patricio Winckler</i>	
COASTAL FLOOD RISK TO EUROPEAN CRITICAL INFRASTRUCTURE	1534
<i>Khin Nawarat, Johan Reyns, Michalis I. Vousdoukas, Kees C. H. Van Ginkel, Eamonn Mulholland, Roshanka Ranasinghe</i>	

ESTUARY RESPONSE TO EXTREME RIVER DISCHARGE EVENTS AFTER DREDGING OPERATIONS.....	1536
<i>Guillermo Martín-Llanes, Ignacio Antequera, Marta Aragón, Carmen Zarzuelo, Alejandro López-Ruiz</i>	
PHYSICAL MODELLING STUDIES FOR THE SCARBOROUGH WATERFRONT PROJECT.....	1538
<i>Scott Baker, Bruce Pinchin, Milo Sturm</i>	
DECADAL COASTLINE RESPONSE TO ACCELERATED SEA LEVEL RISE.....	1540
<i>Roshanka Ranasinghe, Han-Yu Wu, Johan Reyns, Sierd De Vries, Peter Ruggiero, Gonéri Le Cozannet, Keiko Udo</i>	
BIVARIATE COPULA APPROACH FOR QUANTIFYING THE JOINT PROBABILITY OF COASTAL TEXAS COMPOUND FLOOD HAZARDS.....	1541
<i>Mohammad Islam, Meredith Carr, Norberto Nadal-Caraballo, Luke Aucoin</i>	
HARBOUR LAYOUT DESIGN IN A CHANGING CLIMATE BASED ON ADVANCED NUMERICAL MODELS AND MACHINE LEARNING: A CASE STUDY	1543
<i>Achilleas G. Samaras, Lazaros Iliadis, Theofanis V. Karambas</i>	
VALIDATION OF A NUMERICAL MODEL FOR DISPERSION OF HEAVY MARINE PLASTIC.....	1545
<i>Paula Núñez, Alessandro Romano, Raúl Medina, Giovanni Besio</i>	
PRELIMINARY REFLECTIONS OF 1ST BIODIVERSITY RESTORATION PROJECT IN POLAND.....	1547
<i>Grzegorz Rózyński</i>	
A PROBABILISTIC TSUNAMI HAZARD MODEL FOR SOUTH CHINA SEA	1549
<i>Aykut Ayca, Yufang Rong, Harold Magistrale, Elliot Klein</i>	
COASTAL LEVEE CONSEQUENCE ASSESSMENT TO SUPPORT RISK-INFORMED DECISION MAKING IN DESIGN	1550
<i>Alex Nelson</i>	
HOLISTIC COASTAL RESILIENCY IN THE GALVESTON BAY AREA	1551
<i>Coraggio Maglio, Jens Figlus, Tony Williams</i>	
ASSESSING THE DYNAMIC RESILIENCE OF NEWLY ESTABLISHED SALT MARSHES TO WAVE-INDUCED STRESS OVER TIME	1553
<i>Jacob Stolle, Ganga Caldera, Enda Murphy, Paul Knox, Damien Pham Van Bang</i>	
APPLICATION OF SHIP SIMULATIONS ON THE TEXAS COAST TO UPDATE DESIGN GUIDANCE FOR CONCEPTUAL NAVIGATION CHANNEL DESIGN.....	1555
<i>Robert Thomas, Keith Martin</i>	
NUMERICAL MODELING ON WAVE-CURRENT FLOWS AND BED SHEAR STRESSES OVER AN ALGAL REEF.....	1557
<i>Yi-Ru Lan, Zhi-Cheng Huang</i>	
LONG-TERM OBSERVATIONS OF INTERACTIONS AMONG WAVES, SAND, AND GRAVEL USING A LIDAR-CAMERA FUSION SYSTEM.....	1559
<i>Yoshinao Matsuba, Yoshimitsu Tajima, Takenori Shimozono</i>	
OCEAN ENERGY HARVESTING IN MEXICO: LESSONS LEARNED.....	1561
<i>Valeria Chávez, Ismael Mariño-Tapia, Rodolfo Silva</i>	

SUSTAINABLE MANAGEMENT OF THE MEXICAN CARIBBEAN	1563
<i>Rodolfo Silva, Valeria Chávez, Ismael Mariño-Tapia</i>	
STRUCTURAL AND HYDRODYNAMIC ANALYSIS OF THE BREAKAGE OF BRANCHING AND PLATE CORALS.....	1565
<i>Wen Deng, David P. Callaghan, Tom E. Baldock</i>	
SIMULTANEOUS 3D TOPOGRAPHY AND BATHYMETRY ESTIMATION FROM SPACEBORNE VIDEO OPTICAL IMAGERY	1567
<i>Erwin W. J. Bergsma, Adrien N. Klotz, David Youssefi, Rafael Almar, Stephanie Artigues, Thierry Garlan</i>	
ENGINEERING GUIDELINES FOR NATURE-BASED SOLUTIONS TO MITIGATE SALT INTRUSION	1568
<i>Gijs G. Hendrickx, Stuart G. Pearson, Stefan G. J. Aarninkhof</i>	
IMPACT OF OCEAN COOLING AND WAVE EFFECTS ON TYPHOON MODELING FOR 2018 TYPHOON JEBI.....	1571
<i>Koki Iida, Nobuhito Mori, Tomoya Shimura, Takuya Miyashita</i>	
FORECASTING HURRICANE IMPACTS ON US COASTS	1573
<i>Ap Van Dongeren, Maarten Van Ormondt, Roel De Goede, Ellen Quataert, Panos Athanasiou, Kees Nederhoff</i>	
MONITORING BOUNDARIES TO EVALUATE BEACH AND SHOREFACE NOURISHMENT EFFECTIVENESS AND PERFORMANCE	1575
<i>Celso Aleixo Pinto, Bruno Pires</i>	
SATELLITE-BASED NEARSHORE SANDBAR DETECTION WITH IMPLICATIONS FOR BEACH CLASSIFICATION.....	1577
<i>Salomé Fugier, Rafael Almar, Erwin Bergsma</i>	
GLOBAL INVENTORY OF BEACHES BACKED BY ARTIFICIAL STRUCTURES.....	1578
<i>Khin Nawarat, Johan Reyns, Trang Duong, Etiënne Kras, Michalis Vousdoukas, Roshanka Ranasinghe</i>	
CAN WE RELIABLY EXTRACT SHORELINES FROM CLOUD-CONTAMINATED SATELLITE IMAGES: THE APPLICATION OF SAR-OPTICAL FUSION METHOD	1579
<i>Yongjing Mao, Kristen D. Splinter</i>	
IMPACT ASSESSMENTS OF CLIMATE CHANGE ON BEACH TOPOGRAPHY IN TOSA BAY, JAPAN	1581
<i>Makoto Nakamichi, Shinji Sato</i>	
EXPERIMENTAL AND NUMERICAL APPROACH TO THE FOILAR BEHAVIOUR OF SEAGRASSES.....	1583
<i>Edgar Mendoza, Carlos Echeverría, Gerardo Juárez</i>	
MODELING THE FUTURE OF CORAL REEFS: AN ECO-MORPHODYNAMIC APPROACH.....	1585
<i>Ana Paula Da Silva, Giovanni Coco, Kate Whitton, Thanh Trung Nguyen, Thomas Fellowes, Lachlan Perris, Tristan Salles, Maria Byrne, Fernando Mendez, Laura Cagigal, Ana Vila- Concejo</i>	
SHIP WAVE EFFECTS IN TIDAL WATERWAYS: PERSPECTIVES FROM AN INTERNATIONAL WORKSHOP	1587
<i>Gregor Melling, Christian Windt, Carlos Dempwolff, Ingrid Holzwarth, Nils Goseberg</i>	

TSUNAMI EVACUATION SIMULATION OF TOURISTS AND LOCAL RESIDENTS BY USING EXPECTED TSUNAMI OF NANKAI TROUGH EARTHQUAKE	1589
<i>Kosuke Sasaki, Ryota Nakamura, Tamaki Kanemura</i>	
FORECASTING MULTI-HAZARD SCENARIOS WITH ENSEMBLE TROPICAL CYCLONE FORECASTS	1591
<i>Md. Rezuhanul Islam, Le Duc, Yohei Sawada</i>	
EFFECTS OF CLIMATE CHANGE SCENARIOS ON THE COASTAL FLOODING HAZARD INDUCED BY EXTREME WAVE CONDITIONS IN THE SOUTHERN ITALIAN COASTS	1593
<i>Carolina Codato, Marcello Di Risio, Myrta Castellino, Davide Pasquali, Iolanda Lisi, Antonello Bruschi, Gioele Ruffini, Francesca Scipione, Paolo De Girolamo</i>	
REPRODUCING TROPICAL CYCLONES: A NOVEL COMBINED APPROACH OF VORTEX- FOLLOWING WITH BOGUSSING USING WRF	1595
<i>Mangala Amunugama, Yoji Tanaka, Katsuyuki Suzuyama, Takehiko Ogata</i>	
NATURE-BASED INFRASTRUCTURE MODELLING IN AN INTERTIDAL ENVIRONMENT EXPOSED TO STORM SURGES	1597
<i>Delaney M Benoit, D Gwyn Lintern, Michelle M Côté, Enda Murphy, Ryan P Mulligan</i>	
COMPARING BELOWGROUND CHARACTERISTICS OF NATURAL AND RESTORED COASTAL DUNES ALONG THE NORTHEAST FLORIDA (USA) COAST	1598
<i>Justin Shawler, Brian Harris, Hallie Fischmann, Joe Morton, Peter Tereszkievich, Jonathan Hubler, Nina Stark, Orlando Cordero, Leigh Provost</i>	
OBSERVATION OF TIDAL EXCHANGE DYNAMICS FROM SURFACE CURRENT MEASUREMENTS USING UNMANNED AIRCRAFT SYSTEMS	1600
<i>Soo Bum Bae, Scott A. Socolofsky, Kuang-An Chang</i>	
PREDICTING SHORELINE CHANGE WITH DEEP LEARNING: CASE STUDIES FROM THE EAST AND WEST COASTS OF THE U.S.	1602
<i>Eduardo Gomez-De La Pena, Giovanni Coco, Kristen Splinter, Sean Vitousek, Daniel Buscombe, Colin Whittaker</i>	
SPATIAL PATTERNS OF WAVE SIGNATURES IN BEACHES IN ESTUARIES AND BAYS (BEBS) OF DIFFERENT TIDAL RANGES	1604
<i>Md. Yousuf Gazi, Thomas E. Fellowes, Tristan Salles, Ana Paula Da Silva, Nicolas Villacieros-Robineau, Ratneel Deo, Ana Vila-Concejo</i>	
A MIXTURE OF EXPERTS APPROACH COMBINING PHYSICS INFORMED AND MACHINE LEARNING SHORELINE MODELS	1606
<i>Kit Calcraft, Kristen Splinter, Lucy Marshall, Josh Simmons</i>	
DEVELOPMENT AND VALIDATION OF A MODELLING CHAIN TO QUANTIFY COASTAL FLOODING EXPOSURE AT AN ENGINEERED BEACH	1608
<i>Aritz Abalia, Iñaki De Santiago, Pedro Liria, Roland Garnier, Irati Epelde, Asier Nieto, Denis Morichon</i>	
ASSESSMENT OF COMPOUND FLOODING FOR ISE BAY, JAPAN USING TYPHOON TRACK ENSEMBLE EXPERIMENTS	1610
<i>Masaya Toyoda, Nobuhito Mori, Sooyoul Kim, Jun Yoshino</i>	
INTERACTIONS BETWEEN RIVER AND COASTAL SEDIMENTARY BALANCE AND EFFECTS OF HYDRAULIC WORKS ON SHORELINE CHANGES	1612
<i>Giuseppe Barbaro, Giuseppe Bombino, Giandomenico Foti, Daniela D'Agostino, Santo Marcello Zimbone</i>	

AUTOMATIC SHORELINE EXTRACTION FROM SAR IMAGERY USING DEEPLABV3+	1614
<i>Lianhui Wu, Sho Ishikawa, Daisuke Inazu, Tsuyoshi Ikeya, Akio Okayasu</i>	
CHARACTERISTICS OF POPULATION OF VISITORS TO SANDY BEACHES IN JAPAN USING MOBILE SPATIAL STATISTICS.....	1616
<i>Keiko Udo, Jinsaku Asano, Shunichi Koshimura</i>	
PREDICTIVE TOOL OF SEAGRASS HEALTH TO OPTIMIZE THE DESIGN OF LOW CRESTED STRUCTURES.....	1617
<i>Mireille Escudero, Núria Marbà, Joaquín Garrido, Jorge Molines, Enrique Ripoll, Josep Ramon Medina</i>	
GLOBAL SANDY BEACH AREAS	1619
<i>Etiënne Kras, Arjen Luijendijk, Antonio Moreno Rodenas, Pim Van Steijn, Roshanka Ranasinghe</i>	
THE IMPACT OF DAMPING COEFFICIENTS ON DYNAMIC BLADE MOTION OF FLEXIBLE SUBMERGED VEGETATION	1621
<i>Inga Prüter, Kara Keimer, Felix Spröer, Oliver Lojek, Christian Windt, Ioan Nistor, Nils Goseberg</i>	
DEVELOPMENT OF FRESHWATER MUDFLAT ZONES AND TIDAL CREEKS FOLLOWING AN INITIAL DESIGN SUPPORTED BY MORPHODYNAMIC MODELLING.....	1623
<i>Gabriele Gönnert, Jan-Moritz Müller, Stefan Kraatz, Luis Manuel López Zárate, Olaf Müller</i>	
FUTURE CHANGES IN THE BLACK SEA WAVE POWER UNDER TWO CLIMATE SCENARIOS.....	1625
<i>Fulya Islek, Yalcin Yuksel, Cihan Sahin</i>	
PROBABILISTIC SHORELINE CHANGE PROJECTIONS FOR THE CATALAN COAST (SPAIN): A PCR MODEL APPLICATION.....	1627
<i>Rut Romero-Martín, Johan Reyns, Ali Dastgheib, Roshanka Ranasinghe, José A Jiménez</i>	
INVESTIGATION OF EROSION MANAGEMENT ALTERNATIVES BY AREA-BASED ANALYSIS METHOD.....	1629
<i>Giorgio Manno, Carlo Lo Re, Gabriele Nardone, Giuseppe Ciraolo</i>	
SPATIAL EFFECTS OF ARTIFICIAL SEAGRASS PATCHES ON HYDRO- AND MORPHODYNAMICS.....	1631
<i>Maike Paul, Mareike Taphorn, Alice Lefebvre, Torsten Schlurmann</i>	
RISK ATTRIBUTION STUDY FOR FLOODING IN COASTAL URBAN AREA, CASE OF PEKALONGAN, CENTRAL JAVA, INDONESIA.....	1633
<i>Ali Dastgheib, Roni Praselia, Tim Leijnse, Roel De Goede, Dano Roelvink</i>	
COMMUNITY-ENGAGED COASTAL FLOOD MODELING TO EVALUATE SEA LEVEL RISE ADAPTATION STRATEGIES	1635
<i>Thomas Thelen, Katherine Anarde, Casey Dietrich, Max Cawley, Miyuki Hino</i>	
MACHINE LEARNING TECHNIQUES FOR CROSS SHORE BEACH CHANGE FORECASTING	1637
<i>Tharindu Udasri Sampath Manamperi, Harshinie Karunarathna, Alma Rahat, Masayuki Banno, Doug Pender, Demetra Cristaudo</i>	
TOLOSA-SW: A NEW FINITE-VOLUME MODEL FOR PREDICTING STORM SURGES.....	1639
<i>Roman Le Belleguic, Maya Ciavaldini, Audrey Pasquet, Héloïse Michaud, Fabien Brosse, Yann Krien</i>	

FROM GWK TO GWK+: EXTENSION OF THE LARGE WAVE FLUME TO A UNIQUE EXPERIMENTAL FACILITY FOR OFFSHORE AND COASTAL ENGINEERING RESEARCH	1640
<i>Torsten Schlurmann, Nils Goseberg, Stefan Schimmels, Alexander Schendel, Constantin Schweiger, Mario Welzel</i>	
ROAD-RAT - REGIONAL RISK ASSESSMENT TOOL FOR FLOODING, EROSION, AND OVERTOPPING OF COASTAL ROADS	1643
<i>Caroline Hallin, Björn Almström, Anna Adell</i>	
MODELLING THE EFFECT OF SALT MARSHES FOR COASTAL PROTECTION.....	1645
<i>Pushpa Dissanayake, Dennis Oberrecht, Andreas Wurpts</i>	
METHODS AND APPLICATIONS FOR WATER LEVEL EXTRACTION FROM IMAGERY	1646
<i>Sean P. McGill, Brittany L. Bruder</i>	
USING TWO-EYED SEEING TO DOCUMENT CLIMATE IMPACTS TO SEA ICE IN RESOLUTE BAY, NUNAVUT, CANADA	1647
<i>Alexandra Forsythe, Ioan Nistor</i>	
DEVELOPMENT OF AN OPTIMIZED BOUSSINESQ-TYPE MODEL FOR OPERATIONAL ASSESSMENT OF WAVE-DRIVEN FLOODING	1649
<i>Fatima-Zahra Mihami, Volker Roeber, Assaf Azouri, Camilla Tognacchini, Douglas S. Luther</i>	
COMPARATIVE ANALYSIS OF TSUNAMI CASUALTY ESTIMATION APPROACHES.....	1651
<i>Tomoyuki Takabatake, Nanami Hasegawa, Keita Yamaguchi</i>	
COMPOUND FLOODING OF WAVE OVERTOPPING AND STORM SURGE USING A FULLY COUPLED SURGE, WAVE AND TIDE MODEL	1653
<i>Junbeom Jo, Sooyoul Kim, Jungsoo Kim, Nobuhito Mori, Hajime Mase</i>	
A STUDY ON THE LONG-TERM SHORELINE CHANGES IN EAST COAST OF KOREA USING SATELLITE IMAGES	1655
<i>Hojun Yoo, Tae-Soon Kang, Ki-Hyun Kim</i>	
SUBGRID SCALE MODELING OF STORM SURGE INUNDATION IN COASTAL URBAN AREA CONSIDERING VOLUME OF BUILDINGS.....	1657
<i>Nobuki Fukui, Nobuhito Mori, Tomoya Shimura, Takuya Miyashita, Sooyoul Kim</i>	
A MODEL APPROACH TO NATURE-BASED SOLUTIONS DESIGN IN ESTUARIES	1659
<i>Thomas Dunlop, William Glamore, Stefan Felder</i>	
SCALDIS-COAST: A NUMERICAL MODEL FOR LONG-TERM MORPHOLOGY OF THE BELGIAN COAST USING THE TELEMAT-MASCARET SYSTEM.....	1661
<i>Li Wang, Alexander Breugem, Gerasimos Kolokythas, Bart De Maerschalck, Boudewijn Decrop</i>	
HYBRID APPROACHES FOR PREDICTING SALT WEDGE INTRUSION IN ESTUARINE ENVIRONMENT.....	1663
<i>Mirian Jimenez Tobio, Laura Cagigal, Alba Ricondo, Beatriz Pérez-Díaz, Cielo Fernández, Javier Sopelana, Sonia Castanedo, Fernando Méndez</i>	
LONG-TERM RESPONSE OF SHORELINE AND DEPTH-CONTOURS AFTER NEARSHORE SAND MINING BY EQUI-WAVE PHASE POTENTIAL CONCEPT	1664
<i>Jung-Lyul Lee</i>	

NUMERICAL SIMULATION OF THE DEBRIS BEHAVIOR AFFECTED BY WAVE BREAKING	1665
<i>Hideki Kaida, Takashi Tomita, Naoto Kihara, Yasuo Niida</i>	
INFLUENCE OF TYPHOON MOVING SPEED ON MAXIMUM STORM SURGE HEIGHT IN A BAY FACING THE OPEN OCEAN	1667
<i>Takumu Iwamoto, Tomohiro Takagawa, Takashi Fujiki</i>	
TSUNAMI EVACUATION SIMULATION CONSIDERING AREA-SPECIFIC REGULATORY EVACUATION.....	1669
<i>Tamaki Kanemura, Ryota Nakamura</i>	
COASTAL OVERWASH – THE IMPACTS OF A 100-YEAR STORM FLOOD EVENT IN SOUTH-EASTERN DENMARK	1671
<i>Drude Fritzboeger Christensen, Anna Adell, Aart Kroon</i>	
ACCURACY OF SATELLITE-DERIVED WATERLINE EXTRACTION METHODS ON SANDY BEACHES	1673
<i>Marcan Graffin, Rafael Almar, Erwin Bergsma</i>	
OPTIMIZING MANGROVE CARBON SEQUESTRATION WITH A MECHANISTIC MANGROVE HYDRO-MORPHODYNAMIC MODEL	1674
<i>Sebrian Mirdeklis Beselly, Mick Van Der Wegen, Johan Reyns, Uwe Grueters, Jasper Dijkstra, Dano Roelvink</i>	
DEFINITION OF TSUNAMI INUNDATION LIMIT BASED ON PROBABILISTIC ANALYSIS OF TSUNAMI RUNUP AND INUNDATION DISTANCE	1675
<i>Marilym Ramos, Rafael Aranguiz</i>	
GERMAN SEAPORTS AND CLIMATE CHANGE – RECOMMENDATIONS FOR CLIMATE CHANGE ADAPTATION MEASURES.....	1677
<i>Baerbel Koppe, Lena Lankenau</i>	
STRENGTHENING THE CASE FOR NATURE BASED SOLUTIONS IN THE CARIBBEAN	1679
<i>Andrew Williams, Deborah Ann Villarroel-Lamb</i>	
THE LARGE-SCALE APPLICATION OF A NEW RAPID TSUNAMI INUNDATION MODEL TO NEW ZEALAND’S COAST	1681
<i>Tate Lloyd Jones Kimpton, Pablo Higuera, Colin Whittaker, Liam Wotherspoon</i>	
HIGH-FIDELITY NUMERICAL SIMULATION OF OSCILLATING FLOWS AND TURBULENCE STRUCTURES PAST A SINGLE OYSTER INDIVIDUAL	1683
<i>Jan Hitzegrad, Elin Schuh, Christian Windt, Oliver Lojek, Nils Goseberg</i>	
AN OVERVIEW OF THE DEVELOPMENT, EXPANSION, AND APPLICATION OF THE ENGINEERING WITH NATURE® MODELING TOOLKIT	1685
<i>Margaret B Owensby, Thomas C Massey, Amanda S Tritinger, Alan Lemon</i>	
DEVELOPMENT OF AN EFFICIENT EARLY WARNING SYSTEM FOR WAVE-INDUCED FLOODING.....	1687
<i>Juan L. Garzon, Oscar Ferreira, Catarina Zozimo, Liliana Pinheiro, Juana Fortes</i>	
10 M PR. YEAR OF DUNE FACE RETREAT RATES AT DANISH COASTLINE UNDULATIONS.....	1689
<i>Nikolai Heath Sørensen, Christina Kaersgaard, Per Sørensen</i>	

EXPLORING THE VIABILITY OF ACCOMMODATION SPACE-BASED COASTAL ADAPTATION IN DEVELOPED MEDITERRANEAN COASTS	1691
<i>José A. Jiménez, Rut Romero-Martin, Herminia I. Valdemoro</i>	
ASSESSING COMPOUND FLOODING HAZARD IN ESTUARIES BY INTEGRATING A CLIMATE EMULATOR AND A HYBRID METAMODEL	1693
<i>Paula Camus, Jared Ortiz-Angulo, Fernando Méndez, Sonia Castanedo, Mirian Jiménez, Laura Cagigal, Beatriz Pérez-Díaz</i>	
AN ANALYTICAL APPROACH TO PRELIMINARY ASSESS THE FAR FIELD EVOLUTION OF PLUMES IN CONFINED WATERS	1694
<i>Davide Pasquali, Daniele Celli, Carmine Di Nucci, Iolanda Lisi, Marcello Di Risio</i>	
THE ROLE OF TSUNAMI RESONANCE ON THE BALANCE OF MECHANICAL ENERGY AND ITS IMPLICATIONS FOR FRAGILITY ANALYSES	1696
<i>Patricio A. Catalan, Natalia Zamora, Matías Carvajal, Rodrigo Cienfuegos</i>	
VARIABLE BATHYMETRY EFFECTS ON THE RESPONSE OF U-OWC WAVE ENERGY CONVERTERS	1698
<i>Giovanni Malara, Kostas Belibassakis, Alexandros Magkouris, Felice Arena</i>	
DEVELOPMENT AND TESTING OF A MODERN CLOUD-BASED WORKFLOW FOR COASTAL HAZARD MODELING	1700
<i>Christopher Bender, Alireza Gharagozlou, Jeff Lillycrop, Chris Massey</i>	
PERFORMANCE EVALUATION OF SUBDOMAIN MODELING USING THREE CASE STUDIES	1701
<i>Fatima Bukhari, Chris Massey, John Baugh</i>	
CREATING LARGE-SCALE COMPOUND FLOOD MODELS IN AN AUTOMATED AND REPRODUCIBLE WAY	1703
<i>Roel De Goede, Dirk Eilander, Tim Leijnse, Maarten Van Ormondt, Tim De Wilde</i>	
A PRELIMINARY NUMERICAL STUDY ON TSUNAMI-BORNE SUBMERGED DEBRIS MOTION.....	1705
<i>Guangwei Liu, Qinghe Zhang, Jinfeng Zhang</i>	
RELATION OF GLOBAL AND REGIONAL ATMOSPHERIC-WAVE CLIMATE SYSTEMS	1707
<i>Nobuhito Mori, Tomoya Shimura, Takuya Miyashita</i>	
HYDRODYNAMIC FORCES ON NEAR-BED UNDERWATER DATACENTER.....	1709
<i>Xiaoyuan Hu, Yunfei Teng, Liang Cheng, Feifei Tong, Hongwei An, Scott Draper</i>	
CONNECTING THE CANOPIES: SUBMERGED AND EMERGENT AQUATIC VEGETATION.....	1711
<i>Matthew V Falcone, Mark T Stacey, Arnold Van Rooijen, Robert McCall</i>	
OPERATIONAL AND STRUCTURAL SOLUTIONS FOR A SUSTAINABLE NAVIGATION IN THE MALAMOCCO – MARGHERA CHANNEL (VENICE LAGOON).....	1713
<i>Andrea Pedroncini, Paolo Menegazzo</i>	
PREDICTING INSTANTANEOUS SUBSURFACE VELOCITY USING SURFACE VELOCITY	1715
<i>Tyler McCormack, Julia Hopkins</i>	
CLIMATE RESILIENT INLAND WATERWAYS: A NOVEL SYSTEMIC APPROACH	1717
<i>Frederik Vinke, Mark Van Koningsveld</i>	

BUILD FOR NATURE, NOT ONLY WITH NATURE, TO ENGINEER RECOVERY OF COASTAL ECOSYSTEMS	1718
<i>Tundi Agardy</i>	
WORKING WITH NATURE ALONG OPEN COASTS – PAST, PRESENT AND FUTURE.....	1720
<i>Sam King, Leslie Angus Jackson, Bobbie Corbett, Martin Mulcahy, Aaron Salyer, Zack Lindenberg</i>	
STORM CLUSTER IDENTIFICATION AND IMPACTS FOR SHORELINE RESILIENCE.....	1722
<i>Heidi Pfeiffer Moritz, Hans Moritz, Robert Jensen, Candice Hall</i>	
TIDAL INLET MORPHOLOGY CHANGE IN RESPONSE TO NAVIGATION IMPROVEMENT	1724
<i>Hans Roderick Moritz, Julia Keiter, Matthew Craig, Sean Carroll</i>	
ANALYSIS OF HISTORICAL EXTREME COASTAL WATER LEVEL, AND CONTRIBUTORS ALONG SOUTH AMERICAN PACIFIC COAST	1725
<i>Francisco Molteni Pérez, Takuya Miyashita, Tomoya Shimura, Nobuhito Mori</i>	
A NEW METHODOLOGY TO ASSESS SURFING CHANGES DUE TO COASTAL WORKS	1727
<i>Lucas De Freitas Pereira, Mauricio Gonzalez, Cesar Vidal, Omar Quetzalcóatl, Paula Gomes, Camilo Jaramillo, Antonio Espejo</i>	
TRENDS IN STORM SURGE EXTREMES ALONG THE SOUTHEASTERN COAST OF CHINA	1729
<i>Dongmei Xie, Junning Pan, Hongchuan Wang, Yongping Chen</i>	
MULTI-HAZARD FLEXIBLE CLIMATE CHANGE ADAPTATION FOR PORT INFRASTRUCTURES.....	1731
<i>Alberto Vicente Fernandez, Javier L. Lara, Iñigo J. Losada</i>	
SATELLITE-DERIVED SHORELINE INTERANNUAL VARIABILITY ALONG THE ATLANTIC COAST OF EUROPE	1732
<i>Bruno Castelle, Etiënne Kras, Gerd Masselink, Tim Scott, Aikaterini Konstantinou, Arjan Luijendijk</i>	
MODELING SYNTHETIC WAVE STORMS WITH A REALISTIC SHAPE EVOLUTION: APPLICATIONS TO STORM-INDUCED COASTAL IMPACTS	1734
<i>David Lucio, Javier L. Lara, Sebastián Solari, Iñigo J. Losada</i>	
FIELD MEASUREMENTS OF TSUNAMI EVACUATION DYNAMICS	1735
<i>Joseph Kim, Naoto Inagaki, Ioan Nistor, Andrew Cornett, Enda Murphy, Nils Goseberg, Tomoya Shibayama</i>	
FUTURE PROJECTION OF MAXIMUM POTENTIAL STORM SURGE CONSIDERING SST BIAS FOR CMIP6 HIGHRESMIP EXPERIMENT	1737
<i>Shun Ito, Tomoya Shimura, Takuya Miyashita, Nobuhito Mori</i>	
ABOUT THE SIGNIFICANCE OF THE TRANSPORT BOUNDARY CONDITIONS IN MODELLING BOSPHORUS EXCHANGE FLOW	1739
<i>Furkan Altas, Kadir Orhan, Mehmet Ozturk, Roberto Mayerle</i>	
A GLOBAL DATABASE OF GEOPHYSICAL, HYDRODYNAMIC AND SOCIOECONOMIC INDICATORS AT THE COAST	1741
<i>Panagiotis Athanasiou, Ap Van Dongeren, Maarten Pronk, Alessio Giardino, Michalis Vousdoukas, Roshanka Ranasinghe</i>	

COMPUTATIONAL SIMULATION SET SELECTION FOR STORM SURGE SURROGATE MODELING.....	1743
<i>Jennifer L. Irish, Elsbeth Noe, Christopher C. Bender, Alireza Gharagozlou, Michelle T. Bensi, Jun-Whan Lee</i>	
APPLYING PROBABILISTIC DATABASES TO DEFINE INPUTS FOR INUNDATION NUMERICAL SIMULATIONS: THE MESSINA STRAIT CASE	1745
<i>Gioele Ruffini, Carolina Codato, Briganti Riccardo, Paolo De Girolamo</i>	
REGIONAL CHARACTERISTICS OF TSUNAMI AMPLITUDES IN JAPAN WITH VARIOUS FAULT PARAMETERS	1747
<i>Kenta Fujimoto, Takuya Miyashita, Tomoya Shimura, Nobuhito Mori</i>	
COASTAL FLOODING PROCESSES CAUSED BY SLOW-MOVING TROPICAL CYCLONES	1749
<i>Naoto Inagaki, Tomoya Shibayama</i>	
COASTAL CHANGE DETECTION FROM SATELLITE RADAR (SENTINEL-1).....	1751
<i>Paula Gomes Da Silva, Jara Martínez, Arnau García Tort, Salvatore Savastano, Andres Payo, Xavier Monteyts, Yeray Castillo</i>	
PROJECTING FUTURE CASPIAN SEA LEVEL CHANGES IN RESPONSE TO CLIMATE CHANGE	1753
<i>S. Mahya Hoseini, Mohsen Soltanpour, Mohammad R. Zolfaghari, Ioan Nistor</i>	
TSUNAMI HAZARD DATASET IN THE SOUTH CHINA SEA	1755
<i>Guangsheng Zhao, Xiaojing Niu</i>	
QUANTIFYING THE EFFICIENCY OF TIDAL EXCHANGE AND SALT DISPERSION IN A HARBOR BASIN	1757
<i>Shih-Hsing Lo, Wen-Tai Wen, Jia-Lin Chen, Po Hung Yeh</i>	
ECONOMIC EVALUATION OF ADAPTIVE PATHWAYS FOR FLOOD RESILIENCE	1758
<i>Matthijs Bos, Lars De Ruig, Joost Trommelen, Maria Montijn</i>	
ASSESSING THE IMPACT OF SEA LEVEL RISE AND LONG TERM COASTAL PROTECTION STRATEGIES AT THE BELGIAN COAST	1759
<i>Bart Verheyen, Annelies Bolle, Ali Dastgheib, W. Alexander Breugem</i>	
TIME-EVOLUTION OF COASTAL FLOODING UNCERTAINTIES USING GLOBAL SENSITIVITY ANALYSIS: INSIGHTS FROM OREWA BEACH, NEW ZEALAND	1761
<i>Charline Dalinghaus, Giovanni Coco, Pablo Higuera</i>	
INFLUENCE OF TIDAL LEVEL ON TSUNAMI HAZARD ASSESSMENT ALONG THE COAST OF PEARL RIVER ESTUARY	1763
<i>Xiaojing Niu, Xingyu Gao</i>	
ASSESSING COASTAL HAZARDS WITH SLR AND PREDICTING LONG-TERM SHORELINE CHANGES ALONG BEACH BARRIER SYSTEMS OF THE NEW ENGLAND COASTLINE, USA	1765
<i>Alexa Leone, Annette Grilli, Bas Huisman, Dano Roelvink, Ap Van Dongeren, Bryan Oakley, Peter Stempel, John Walsh</i>	
EFFECTS OF CLIMATE CHANGE ON COASTAL HYDRODYNAMICS ALONG THE GERMAN BALTIC SEA COAST	1767
<i>Htun Pyae Sone, Norman Dreier, Edgar Nehlsen, Peter Fröhle</i>	

A COMPREHENSIVE ONE-LINE MODEL FOR SHORELINE EVOLUTION ESTIMATION	1769
<i>Francesca Scipione, Myrta Castellino, Paolo De Girolamo, Marcello Di Risio</i>	
QUANTIFYING THE HYDRODYNAMIC RESILIENCE OF SIMPLIFIED ATOLLS.....	1771
<i>Louis Saisset, Frédéric Bouchette, Damien Sous</i>	
REGIONS WITHOUT HISTORICAL RECORDS THREATENED BY TROPICAL CYCLONES IN THE FUTURE.....	1772
<i>Itxaso Odériz, Iñigo J. Losada</i>	
BOTTOM ROUGHNESS DEFINITION IN CORAL REEF CONTEXT (LA REUNION ISLAND, FRANCE).....	1774
<i>Mila Geindre, France Floc'H, Emmanuel Cordier, Marion Jaud, Simon Delsol, Heloïse Michaud, Damien Sous</i>	
VULNERABILITY ANALYSIS OF LAZIO REGION COASTS FOR AN INTEGRATED PROTECTION PLAN.....	1776
<i>Ilaria Di Muzio, Laura Seraceno, Davide Tullio, Leopoldo Franco, Giorgio Bellotti, Claudia Cecioni, Alessandro Romano</i>	
NON-STATIONARY PARAMETERS ON EQUILIBRIUM-BASED SHORELINE EVOLUTION MODELS	1778
<i>Camilo Jaramillo Cardona, Lucas De Freitas Pereira, Mauricio González Rodríguez, Raúl Medina Santamaría, José Antonio Álvarez Antolinez</i>	
MODELING COLD CLIMATE SALTMARSH EVOLUTION: TOOLS FOR RESTORATION AND PREDICTION.....	1780
<i>Acacia Markov, Jacob Stolle, Ioan Nistor, Valérie Desrochers, Enda Murphy</i>	
INCORPORATING CLIMATE CHANGE INTO COASTAL COMPOUND FLOOD RISK.....	1782
<i>Keith Jared Roberts, Onur Kurum, Nicole Rusek, James Lewis, Rob Nairn, Sergey Vinogradov, James Benzing</i>	
PREDICTING SEA TURTLE NEST FLOODING ON SANDY BEACHES.....	1783
<i>Jakob C. Christiaanse, José A. A. Antolínez, Jens Figlus, Tim M. Dellapenna, Christopher D. Marshall</i>	
EVALUATING SPACE BASED REMOTE SENSING ALGORITHMS FOR ARCTIC SHORELINE DETECTION.....	1785
<i>Katherine Roxanne Devore, Dylan Anderson, Katherine Brodie</i>	
COASTAL FLOODING DUE TO EPISODIC SEA LEVEL ELEVATION AND IMPACT ASSESSMENT OF INUNDATED URBAN AREAS IN MIAMI (SOUTH FLORIDA, USA)	1787
<i>Christos V. Makris, Yannis S. Androulidakis, Zisis C. Mallios, Vassiliki H. Kourafalou</i>	
VULNERABILITY OF THE MEXICAN CARIBBEAN BEACHES.....	1789
<i>Laura Ribas De Almeida, Izchel Gómez, Itxaso Odériz, Mónica Pedraza, Ismael Mariño- Tapia, Rodolfo Silva</i>	
RESPONSE OF HYDRODYNAMICS AND WATER QUALITY TO LARGE-SCALE RECLAMATION IN SANMEN BAY, CHINA	1791
<i>Chunyan Zhou, Yuanhao Ma, Chunyang Xu</i>	
STOCHASTIC COASTAL HAZARDS MODELING.....	1793
<i>Peter Ruggiero, Fernando Mendez, Dylan Anderson, Laura Cagigal, Meredith Leung, Mohsen Taherkhani, Carson Williams, Zhenqiang Wang, Selwyn Heminway, Nicholas Cohn</i>	

IMPACT OF ATMOSPHERIC SPATIAL-TEMPORAL RESOLUTION ON STORM SURGE SIMULATION AND RELATED DAMAGE CHANGE - CASE STUDY ON 2018 TYPHOON JEBI -	1795
<i>Yuji Araki, Takuya Miyashita, Tomoya Shimura, Toshitaka Baba, Tetsuya Takemi, Keita Fujiwara, Nobuhito Mori</i>	
DEPLOYMENT OF UAVS WITH SPECTRAL SENSORS FOR REAL-TIME COASTAL MONITORING	1797
<i>Ha Linh Trinh, Hieu Trung Kieu, Hui Ying Pak, Dawn Sok Cheng Pang, Tham Wai Wah, Eugene Khoo, James Wong, Adrian Law Wing Keung</i>	
CHALLENGES OF IMPLEMENTING NATURE-BASED SOLUTIONS IN THE MEXICAN CARIBBEAN.....	1799
<i>Izchel Gomez, Debora Lithgow, Valeria Chávez, Rodolfo Silva</i>	
HYBRID DUNE STRUCTURES AROUND THE WORLD: A NEW OVERVIEW AND LESSONS LEARNED	1801
<i>Daan Willem Poppema, Sierd De Vries, Ad Reniers, Alessandro Antonini</i>	
UNCORRECTED SATELLITE DERIVED SHORELINE ASSIMILATION IN EQUILIBRIUM SHORELINE MODEL.....	1803
<i>Georgios Azorakos, Bruno Castelle, Vincent Marieu, Déborah Idier, Kristen D. Splinter</i>	
HIERARCHICAL BAYESIAN SPATIO-TEMPORAL MODELLING FOR CONCEPTUAL PROCESS UNDERSTANDING	1805
<i>Joshua A. Simmons, Kristen D. Splinter, R. Willem Vervoort</i>	
MACHINE LEARNING FOR PROBABILISTIC PREDICTION OF SHORELINE CHANGE.....	1807
<i>Afshar Adeli Soleimandarabi, Ali Dastgheib, Dano J. A. Roelvink</i>	
LONG-TERM EVALUATIONS OF GLOBAL EXTREME SEA LEVELS USING UNSTRUCTURED GRID MODELS	1809
<i>Shohei Ohata, Tomoya Shimura, Takuya Miyashita, Nobuhito Mori</i>	
MODELING OF CLIMATE CHANGE EFFECT ON THE CURRENT POWER POTENTIAL OF A SEA STRAIT	1811
<i>Mehmet Öztürk, Furkan Altas, Cihan Sahin, Yalcin Yuksel, H. Anil Ari Guner</i>	
SHORELINE EXTRACTION METHODS AND MEGACUSPS IDENTIFICATION FROM SENTINEL-2 IMAGES	1813
<i>Riccardo Angelini, Eduard Angelats, Francesca Ribas, Guido Luzi, Andrea Masiero</i>	
NATIONAL ASSESSMENT OF SEA LEVEL RISE VULNERABILITY OF ARCHEOLOGICAL HERITAGE SITES OF TURKIYE	1815
<i>Gulizar Ozyurt Tarakcioglu, Iremnaz Kosem, Akdeniz Ince, A. Cagatay Uysal, Aysen Ergin, M. Lutfi Suzen, D. Burcu Erciyas, Ugur Caliskan, Ahmet Cevdet Yalciner, Guzden Varinlioglu</i>	
AN INTEGRATED COASTAL MANAGEMENT STRATEGY FOR THE SAINT-LOUIS REGION, SENEGAL.....	1817
<i>Pieter Koen Tonnon, Anouk De Bakker, Christophe Lescoulier, Christophe Brière, Camille Lequette, Dano Roelvink, Nicolas Guillot, Hans De Vroeg, Romain Carrel</i>	
CLIMATE CHANGE EFFECTS IN ESTUARINE MORPHODYNAMICS: EFFICIENT LONG- TERM MODELING.....	1819
<i>Marta Aragón, Andrea Lira-Loarca, Guillermo Martín-Llanes, Juan Del-Rosal-Salido, Alejandro López-Ruiz, Miguel Ortega-Sánchez</i>	

COASTAL TOPOGRAPHIC CHANGE ANALYSIS USING QUADRUPEDAL ROBOTS AND IMAGE PROCESSING.....	1821
<i>Bumshick Shin, Kyu-Han Kim</i>	
EXPLORING THE LONG-TERM IMPACT OF BEACH ENTRANCES ON DUNE DEVELOPMENT	1822
<i>Manuel Teixeira, Erik M. Horstman, Elham Bakhshianlamouki, Sasja J. Van Rosmalen, Juul Limpens, Michel J. P. M. Riksen, Ellen-Wien Augustijn, Kathelijne M. Wijnberg</i>	
DESIGN AND USE OF A NOVEL TEST APPARTUS FOR RETENTION OF FINE DREDGED FILL	1824
<i>Tim Pullen, Ian Chandler, William Allsop, Aggelo Dimakopoulos</i>	
INTEGRATED FRAMEWORK FOR COASTAL ZONE HEALTH INDEX AND VULNERABILITY ASSESSMENT	1826
<i>Jonathan Cabrera, Han Soo Lee, Jae-Soon Jeong, Morhaf Aljber</i>	
HIGH-RESOLUTION MULTI-MODEL SERVICE OF POLLUTANT DISPERSION IN THE MEDITERRANEAN SEA	1828
<i>Beatrice Maddalena Scotto, Andrea Lira Loarca, Antonio Novellino, Giovanni Besio</i>	
SALT MARSH AND EXTREME CONDITIONS: A LARGE SCALE EXPERIMENT	1830
<i>Alessandro Antonini, Dimitrios Dermentzoglou, Jos Muller, Marion Tissier, Mark Klein Breteler, Pim Willemsen, Victoria Mason, Tjeerd Bouma, Akis Vouziouris, Paul Buring, Bas Hofland, Bas Borsje</i>	
A SYSTEMATIC APPROACH TO ASSESS WAVE OVERTOPPING AT A REGIONAL SCALE: THE NORTHERN PORTUGUESE COAST	1832
<i>Jose Eduardo Carneiro-Barros, Tiago Fazeres-Ferradosa, Paulo Rosa-Santos, Francisco Taveira-Pinto</i>	
ANALYZING DISPERSION IN THE PORT OF GENOVA: HYDRODYNAMIC AND LAGRANGIAN MODELS FOR METE-OCEAN SCENARIOS	1834
<i>Mattia Scovenna, Mohammad Daliri, Francesco De Leo, Giovanni Besio</i>	
EXPERIMENTAL STUDY OF MICROPLASTIC PARTICLE TRANSPORT AROUND SEA GRAVEL IN WAVES PLUS CURRENT CONDITIONS.....	1836
<i>Giovanni Passalacqua, R. Ilayda Tan, Stefan Carstensen, Claudio Iuppa, Carla Faraci, Bjarke Eltard Larsen, Nils B. Kerpen, Torsten Schlurmann, David R. Fuhrman</i>	
COASTAL HAZARDS SYSTEM: A MULTI-COMPONENT FRAMEWORK AIDING COASTAL RESILIENCY.....	1838
<i>Madison C. Yawn, Norberto C. Nadal-Caraballo, Luke A. Aucoin, Jeffrey A. Melby, Victor M. Gonzalez, Meredith L. Carr, Chris Massey, Alexandros A. Taflanidis, Michelle T. Bensi</i>	
FORECASTING AND MONITORING MARINE LITTER IN COASTAL REGIONS COMBINING NUMERICAL MODELLING AND CITIZEN SCIENCE.....	1840
<i>Jose M. Alsina, Anna Sanchez-Vidal, William P. De Haan, Ivan Hernandez, Leidy M. Castro- Rocero, Angela S. Gomez-Lopez, Oriol Uviedo, Manuel Espino</i>	
CASE STUDY FOR FUTURE WAVE ENERGY EXPLOITABILITY (2020 - 2050) IN THE BELGIAN CONTINENTAL SHELF	1842
<i>Paulino Meneses, Manuel Corrales-Gonzalez, Vasiliki Stratigaki, Edgar Mendoza, Giovanni Besio, Peter Troch</i>	
ATTENUATION AND LONGITUDINAL MIXING IN VEGETATED WAVE-CURRENT FLOW	1844
<i>Nipuni Odara Merenchi Galappaththige, Jonathan Pearson</i>	

JOINT PROBABILITY METHOD AIDED BY METAMODEL PREDICTION FOR HURRICANE HAZARDS	1846
<i>Norberto C. Nadal-Caraballo, Madison C. Yawn, Luke A. Aucoin, Victor M. Gonzalez, Meredith L. Carr, Abigail L. Stehno, Jeffrey A. Melby, Chris Massey, Alexandros A. Taflanidis, Michelle T. Bensi</i>	
NEARSHORE DEPTH-INVERSION FROM LIDAR SCANNERS: CURRENT PROGRESS, LIMITATIONS AND FUTURE PERSPECTIVES	1848
<i>Kévin Martins, Katherine L. Brodie, Julia Fiedler, Annika M. O'Dea, Nicholas J. Spore, Robert L. Grenzeback, Patrick J. Dickhudt, Brittany L. Bruder, Philippe Bonneton</i>	
COASTAL ENGINEERING WITH NATURE AT THE INTERFACE BETWEEN BEST AVAILABLE SCIENCE, ENGINEERING, MANAGEMENT, AND COMMUNITY NEED.....	1849
<i>Meagan Wengrove, Carly Ringer, Hailey Bond, Meg Reed, Kayla Ostrow, Peter Ruggiero, Sally D. Hacker, Dan Cox, Jonathan Allan, George M. Kaminsky, Ian Silvernail, Rhiannon Bezore, Laurel Hillmann, Kevin Herkamp</i>	
APPLICABILITY OF HYBRID 2D AND 3D CALCULATION FOR TSUNAMI CAUSED BY SUBMARINE VOLCANIC ERUPTION	1851
<i>Tatsuhiko Tokuta, Taro Arikawa</i>	
INTEGRATING CLIMATE CHANGE PROJECTIONS AND HYDRODYNAMIC- WAVE MODELING FOR PRESENT AND FUTURE COMPOUND FLOOD RISK	1852
<i>Mustafa Onur Kurum, Keith Jared Roberts, Dave Kelly</i>	
ASSESSING CLIMATE RISKS AND VULNERABILITY OF LOW-LYING CORAL ISLANDS	1853
<i>Thomas Fellowes, Ana Vila-Concejo, Eleanor Bruce, Maria Byrne, Elaine Baker</i>	
FIRST CURRENT MEASUREMENTS FROM CORAL FOREREEF SPURS AND GROOVES ON THE GREAT BARRIER REEF	1855
<i>Lachlan Arthur Perris, Ana Vila-Concejo, Tristan Salles, Jody M Webster, Alisha M Thompson, Ana Paula Da Silva</i>	
PERFORMANCE-BASED DESIGN FOR USING EMERGENT VEGETATION TO MITIGATE WAVE OVERTOPPING CONSIDERING CLIMATE CHANGE	1857
<i>Kayla Ostrow, Daniel T. Cox, Tori Tomiczek, Esteban L. Biondi</i>	
BASIC STUDY ON A STOCHASTIC TROPICAL CYCLONE RAINFALL MODEL AROUND JAPAN.....	1859
<i>Maya Takeda, Sota Nakajo</i>	
VIDEO-BASED DEPTH INVERSION IN SHALLOW WATER: A CASE STUDY AT BYEONSAN BEACH, SOUTH KOREA.....	1861
<i>Byungkuk Kim, Yong Sung Park</i>	
A STUDY ON THE DAMAGE INFLICTED ON SMALL AND MEDIUM-SIZED FISHERY PORTS DUE TO THE INCREASE IN SEA LEVEL AND COUNTERMEASURES FOR PORT TRANQUILITY	1863
<i>Kyu-Tae Shim, Kyu-Han Kim</i>	
RAPID ASSESSMENT OF COASTAL FLOODING VULNERABILITY OF HERITAGE SITES: OPTIMIZATION AND LIMITATIONS.....	1864
<i>Arif Cagatay Uysal, Gulizar Ozyurt Tarakcioglu, Akdeniz Ince, Iremnaz Kosem</i>	
MODEL VALIDATION USING A DIAGRAM COMPARING OBSERVED AND SIMULATED TIDES AND TIDAL CURRENT ELLIPSES IN TOKYO BAY.....	1866
<i>Takaki Tsubono, Teruhisa Okada, Kazuhiro Misumi, Daisuke Tsumune</i>	

ASSESSING THE BENEFITS OF BEACHES IN FLOOD RISK REDUCTION	1868
<i>Alexandra Toimil, Iñigo Losada, Moisés Álvarez-Cuesta, Gonéri Le Cozannet</i>	
UPSCALING THE SHORELINE TO MODEL EROSION-ENHANCED FLOODING DUE TO CLIMATE CHANGE	1869
<i>Moisés Álvarez Cuesta, Alexandra Toimil, Iñigo Losada</i>	
STOKES DRIFT AND CURRENT PROFILES IN THE NEARSHORE: LABORATORY EXPERIMENT USING 3D PARTICLE TRACKING VELOCITY	1870
<i>Maxime Bayle Paul, Jessamy Mol, Wout Bakker, Ton Van Den Bremer</i>	
EFFECT OF BIAS CORRECTION METHOD TO FUTURE PREDICTION OF TROPICAL CYCLONE PROPERTIES SIMULATED BY GLOBAL STOCHASTIC MODEL.....	1872
<i>Sota Nakajo, Daiki Shimada</i>	
ASSESSMENT OF FUTURE REGIONAL CYCLONE AND EXTREME WAVE CLIMATE IN THE BALTIC SEA.....	1874
<i>Martin Mäll, Takayuki Suzuki, Ülo Suursaar</i>	
URBAN-INTEGRATED STRATEGIES FOR CLIMATE CHANGE ADAPTATION AT COASTAL COMMUNITIES	1876
<i>Javier Lara, Maria Alvarez De Eulate, David Lucio, Alberto Fernandez, Inigo Losada</i>	
PREDICTION OF EQUILIBRIUM SUBAQUEOUS DUNE CHARACTERISTICS USING GENETIC ALGORITHMS	1877
<i>Arnaud Doré, Coco Giovanni</i>	
OPTIMIZING NEURAL NETWORK TRAINING DATA SELECTION FOR NEARSHORE SEA STATE FORECASTING THROUGH CLUSTERING ALGORITHMS	1879
<i>Elisa Castro, Luca Cavallaro, Claudio Iuppa, David Lucio Fernández, Javier López Lara, Enrico Foti, Rosaria Ester Musumeci</i>	
UPDATE OF THE VULNERABILITY ANALYSIS AND MANAGEMENT STRATEGY FOR THE COAST OF THE VENETO REGION	1881
<i>Chiara Favaretto, Luca Martinelli, Piero Ruol</i>	
MODELLING MANGROVE ECOSYSTEM ENGINEERING EFFECTS FOR PERSISTENT FLOOD RISK REDUCTION.....	1883
<i>Rik Gijsman, Erik Horstman, Andrew Swales, Daphne Van Der Wal, Kathelijne Wijnberg</i>	
A NUMERICAL-BASED APPROACH TO PREDICT PLASTIC LITTER PATHWAYS IN COASTAL AREAS	1885
<i>Martina Stagnitti, Rosaria Ester Musumeci, Luca Cavallaro, Enrico Foti</i>	
URUGUAYAN NATIONWIDE BEACH REMOTE MONITORING INITIATIVE	1887
<i>Paula Gurruchaga, Maya Lambert, Rodrigo Alonso, Sebastian Solari</i>	
SMART BOUNDARY CONDITIONS FOR NUMERICAL MODELLING OF HURRICANE INDUCED STORM SURGE	1889
<i>Ludovico Cipollone, Davide Pasquali, Daniele Celli, Carmine Di Nucci, Marcello Di Risio</i>	
PARAMETERISATION OF CORAL STRESSORS IMPACTING REEF ECO- MORPHODYNAMICS.....	1891
<i>Kate Whitton, Ana Paula Da Silva, Maria Byrne, Sarah Hamylton, Tristan Salles, Tommy Fellowes, Ana Vila-Concejo</i>	

MORPHOLOGICAL CHANGE SIMULATION USING A GPU-BASED PLATFORM	1893
<i>Junsu Noh, Sangyoung Son</i>	
MAPPING WAVES, CURRENTS AND BATHYMETRY WITH SHORE-BASED COHERENT MARINE RADAR: NEARSHORE VALIDATION.....	1894
<i>Michael Stresser, Björn Lund, Ruben Carrasco, Jochen Horstmann</i>	
EUROPEAN ASSESSMENT OF COASTAL FLOOD HAZARDS.....	1895
<i>Camila Cotrim, Alexandra Toimil, Iñigo Losada, Melisa Menendez, Hector Lobeto, Iria Suárez, Sara Novo</i>	
LOW LATITUDE TYPHOON INDUCED STORM TIDE IN SINGAPORE: A MONTE CARLO APPROACH FOR STORM TIDE MODELLING.....	1897
<i>Serene Hui Xin Tay, Dieu Huong Trinh, Seng Keat Ooi</i>	
DEVELOPMENT OF A REALISTIC VR DEVICE USING PHOTOGRAMMETRY AND CLARIFICATION OF EVACUATION BEHAVIOR.....	1898
<i>Rena Naito, Tomoki Shirai, Taro Arikawa</i>	
EFFECTS OF WIND WAVES ON COASTAL CURRENTS: A CASE STUDY OF TYPHOON JEBI, 2018.....	1899
<i>Jae-Soon Jeong, Han Soo Lee, Nobuhito Mori</i>	
SKILL AND UNCERTAINTIES IN GCM-RCM WIND AND WAVE PROJECTIONS IN THE MEDITERRANEAN SEA	1901
<i>Andrea Lira Loarca, Tim Toomey, Marta Marcos, Giovanni Besio</i>	
DESIGN AND MANAGEMENT OF NATURAL AND NATURE BASED FEATURES CASE STUDIES IN SOUTHWEST FLORIDA, USA	1903
<i>Mohamed Dabees</i>	
EWS_COCOFLOOD: AN EARLY WARNING SYSTEM FOR PREDICTION OF COMPOUND FLOOD EVENTS	1905
<i>Vasiliki K. Tsoukala, Anastasios S. Metallinos, Andreas G. Papadimitriou, Michalis K Chondros</i>	
PROBABILISTIC TSUNAMI HAZARD ANALYSIS FROM SUBMARINE MASS FAILURE: A MONTE CARLO APPROACH TO A CASE STUDY IN ITALY	1907
<i>Claudia Cecioni, Giorgio Bellotti, Stephan T. Grilli</i>	
DEVELOPMENT OF A SALTWATER-WAVE-CURRENT-FLUME WITH HOLDING TANK AND WATER TREATMENT PLANT.....	1909
<i>Clemens Krautwald, Constantin Schweiger, David Schürenkamp, Nils Goseberg</i>	
COMPREHENSIVE STUDY OF A COASTAL INLET EVOLUTION AND ITS DRIVING FACTORS	1911
<i>Rodrigo Alonso, Paula Gurruchaga, Maya Lambert, Sebastian Solari</i>	
A NEW SIMPLE PARAMETER TO CLASSIFY SEAFLOOR STATE.....	1913
<i>Allison Penko, William Kearney</i>	
MODELING VOLCANIC LAMB-WAVE-INDUCED TSUNAMIS ACROSS PLANETARY-TO- COASTAL SCALES INCORPORATING TOPOGRAPHY AND GLOBAL WINDS.....	1915
<i>Ignacio Sepulveda, Matias Carvajal, Duncan Agnew, Andrew Mosqueda</i>	

STORMSIM: A MODULAR APPROACH TO PROBABILISTIC COASTAL HAZARDS ANALYSIS.....	1917
<i>Fabian A. Garcia-Moreno, Abigail L. Stehno, Jeffrey A. Melby, Kevin C. Hodgens, Victor M. Gonzalez, Norberto C. Nadal-Caraballo</i>	
IMPROVING HURRICANE-INDUCED COMPOUND FLOOD RISK ASSESSMENT IN LONG ISLAND, BAHAMAS: THE ROLE OF LOCAL DIGITAL TERRAIN MODELS	1919
<i>Bart-Jan Van Der Spek, David Heineke, Sophie Bockelmann, Stijn Dijsselbloem, Bram Loef</i>	
MULTIVARIATE COASTAL HAZARD RESPONSES WITH STOCHASTIC SIMULATION.....	1921
<i>Kevin C. Hodgens, Abigail L. Stehno, Jeffrey A. Melby, Victor Gonzalez, Norberto C. Nadal-Caraballo, Madison Yawn, Fabian Garcia-Moreno, Luke Aucoin</i>	
A GPU-ACCELERATED NUMERICAL MODEL FOR COASTAL FLOODING	1923
<i>Sooncheol Hwang, Sangyoung Son</i>	
MULTIVARIATE COASTAL HAZARD RESPONSE STOCHASTIC SIMULATION	1924
<i>Abigail L. Stehno, Jeffrey A. Melby, Victor M. Gonzalez, Norberto C. Nadal-Caraballo, Fabian A. Garcia-Moreno, Kevin C. Hodgens, Madison C. Yawn</i>	
GLOBAL SHORELINE FORECASTING USING SATELLITE-DERIVED DATA AND INTERPRETABLE MACHINE LEARNING.....	1926
<i>Mahmoud Al Najar, Rafael Almar, Grégoire Thoumyre., Erwin W. J. Bergsma, Jean-Marc Delvit, Dennis G. Wilson</i>	
EXTREME SEA-LEVEL PROJECTIONS BASED ON LOCAL WAVES AND FORESHORE SLOPE.....	1928
<i>César Antonio Esparza, Rodrigo Alberto Cienfuegos, Patricio Alejandro Winckler</i>	
INVESTIGATING THE USE OF PLEAIDES IMAGERY TO DERIVE COASTAL DUNE TOPOGRAPHY	1930
<i>Olivier Burvingt, Bruno Castelle, Vincent Marieu</i>	
THE SPATIAL DISTRIBUTION OF THE TROPICAL CYCLONE PRESSURE USING MACHINE LEARNING TECHNIQUE	1932
<i>Jihyeon Youn, Sangyoung Son</i>	
APPLYING A COMPOUND FLOOD MODEL ON OCEAN BASIN SCALES	1933
<i>Maarten Van Ormondt</i>	
A NEW MODELING FRAMEWORK FOR PROBABILISTIC LANDSLIDE TSUNAMI HAZARD ANALYSES	1935
<i>Stephan Toni Grilli, Annette Renée Grilli, Wei Cheng, Juan Horrillo, Claudia Cecioni, Giorgio Bellotti</i>	
ASSESSING COMPOUND FLOOD PROCESSES THROUGH A MULTIDIMENSIONAL FRAMEWORK IN COASTAL WATERSHEDS	1937
<i>Felix Luis Santiago-Collazo, Logan Bayer, Matthew Bilskie, Peter Bacopoulos</i>	
NATURE-BASED SOLUTIONS FOR COASTAL ADAPTATION: A MODELLING STUDY IN THE SICILY COAST (ITALY)	1939
<i>Massimiliano Marino, Ahmad Ik Kharoubi, Luca Cavallaro, Enrico Foti, Rosaria Ester Musumeci</i>	
EXAMINING THE ROLE OF TROPICAL CYCLONE RAINFALL MOTION IN COASTAL COMPOUND FLOODING.....	1941
<i>Xiaojuan Qian, Sangyoung Son</i>	

POWER AND LIMITATIONS OF NATURE-BASED SOLUTIONS TO ENHANCE COASTAL RESILIENCE	1943
<i>Annette Grilli, Alexa Leone, Thomas Becker, Deborah Crowley, Peter Stempel, John Walsh, Isaac Ginis1, Stepan Grilli, Christopher Damon, Roland Duhaime, Pamela Rubinoff</i>	
ANALYSIS OF EXTREME WAVES IN THE GULF OF OMAN	1945
<i>Hamidreza Mohammadzadeh, Mohsen Soltanpour, Zahra Ranji</i>	
A COMPARATIVE ANALYSIS OF WAVE ENERGY CONVERTERS PERFORMANCE USING SWAN AND ERA5 DATASETS WITH A CASE STUDY ON PANTELLERIA ISLAND	1947
<i>Giulia Cervelli, Giuseppe Giorgi, Giuliana Mattiazzo</i>	
QUANTIFICATION OF CHRONIC COASTAL FLOODING USING MACHINE LEARNING.....	1948
<i>Ryan McCune, Katherine Anarde, Evan B. Goldstein, Emma Rudy Srebnik, Thomas Thelen, Miyuki Hino</i>	
COASTAL ENGINEERING: THE FRONTLINE OF RESILIENCE AND CLIMATE ADAPTATION	1950
<i>Paul Tschirky</i>	
DEVELOPMENT OF THE CANADIAN COASTAL ZONE INFORMATION SYSTEM (CCZIS)	1952
<i>Amaury Camarena, Jessica Wilson, Lea Braschi, Tom Kozlowski</i>	
CLIMATE CHANGE IMPACTS ON COASTAL HAZARDS IN NEWFOUNDLAND AND LABRADOR, CANADA	1954
<i>Aline Kaji, Gabriel Vieira De Carvalho, Jose Ignacio Ribba Esteva, Méven Robin Huiban, Danker Kolijn</i>	
SIMULATION EXPERIMENT OF TROPICAL CYCLONE MOCHA (2023) AND ASSOCIATED STORM SURGE USING DIFFERENT PHYSICS OPTIONS OF WRF	1956
<i>Takehiro Ishiwata, Tomoki Shirai, Taro Arikawa</i>	
THE ABILITY OF COASTAL ECOSYSTEMS TO REDUCE STORM SURGE AND COASTAL EROSION IN THE CONTEXT OF CLIMATE CHANGE.....	1957
<i>David A Y Smith, Elisabeth A Mondon, Philip S Warner</i>	
NEW GUIDANCE AND DECISION-SUPPORT TOOLS FOR NATURE-BASED SOLUTIONS	1958
<i>Jessica Wilson, Brianna Lunardi, Eleanor Simpson, Aline Kaji, Danika Van Proosdij, Jennie Graham, Christian Appendini, Danker Kolijn, Denise Devotta, Tom Foster, Chatherine Boyd Michaud, Lucie Robidoux, Nicole Goni</i>	
DEVELOPMENT OF A DECISION SUPPORT SYSTEM FOR NAVAL PLANNING AND PREDICTION OPERATIONS: SIAAMETOC PROJECT	1960
<i>Gabriel Diaz-Hernandez, Alejandro Ortega, Alejandro González</i>	
CHARACTERISTIC HYDRAULIC TIMES OF WATER AGE AND RENEWAL RATES IN THE LOWER AMAZON	1962
<i>Monica Buckmann, Jeffrey Richey, Paulo Rosman</i>	
COMPARATIVE STUDY OF EXTREME SEA LEVEL PREDICTIONS IN THE MEDITERRANEAN SEA	1964
<i>Gozde Guney Dogan, José Antonio Álvarez Antolínez, Mia Pupic Vurilj, Sanne Muis, Ahmet Cevdet Yalciner</i>	
PREDICTION OF HYPOXIA IN A COASTAL LAGOON USING HYDRODYNAMIC MODELLING AND MACHINE LEARNING	1966
<i>Irene Simonetti, Lorenzo Cappiatti</i>	

PROJECTED WAVE CLIMATE IN THE GULF OF MEXICO BASED ON SYNTHETIC TROPICAL CYCLONES DERIVED FROM CMIP6	1968
<i>Christian M. Appendini, Pablo Ruiz-Salcines, Rodrigo Duran, Reza Marsooli, Asm Alauddin Al-Azad</i>	
IMMERSIVE SIMULATION OF NATURAL HAZARDS FOR ENHANCED PUBLIC AWARENESS AND DISASTER PREPAREDNESS	1969
<i>Behzad Ebrahimi, Patrick Lynett</i>	
DUNEFront PROJECT: DEMONSTRATION OF DUNE-DIKE HYBRID NATURE-BASED SOLUTIONS.....	1970
<i>Ine Moulart, Oliver Lojek, Boris Schröder, Nils Goseberg, Toon Verwaest, Sieglie De Roo, Peter Van Besien, Thoon Daphné, Steve Timmermans, Valerie Reijers, Pieter Rauwoens, Marie-Hélène Ruz, Luciana Das Neves, Paulo Rosa Santos, Robin Nicolas, Caroline Hallin, Helena Hanson, Johanna Alkan Olsson, Marion Tissier, Dries Bonte, Peter Troch, Vincent Gruwez, Maxime Dahirel, Kim Van Tittelboom, Nele De Belie, Bas Hofland, Ad Reniers, Vicky Stratigaki, Sierd De Vries, Jan Fordeyn, Marc Huygens, Tomas Sterckx, Bruno Castelle, Richard Michalet, Bas Huisman</i>	
THE STUDY OF THE EFFECT OF VEGETATION ON STORM WAVE BASED ON NUMERICAL MODELING APPROACH: PABUK STORM SURGE CASE STUDY	1972
<i>Chatuphorn Somphong, Napat Silapasuwat, Karntapong Numnual</i>	
BIAS CORRECTION METHOD FOR SIMULATED STORM SURGE HEIGHT CONSIDERING COASTLINE CHARACTERISTIC	1974
<i>Jung-A Yang, Nobuhito Mori</i>	
RELATIVE SEA LEVEL RISE PROJECTIONS BY 2150 AND FLOODING HAZARD ALONG THE COASTS OF THE MEDITERRANEAN SEA.....	1975
<i>Marco Anzidei, Antonio Vecchio, Enrico Serpelloni, Tommaso Alberti</i>	
SHOALING FORECASTING AT THE MOUTH OF THE MISSISSIPPI RIVER WITH MACHINE LEARNING MODELS.....	1976
<i>Magdalena Asborn, Jacob Broders, Kenneth Mitchell, Michael Hartman, Lauren Dunkin</i>	
QUANTIFYING THE BENEFITS AND COSTS OF WETLAND RESTORATION PROJECTS FOR STORM SURGE DAMAGE REDUCTION	1978
<i>Siddharth Narayan, Zaid Al-Attabi, Yicheng Xu, Georgette Tso, Ananth Wuppukondur, Stefanie Simpson</i>	
STAKEHOLDER COASTAL HAZARD COMMUNICATION AND DECISION MAKING IN MOBILE, AL.....	1979
<i>Evan Cass, Ce'Ne Harris, Wanyun Shao, Elissa Yeates, Hamid Moradkhani</i>	
ANATOMY OF STRIKE SLIP FAULT TSUNAMI-GENESIS.....	1981
<i>Costas Synolakis, Ahmed Elbannac, Mohamed Abdelmeguid, Xiao Mac, Faisal Amlanie, Harsha S. Bhatf, Ares J. Rosakis</i>	

Author Index