Improving Propagation in Ocean Wave Models..................................................507
Hendrik L. Tolman

Directional Spreading in Ocean Swell.................................................................517
Kevin C. Ewans

Wind Wave Generation II

Extension and Modification of Discrete Interaction Approximation (DIA) for
Computing Nonlinear Energy Transfer of Gravity Wave Spectra.......................530
Noriaki Hashimoto and Koji Kawaguchi

Extension of the Discrete Interaction Approximation for Computing Nonlinear
Quadruplet Wave-Wave Interactions in Operational Wave Prediction Models........540
Gerbrant Ph. van Vledder

A Shallow Water Intercomparison of Wave Models on Lake Erie......................550
Roop Lalbeharry, Weimin Luo, and Laurie Wilson

Wave Growth Limit in Shallow Water..............................................................560
Johannes P. de Waal

Wave Hindcasting and Climate

Wave Data Assimilation with Clustered Winds.................................................570
Sander E. Vos, Leo H. Holthuijsen, and Nico Booij

Evaluation of the SWAN Wave Model for the Dutch IJsselmeer Area...............580
Marcel Bottema and Dénes Beyer

Validation of Operational Global Wave Prediction Models
with Spectral Buoy Data..................................................................................590
K.M. Wingeart, T.H.C. Herbers, W.C. O'Reilly, P.A. Wittmann, R.E. Jensen,
and H.L. Tolman

Wave Hindcasting and Climate I

Nearshore Directional Wave Measurements for Regional Coastal Management......600
Hans H. Dette

Implementation of a Regional Wave Measurement and Modeling System,
South Shore of Long Island, New York.........................................................610
William G. Grosskopf, Nicholas C. Kraus, Adele Militello,
and Lynn M. Bocamazo

Relationship Between Coastal Waves and Lake Erie Water Levels...................620
Shanon A. Chader

Wave Hindcasting and Climate II

Discrepancies in Design Wave Based on Source and Location of Wave Data........630
Heidi P. Moritz and Hans R. Moritz

Statistical Comparisons of Satellite and Model Wave Climatologies.................640
David K. Woolf and Peter G. Challenor
Improving Wave Hindcast Information for the Great Lakes
Lihwa Lin and Donald T. Resio

Wave Hindcasting and Climate III
A System for Estimating Wave Climate and Wave Extremes Based on 20-Year Wave Hindcast and its Verification at the Measurement Stations Around Japanese Coasts
Yoshio Hatada and Masataka Yamaguchi

Specification of Hurricane Wind Fields for Ocean Wave Prediction
Yung Y. Chao and Hendrik L. Tolman

Wave Climate Change and Coastal Erosion in the US Pacific Northwest
Jonathan C. Allan and Paul D. Komar

Wave Transformation I
Linear Refraction-Diffraction Model for Steep Island Bathymetry
Carmela N. Chandrasekera and Kwok Fai Cheung

Transformation of Wave Spectra from Deep to Shallow Water
Michel K. Ochi and Subarna B. Malakar

A Generalized Absorbing Boundary Condition for Elliptic Harbor Wave Models
Wei Chen, Vijay G. Panchang, and Zeki Demirbilek

Extended Mild-Slope Equation for Random Waves
Changhoon Lee, Gunwoo Kim, and Kyung Doug Suh

Wave Transformation II
Field Measurements and Laboratory Investigations on Wave Propagation and Wave Run-Up
Marcel R.A. van Gent, Arno C. de Kruijf, and Jimmy Murphy

Spectral Evolution of Swell Across the Continental Shelf
Fabrice Ardhuin, W.C. O'Reilly, T.H.C. Herbers, and P.F. Jessen

Application of S-Transforms to the Study of Modulational Interactions of Waves
Brian T. Linfoot, Julian Wolfram, and Paul Stansell

Generation of Secondary Waves due to Wave Propagation over a Bar:
A Field Investigation
Nadia Sénéchal, Philippe Bonneton, and Hélène Dupuis
Wave Transformation III

A Case Studying of Wave Transformation at Starling Creek Marina........................................773
Jerome P.-Y. Maa, T.-W. Hsu, and C.S. Hardaway, Jr.

Wave Control on Reef Morphology and Coral Distribution: Molokai, Hawaii......................784
Curt D. Storlazzi, Michael E. Field, James D. Dykes, Paul L. Jokiel, and Eric Brown

Wave Transformation at Grays Harbor, WA, with Strong Currents and Large Tide Range..........................................................794
Mary A. Cialone and Nicholas C. Kraus

Mathematical Modeling of Interaction Between Standing Waves and a Horizontal Turbulent Jet.........................................................804
Nobuhito Mori

Spectral Wave Transformation Model with Wave Diffraction Effect........................................814
Hajime Mase, Tomotsuka Takayama, and Toshikazu Kitano

Wave Transformation IV

Collision of Solitary Waves in Branching Channels..........................................................824
Masatoshi Yuhi, Hajime Ishida, and Hajime Mase

A Highly Accurate Boussinesq Method for Fully Nonlinear Waves from Shallow to Deep Water.................................................................834
Per A. Madsen, Harry Bingham, and Hua Liu

A Curvilinear Boussinesq Model and its Application..........................................................844
Fengyan Shi, James T. Kirby, Robert A. Dalrymple, and Qin Chen

Nonlinearity of Boussinesq-Type Equations and its Role on Wave Transformation...........854
Ashwini K. Otta

Wave Transformation V

Numerical Simulation of Stem Waves Along a Wave-Dissipating Breakwater..................864
Taro Arikawa and Masahiko Isobe

A Finite Element Method for the 1-Term Weakly Nonlinear Beji-Nadaoka Wave Model.................................................................874
Paulo Avilez-Valente and Fernando J. Seabra-Santos

Flexible Boundary Conditions for a Boussinesq-Type Wave Model................................884
Mart Borsboom, Jacco Groeneweg, Neelke Doorn, and Marcel van Gent

A Weakly Nonlinear Wave Model of Practical Use.........................................................894
Jung Lyul Lee and Chan Sung Park

Boussinesq Waves on Vertically Sheared Currents..........................................................904
V.S. Rego, J.T. Kirby, and D. Thompson
Wave Transformation VI

Modeling of Wave Breaking in Boussinesq Evolution Equations...........................................914
Henrik Bredmose, Hemming A. Schäffer, and Per A. Madsen

Refinements to an Optimized Model-Driven Bathymetry Deduction Algorithm.........................924
James M. Kaihatu and Chandrasekher Narayanan

of Low Frequency Energy.................................................................934
W. Erick Rogers and William C. O'Reilly

Analysis of Directional Spectra in Shallow Environment: Comparison of Field
Data and Results from Mathematical Modeling.................................................944
Ralf Kaiser and Hanz D. Niemeyer

Finite Volume Schemes for the Boussinesq Equations.......................................................953
Scott F. Bradford and Brett F. Sanders

Volume Two

Poster Session on Wave Modeling

A Wave Spectra Study of the Typhoon Across Taiwan.......................................................963
Dong-Jiing Doong, Li-Hung Tsai, Chia-Chuen Kao,
and Laurence Zsu Hsin Chuang

System Identification Techniques for the Modeling of Irregular Wave Kinematics.....972
Witold Cieslikiewicz and Ove T. Gudmestad

Wave Effects on Ships Moored at Figueira da Foz Harbour............................................982
João Alfredo Santos, Maria da Graça Neves, and Conceição J.E.M. Fortes

Breaking Waves I

Evolution of Bubbly Flow in the Surf Zone..............................................................992
Yasunori Watanabe, Junichi Ohtsuka, and Hiroshi Saeki

Laboratory Study of Breaking Wave Induced Noises..................................................1002
S.A. Sannasiraj and Chan Eng Soon

Implementation and Validation of a Breaker Model in a Fully Nonlinear Wave
Propagation Model.................................................................1012
Stéphan N. Guignard and Stéphan T. Grilli

Breaking in a Spectral Wave Model..............................................................1022
Jane McKee Smith