

1. Record Nr.	UNINA9911004744203321
Titolo	Advances in coastal modeling / / editor, V.C. Lakhani
Pubbl/distr/stampa	Amsterdam ; Boston, : Elsevier, 2003
ISBN	1-281-05480-1 9786611054809 0-08-052664-0
Edizione	[1st ed.]
Descrizione fisica	1 online resource (xviii, 595 pages) : illustrations (some color), maps (some color) : digital, HTML and PDF files
Collana	Elsevier oceanography series, , 0422-9894 ; ; 67
Altri autori (Persone)	Lakhani V. C (V. Chris)
Disciplina	551.45/7/015118
Soggetti	Coast changes - Mathematical models
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Contents; Preface; Acknowledgments; List of Contributors; Chapter 1. Boussinesq Models and Applications to Nearshore Wave Propagation, Surf Zone Processes and Wave-Induced Currents; Chapter 2. Frequency Domain Wave Models in the Nearshore and Surf Zones; Chapter 3. Advanced Numerical Methods for Coastal Hydrodynamics; Chapter 4. Numerical Models for Nearshore Currents; Chapter 5. Spectral Wave Models in Coastal Areas; Chapter 6. Probabilistic Models of Waves in the Coastal Zone; Chapter 7. Modeling the Effects of Permeable and Reflective Structures on Waves and Nearshore Flows; Chapter 8. Perspective on Evolution in Sediment Modeling; Chapter 9. Large-Scale Finite Element Modeling and Parallel Computation of Sediment Transport in Coastal Areas; Chapter 10. Nonlinear Wave Modeling and Sediment Transport in the Surf and Swash Zone; Chapter 11. Modeling the Morphological Response in a Coastal Zone for Different Temporal Scales; Chapter 12. Numerical Modeling of Beach Topography Change; Chapter 13. Morphodynamic Modeling of Tidal Basins and Coastal Inlets; Chapter 14. Modeling Shore Platforms: Present Status and Future Developments; Chapter 15. Merging Scales in Models of Water Circulation: Perspectives from the Great Barrier Reef; Chapter 16. A Numerical Simulation of Japan/East Sea (JES) Thermohaline Structure and Circulation; Chapter 17. Analytical Modeling of Pollution Flushing in Well-Mixed Tidal

Embayments; Chapter 18. Advances in Water Quality Modeling in the Coastal Environment; Chapter 19. Neural Network Applications in Coastal Ecological Modeling; Chapter 20. Space-Time Transfer Function Models of Beach and Shoreline Data for Medium-Term Shoreline Monitoring Programs; Chapter 21. Progress in Geographical Information Systems and Coastal Modeling: An Overview; Index

Sommario/riassunto

This book unifies and enhances the accessibility of contemporary scholarly research on advances in coastal modeling. A comprehensive spectrum of innovative models addresses the wide diversity and multifaceted aspects of coastal research on the complex natural processes, dynamics, interactions and responses of the coastal supersystem and its associated subsystems. The twenty-one chapters, contributed by internationally recognized coastal experts from fourteen countries, provide invaluable insights on the recent advances and present state-of-the-art knowledge on coastal models which are essential for not only illuminating the governing coastal process and various characteristics, but also for understanding and predicting the dynamics at work in the coastal system.