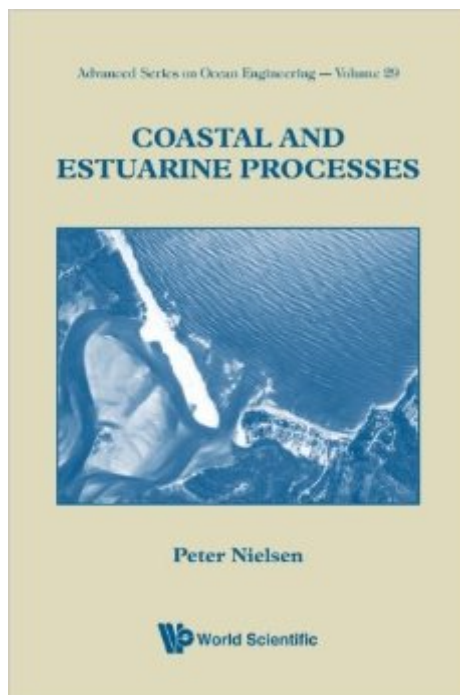# Coastal And Estuarine Processes (Advanced Series On Ocean Engineering) (Advanced Series On Ocean Engineering (Paperback))

Advanced Series on Ocean Engineering — Volume 29

COASTAL AND ESTUARINE PROCESSES

Peter Nielsen

World Scientific

Synopsis

This book is an introductory treatment to coastal and estuarine processes for earth scientists or engineers. Suitable for a first course on the subject, it covers water waves, surf zone hydrodynamics, tides in oceans and estuaries, storm surges, estuarine mixing, basic sediment transport, coastal morphodynamics and coastal groundwater dynamics. The book contains a substantial amount of new material. For example, the explicit, analytical treatment of transient, forced long waves strongly enhances the discussion on tsunami, storm surges and surf beat. The treatment of turbulent mixing includes finite mixing length effects, which provide an explanation for differential diffusion of different sediment sizes in suspension. The recently discovered effects of acceleration skewness and boundary layer streaming are also included in the basic sediment transport models. In addition, the treatment of beach groundwater dynamics: The mechanisms by which waves as well as tides drive groundwater motion, builds the link between the previously unconnected fields of coastal hydraulics and regional groundwater modeling. To serve as an effective reference book for professionals, the book is fully indexed and comprehensively cross referenced. Water Waves Surf Zone Hydrodynamics Wind-Driven Circulation and Surges Tides Estuaries and Estuarine Hydraulics Sedimentary Transport Mechanisms Morphodynamics Coastal Groundwater Dynamics

Book Information

Series: Advanced Series on Ocean Engineering (Paperback) (Book 29)

Paperback: 360 pages

Publisher: World Scientific Publishing Company (April 21, 2009)

Language: English

ISBN-10: 9812837124

Product Dimensions: 6 x 0.8 x 9 inches

Shipping Weight: 1.2 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #1,786,502 in Books (See Top 100 in Books) #57 inÂ Books > Science & Math > Earth Sciences > Geology > Geomorphology #263 inÂ Books > Engineering & Transportation > Engineering > Marine Engineering #587 inÂ Books > Science & Math > Nature & Ecology > Oceans & Seas > Oceanography

Coastal and Estuarine Processes (Advanced Series on Ocean Engineering) (Advanced Series on

Ocean Engineering (Paperback)) Random Seas and Design of Maritime Structures (Ocean Engineering) (Advanced Series on Ocean Engineering (Paperback)) Coastal Bottom Boundary Layers and Sediment Transport (Advanced Series on Ocean Engineering (Paperback)) Introduction to Coastal Engineering and Management (Advanced Series on Ocean Engineering) INTRODUCTION TO COASTAL ENGINEERING AND MANAGEMENT (Advanced Series on Ocean Engineering - Vol. 16) Sea-Level Rise and Coastal Subsidence: Causes, Consequences, and Strategies (Coastal Systems and Continental Margins) Cruising Guide to Coastal South Carolina and Georgia (Cruising Guide to Coastal South Carolina & Georgia) Solo Coastal Sailing: Upgrade your sailing skills to enable single-handed coastal or short off-shore passages Estuarine Shores: Evolution, Environments and Human Alterations Estuarine Ecohydrology, Second Edition: An Introduction Ocean and Coastal Law, Cases and Materials (American Casebook Series) Ocean and Coastal Law and Policy Coastal and Ocean Management Law in a Nutshell Introduction to Coastal Processes and Geomorphology Introduction to Coastal Processes and Geomorphology, Second Edition Oceanography in the Tongue of the Ocean, Bahamas, B.W.I.: a report on oceanographic observations in the Tongue of the Ocean between Fresh Creek, Andros and the western end of New Providence Big Blow: A Tale From Ocean City (Ocean City Mysteries Book 3) Water Wave Mechanics for Engineers and Scientists: 2 (Advanced Series on Ocean Engineering) Water Wave Mechanics for Engineers & Scientists (Advanced Series on Ocean Engineering-Vol2) (v. 2) Optical Processes in Semiconductors (Prentice-Hall electrical engineering series. Solid state physical electronics series)