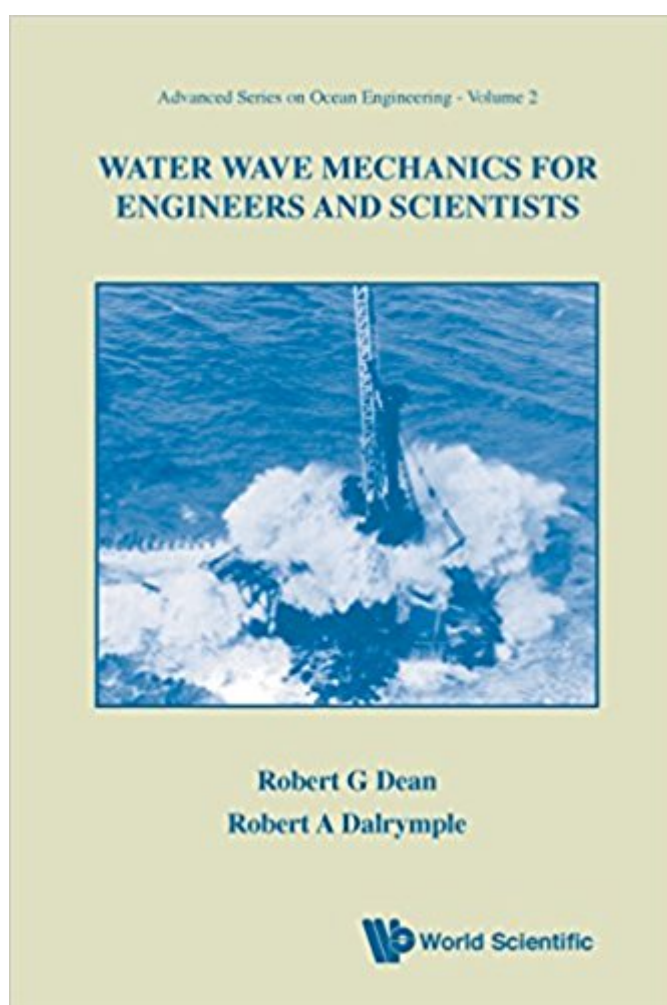


The book was found

Water Wave Mechanics For Engineers & Scientists (Advanced Series On Ocean Engineering-Vol2) (v. 2)



Synopsis

This book is intended as an introduction to classical water wave theory for the college senior or first year graduate student. The material is self-contained; almost all mathematical and engineering concepts are presented or derived in the text, thus making the book accessible to practicing engineers as well. The book commences with a review of fluid mechanics and basic vector concepts. The formulation and solution of the governing boundary value problem for small amplitude waves are developed and the kinematic and pressure fields for short and long waves are explored. The transformation of waves due to variations in depth and their interactions with structures are derived. Wavemaker theories and the statistics of ocean waves are reviewed. The application of the water particle motions and pressure fields are applied to the calculation of wave forces on small and large objects. Extension of the linear theory results to several nonlinear wave properties is presented. Each chapter concludes with a set of homework problems exercising and sometimes extending the material presented in the chapter. An appendix provides a description of nine experiments which can be performed, with little additional equipment, in most wave tank facilities.

Book Information

Paperback: 370 pages

Publisher: World Scientific Publishing Company (January 23, 1991)

Language: English

ISBN-10: 9810204213

ISBN-13: 978-9810204211

Product Dimensions: 6 x 0.8 x 9 inches

Shipping Weight: 1.1 pounds (View shipping rates and policies)

Average Customer Review: 4.6 out of 5 stars 13 customer reviews

Best Sellers Rank: #236,543 in Books (See Top 100 in Books) #48 in [Books > Science & Math > Physics > Waves & Wave Mechanics](#) #57 in [Books > Engineering & Transportation > Engineering > Civil & Environmental > Hydrology](#) #59 in [Books > Engineering & Transportation > Engineering > Mechanical > Hydraulics](#)

Customer Reviews

"Chapter on wave maker theory is new material, generally not found in text books. The authors pull together good stuff from various widely scattered sources ... the book makes a good impression ... it is worth having a copy of this book on your desk." -- T S Murty, Marine Geodesy

When I was in college studying structural engineering, one of my professors told the class: "The trouble with you students is, you don't know what you don't know". This book is a perfect illustration that, I "didn't know what I didn't know" much about water waves. This subject is very interesting. I got into this subject because I was designing an ocean marine dock. This book serves as an excellent resource for learning the essential topics, theory and technical jargon of this interesting field. Be forewarned that you will need a good understanding of differential equations to understand this subject. Written by two experts in this field, Professors Dean and Dalrymple cover the fundamental physics and mathematics of water wave mechanics. The mathematical derivation of formulas is impressive. The authors have gone through extra effort to explain things clearly. The focus is on classical solutions, with little in the way of numerical solutions. An especially nice feature are the historical tributes to great mathematicians, scientists and engineers of the past who made significant contributions in this field.

I enjoy fluid mechanics texts. I also enjoy the ocean. Hence, I enjoy this book. It begins with an excellent review of the Navier-Stokes equations, then leads into potential flow and streamfunctions. It's not a completely thorough derivation, but it doesn't gloss over any concepts or use any handwavy tricks. The application problems and development of waves and wave theory are great. Highly recommended. (P.S. My MS and PhD are in Fluid Mechanics, but I teach math. This is kind of where I'm coming from.)

An absolute must for ocean engineers, specifically when dealing with waves and coastal structures. I am constantly going back to this book to use a reference for formulas and information.

Great value for the price but a few of the equations are very small and difficult to read in the Kindle version.

wonderful book for ocean engineering student.

comprehensible and readable. This is a good book if one want to dive into this world of water wave mechanics.

very good

Great

[Download to continue reading...](#)

Water Wave Mechanics for Engineers & Scientists (Advanced Series on Ocean Engineering-Vol2)
(v. 2) Introduction to Coastal Engineering and Management (Advanced Series on Ocean
Engineering) (Advanced Series on Ocean Engineering (Paperback)) Pure Water: The Science of
Water, Waves, Water Pollution, Water Treatment, Water Therapy and Water Ecology Physics for
Scientists and Engineers with Modern Physics: Volume II (3rd Edition) (Physics for Scientists &
Engineers) Physics for Scientists and Engineers: Vol. 2: Electricity and Magnetism, Light (Physics,
for Scientists & Engineers, Chapters 22-35) Handbook of Ocean Wave Energy (Ocean Engineering
& Oceanography) Advice to Rocket Scientists: A Career Survival Guide for Scientists and Engineers
(Library of Flight) Engineering Mechanics: Statics Plus MasteringEngineering with Pearson eText --
Access Card Package (14th Edition) (Hibbeler, The Engineering Mechanics: Statics & Dynamics
Series, 14th Edition) Fracture and Fatigue Control in Structures: Applications of Fracture Mechanics
(Prentice-Hall International Series in Civil Engineering and Engineering Mechanics) Fluid Mechanics
for Chemical Engineers (UK Higher Education Engineering Chemical Engineering) Water Clarity
Secrets for Ponds and Water Gardens: The Quick and Easy Way to Crystal Clear Water (Water
Garden Masters Series Book 5) Seventy-Eight (78) Duets For Flute And Clarinet Vol2 56-78
Advanced Quantum Mechanics for Scientists and Engineers Physics for Scientists and Engineers,
Vol. 1, 6th: Mechanics, Oscillations and Waves, Thermodynamics, Water Quality & Treatment: A
Handbook on Drinking Water (Water Resources and Environmental Engineering Series) Reinforced
Concrete: Mechanics and Design (4th Edition) (Civil Engineering and Engineering Mechanics) Wave
Scattering from Rough Surfaces (Springer Series on Wave Phenomena) Electromagnetic Wave
Propagation, Radiation, and Scattering: From Fundamentals to Applications (IEEE Press Series on
Electromagnetic Wave Theory) The 5th Wave: The First Book of the 5th Wave Series Fruit Infused
Water - 80 Vitamin Water Recipes for Weight Loss, Health and Detox Cleanse (Vitamin Water, Fruit
Infused Water, Natural Herbal Remedies, Detox Diet, Liver Cleanse)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)