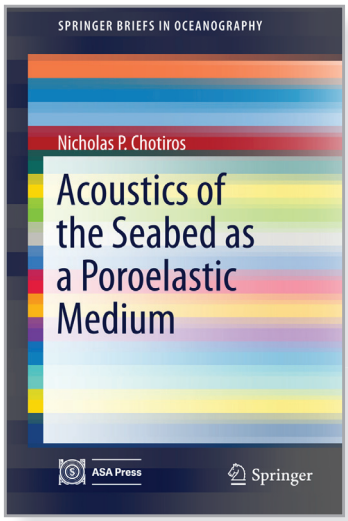
Acoustics of the Seabed as a Poroelastic Medium



Author:
Nicholas P. Chotiros

Series: Springer Briefs in Oceanography
Copyright: 2017
Publisher: Springer International Publishing
Copyright Holder: Nicholas P. Chotiros
Softcover:
ISBN 978-3-319-14276-0
Series ISSN: 2196-1212
Edition Number: 1
Number of Pages: XIII, 99
Number of Illustrations and Tables: 11 b/w illustrations, 46 color illustrations

This book presents a concise description of the acoustics of ocean sediment acoustics, including the latest developments that address the discrepancies between theoretical models and experimental measurements. This work should be of interest to ocean acoustic engineers and physicists, as well as graduate students and course instructors. The seabed is neither a liquid nor a solid, but a fluid saturated porous material that obeys the wave equations of a poroelastic medium, which are significantly more complicated than the equations of either a liquid or a solid.

This volume presents a model of seabed acoustics with input parameters that allow the model to cover a wide range of sediment types. The author includes example reflection and transmission curves which may be used as typical for a range of sediment types. The contents of this book will allow the reader to understand the physical processes involved in the reflection, propagation, and attenuation of sound and shear waves in ocean sediments and to model the acoustic properties for a wide range of applications.

Become a Member of the Acoustical Society of America

The Acoustical Society of America (ASA) invites individuals with a strong interest in **any aspect of acoustics** including (but not limited to) physical, engineering, oceanographic, biological, psychological, structural, and architectural, to apply for membership. This very broad diversity of interests, along with the opportunities provided for the exchange of knowledge and points of view, has become one of the Society's unique and strongest assets. From its beginning in 1929, ASA has sought to serve the widespread interests of its members and the acoustics community in all branches of acoustics, both theoretical and applied. ASA publishes **the premier journal in the field** and annually holds two exciting meetings that bring together colleagues from around the world.

Visit the http://acousticalsociety.org/ to learn more about the Society and membership.