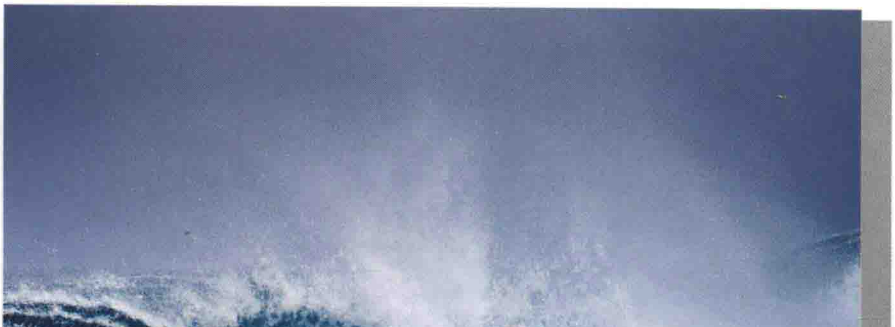
INTERNATIONAL COMPENDIUM OF COASTAL ENGINEERING

edited by
Shinji Sato • Masahiko Isobe



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Preface

Science and technology in the coastal zone has a long history. However, the term "Coastal Engineering" did not appear until the First Conference on Coastal Engineering held in 1950 at Long Beach, California, USA. In the preface of its proceedings, Morrough P. O'Brien stated that "Coastal Engineering" is not a new or separate branch of engineering, but the design of coastal works does involve many criteria which are foreign to other phases of civil engineering.

The aim of this book is to provide a comprehensive overview of Coastal Engineering from basic theory to engineering practice. Each chapter deals with an important topic in the field of coastal engineering. The topics are of recent deep concern all over the world motivated by the 2004 Indian Ocean Tsunami, 2005 Hurricane Katrina, 2011 Tohoku Earthquake Tsunami and other natural disasters.

For proper coastal zone management, a broad range of knowledge is necessary. This book provides a basic understanding of the theories behind the diverse natural phenomena within the coastal areas, such as waves, tsunamis and sediment transport. The book also introduces various coastal conservation technologies such as costal structures and beach nourishment. Finally, coastal zone management practices in the USA, Europe, and Japan are introduced. Each chapter is self-standing and readers can begin from any topic depending on their interest.

In organizing the authors of this book, the contributions of Dr. Kiyoshi Horikawa, a member of The Japan Academy, have been indispensable. He is the founder of Coastal Engineering in Japan, and has been involved in world-wide research and development within this field for more than half a century. It is because of Dr. Horikawa's established reputation in the costal engineering field, that the editors were able to secure leading authors for this book. We are very grateful for Dr. Horikawa's contributions and would like to dedicate this book to him. The authors of this book are thus world-wide authorities in the field of coastal engineering. Therefore, we believe this book is especially beneficial to coastal engineering professionals, researchers and students.

Shinji Sato
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