to concepts and computations that are directly or indirectly relevant to SLOPES. Therefore for those who wish to use this or similar numerical routines the book provides a physical insight into the forcing and response mechanisms. Each review chapter stands by itself, and some reviews are quite extensive, e.g. orthogonal (for me a new word this! I am more used to "cross-shore") sediment transport, presumably reflecting primary areas of the author's research interest.

I especially enjoyed reading all four chapters in Section D, which the book is (or should be) all about. Section E is also well written, but because (1) I am not a potential user of SLOPES and (2) I have no way of evaluating this model against other recent approaches, I was less enthusiastic. I found the falling and oscillating ball experiments in Chapter 12 most interesting, but suspect they represent an "overkill' for the present purpose.

The book is easy to read. However, I could not find the verb "to marinise" in my dictionary (see p. 165, section 12.1, line 4). In the event a second edition is considered, I suggest not repeating the table of contents at the beginning of each chapter. Also, Chapters 1 and 2 may be combined, especially because Chapter 2 seems a bit over-extended. Presumably by that time a more advanced software will enable better fonts for the equations. In addition to spelling checks, typographical corrections will be particularly required in two areas: proper nouns (e.g. Iribaren vs. Iribarren on p. 61, Table 5.2) and references to equations (i.e. matching the number in the text with that of the equation: e.g. on p. 83 Eq. 6.24 should be Eq. 6.29). Ditto for figures (e.g. on p. 68 reference to Fig. 5.22 which does not exist).

Some additional explanations should have been given (e.g. on p. 50, Figure 5.3, why does the Druck time-series differ from that generated by the staff? I have had problems with Druck myself; however, if such is the case in Figure 5.3 why not eliminate the pressure-based record?). A formal convention for parentheses should be adhered to, e.g [0] as opposed to (0), etc. The academic value of the effort can be enhanced by toning down reference to SLOPES, thus making it less of a manual for that specific software.

All in all this is a very worthwhile effort for which the author deserves commendation. It is justified by the need encapsulated in a sentence on p. 189, "There are few introductory texts to the science of morphodynamics which compare with basic books on physics or chemistry or fluid dynamics."

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Computer Modelling of Seas and Coastal Regions, edited by P. W. Partridge, 1992. Computational Mechanics, Inc., Billerica, MA, 534p. ISBN 1-56252-092-X.

Coastal research proceeds along so many different disciplinary paths that it is difficult to stay informed about developments outside of one's own specialty. Yet most coastal researchers are scientifically eclectic and want to know at least something about related research fields. Modelling of coastal physical processes is one of the specialty disciplines that impacts almost all coastal professionals. Process models are now routinely used in research and as a means of applying research to the solution of a variety of practical problems. This book presents proceedings of an international conference on modelling of seas and coastal regions that offers both detailed information for the modelling specialists and a broad range of topics for the generalists.

Breadth of coverage of coastal process modelling is the strongest feature of the book. The book contains 37 papers divided into six sections: waves, tides, shallow water circulation and channel flow, situation and sedimentation, pollution problems, and computational techniques. The papers within each section treat the topic from several viewpoints. In the waves section of the book there are papers describing monochromatic wave prediction in shallow water, wave drift predictions, spectral wave prediction in shallow water, wave diffraction, wave decay over a porous bottom, wave forces on cylinders, wave breaking, long waves in harbors, wave statistics and combined wave refraction and diffraction. The wave modelling approaches include analytic formulas, explicit finite difference, finite element, boundary element method, and combined finite element and boundary element. Many of the articles also contain either laboratory or field data which are used to verify the theoretical predictions.

Tide and circulation modelling is treated with a similarly broad range of numerical techniques: explicit finite difference, alternating direction implicit finite difference, and finite element. Additional numerical techniques used in the models are nested grids, moving boundaries and three dimensional grids. These techniques are applied to several different types of coastal regions and at different locations worldwide. Models are presented for the Arabian Gulf, the Singapore Strait, the Slovenian coastal sea, the southern North Sea, a bay in the Mediterranean, and several lagoons and estuaries.

The models presented in the book concerning sedimentation and pollution are of particular interest. These subjects present special problems for modellers because much of the critical physics and chemistry involved are poorly understood. The types of sediment subjects covered include sea bed changes in cohesive and non-cohesive sediments, shoreline changes and harbor siltation. Pollution models include water quality, thermal discharge, mixing of river effluent and effluent transport. Several different geographic settings are used as sites for application of the models, i.e. the North Sea, the Songkhla Port in Thailand, the Loire estuary, the Chukpyon Harbour in Korea, the Shingu River in Japan, the Tejo estuary in Portugal and the southern coast of England. Modelling specialists will find a number of empirical relationships that will be of interest, given the papers describing sediment erosion and transport, water diffusion, and mixing.

The book concludes with papers on computational techniques. Presented are papers on parallel computing, a general approach to modelling of three-dimensional surface flow problems and risk assessment models.

Authorship is decidedly international. Papers come from Europe, the Middle East, Asia, South America, Central and North America. Most of the authors are associated with academic institutions; the remainder are from government institutions. This provides a truly worldwide overview of activities in coastal modelling that is not easily obtained from other sources. The papers are all well referenced and this provides additional sources of information to the reader about coastal modelling.

In summary, for those desiring an up-to-date compendium of coastal process models, I think this book is ideal and is highly recommended. Both modelling specialists and generalists should find something to learn in the book about modelling of coastal physical processes.

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Intertidal and Littoral Ecosystems, edited by A. C. Mathieson and P. H. Nienhuis, 1991. Elsevier, Amsterdam, 564p. ISBN 0-444-87409-7 (Vol. 24, Ecosystems of the World). Price: US $195; Dutch Fl 380.

The series *Ecosystems of the World* (in 29 volumes) was conceived by Bostwick H. Ketchum of Woods Hole Oceanographic Institution who died on July 14, 1982, but is being nobly carried on by David W. Goodall of the C.S.I.R.O. in Midland, Western Australia. The volumes do not appear in sequence. This one, Volume 24, edited by Mathieson (University of New Hampshire, Durham, NH) and Nienhuis (Delta Institute for Hydrobiological Research, Yerseke, The Netherlands) is an outstanding contribution and should be a required purchase for any coastal institute, though the high price may keep it, regrettably, off the shelves of specialists.

Although the content is intended mainly for biologists, there is much of value for physical geographers, geomorphologists and indeed any coastal scientist. The volume is multi-authored, divided into 18 chapters, and carries no less than five indexes, so that as a future research tool it will be invaluable; these are: lists of genera, authors, systematics, geography, and subject. The first four chapters treat with general-type reviews: (1) Introduction (by the editors); (2) Marine Plant Ecosystems (Lüning and Asmus); (3) Chemical Characteristics (Schramm); (4) Vertical Distribution, Zones (Russell). The rest of the volume is devoted to regional topics, which, although global in principle, leave vast gaps: (5) Iceland, esp. algae (Munda); (6) Baltic (Wallentinus); (7) Canadian Maritimes and Maine, Rocky Shores (Mathieson, Penniman and Harris); (8) U.S. Mid-Atlantic, Sandy Shores (Orth, Heck and Diaz); (9) Caribbean and Tropical W. Atlantic (Dawes, McCoy, and Heck); (10) N.E. Pacific: Aleutians to Baja California (Foster, de Vagelaere, Oliver, Pearse, and Harrold); (11) Southern California: Rocky