



An Introduction to Hydraulics of Fine Sediment Transport 2nd Edition

By Ashish J. Mehta

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ABOUT THE BOOK

This book expounds the hydraulics of fine sediment which is almost ubiquitously found in coastal and estuarine waters, and in rivers, lakes, and reservoirs. Although the basic subject may be categorized as applied marine physics in shallow waters, several physicochemical and biological effects on particulate transport have been addressed.

In this second edition most of the chapters have been substantially updated, rewritten, and expanded. Overall, a significant change has also been made throughout by replacing sediment concentration, a unit dependent quantity at the heart of numerous descriptions, measurements, and calculations, with the nondimensional sediment volume fraction. It marks a divergence in the manner in which fine sediment transport data and calculations are conventionally presented.

The book is mainly written for civil engineering seniors and graduate students, to offer a comprehensive foundation in hydraulics of fine sediment. The book is also a useful reference for researchers interested in the effects of physical chemistry and biology on fine sediment transport in water and to an extent on coastal and estuarine morphodynamics, sediment transport, port and harbor engineering, and applied shallow watwer marine physics. The book is also recommended reading for those interested in understanding particle transport in water.

READERSHIP

Teachers, researchers, upper division undergraduates and graduate students in civil engineering, environmental engineering and coastal geology; Courses in sediment transport, port and harbor engineering, and applied shallow watwer marine physics. Recommended reading for those interested in understanding particle transport in water.

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ABOUT THE AUTHOR

Professor Ashish Mehta holds academic degrees in chemistry, chemical engineering, and civil engineering. He has over 50 years of experience in research and teaching in areas of coastal engineering, including coastal and estuarine hydraulics and sediment transport. His efforts led to the initiation in 1980 of the now biennial International Conference on Cohesive Sediment Transport (INTERCOH). He has extensive experience as a consultant for engineering and scientific problems in numerous countries in North and South America, Europe, Asia, and Australia. In 2000 he received the Hans Albert Einstein Award of the American Society of Civil Engineering for his work in fine sediment transport, which is the subject of his 2014 book *An Introduction to the Hydraulics of Fine Sediment Transport*. In 2020 the book was named as "one of the top civil/coastal engineering books of all time," by Book Authority, San Francisco.

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