

1. Record Nr.	UNINA9911004741103321
Autore	Constantin Adrian
Titolo	Nonlinear water waves with applications to wave-current interactions and tsunamis / / Adrian Constantin
Pubbl/distr/stampa	Philadelphia, Pa., : Society for Industrial and Applied Mathematics (SIAM, 3600 Market Street, Floor 6, Philadelphia, PA 19104), 2011
ISBN	1-61197-187-X
Descrizione fisica	1 online resource (xii, 321 p.) : ill. (some col.) ;
Collana	CBMS-NSF Regional conference series in applied mathematics ; ; 81
Disciplina	551.46/3
Soggetti	Nonlinear waves Nonlinear wave equations Tsunamis - Mathematical models
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- Chapter 1. Introduction -- Chapter 2. Preliminaries -- Chapter 3. Wave-current interactions -- Chapter 4. Fluid kinematics for wave trains -- Chapter 5. Solitary water waves -- Chapter 6. Breaking waves -- Chapter 7. Modeling tsunamis -- Bibliography -- Index.
Sommario/riassunto	This overview of some of the main results and recent developments in nonlinear water waves presents fundamental aspects of the field and discusses several important topics of current research interest. It contains selected information about water-wave motion for which advanced mathematical study can be pursued, enabling readers to derive conclusions that explain observed phenomena to the greatest extent possible. The author discusses the underlying physical factors of such waves and explores the physical relevance of the mathematical results that are presented. The material is an expanded version of the author's lectures delivered at the NSF-CBMS Regional Research Conference in the Mathematical Sciences organized by the Mathematics Department of the University of Texas-Pan American in 2010.