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Altri autori (Persone)	Escher, Joachimauthor Johnson, Robin Stanley Villari, Gabriele Constantin, Adrianauthor
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Nota di contenuto	Adrian Constantin: Exact travelling periodic water waves in two-dimensional irrotational flows ; Joachim Escher: Breaking Water Waves ; Robin Stanley Johnson: Asymptotic methods for weakly nonlinear and other water waves ; Gabriele Villari: A survival kit in phase plane analysis: some basic models and problems
Sommario/riassunto	This volume brings together four lecture courses on modern aspects of water waves. The intention, through the lectures, is to present quite a range of mathematical ideas, primarily to show what is possible and what, currently, is of particular interest. Water waves of large amplitude can only be fully understood in terms of nonlinear effects, linear theory being not adequate for their description. Taking advantage of insights from physical observation, experimental evidence and numerical simulations, classical and modern mathematical approaches can be used to gain insight into their dynamics. The book presents several avenues and offers a wide range of material of current interest. Due to the interdisciplinary nature of the subject, the book should be of

interest to mathematicians (pure and applied), physicists and engineers. The lectures provide a useful source for those who want to begin to investigate how mathematics can be used to improve our understanding of water wave phenomena. In addition, some of the material can be used by those who are already familiar with one branch of the study of water waves, to learn more about other areas. The lectures cover background material as well as aspects that represent the state-of-the-art. We therefore commend this collection of lectures to both the novice and the expert