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Nota di contenuto	Chapter 1. Physical derivation of integrable nonlinear wave equations -- Chapter 2. Rogue waves in integrable systems -- Chapter 3. Rogue wave patterns -- Chapter 4. Experiments on rogue waves -- Chapter 5. Related topics.
Sommario/riassunto	This book offers a holistic picture of rogue waves in integrable systems. Rogue waves are a rare but extreme phenomenon that occur most famously in water, but also in other diverse contexts such as plasmas, optical fibers and Bose-Einstein condensates where, despite the seemingly disparate settings, a common theoretical basis exists. This book presents the physical derivations of the underlying integrable nonlinear partial differential equations, derives the explicit and

compact rogue wave solutions in these integrable systems, and analyzes rogue wave patterns that arise in these solutions, for many integrable systems and in multiple physical contexts. Striking a balance between theory and experiment, the book also surveys recent experimental insights into rogue waves in water, optical fibers, plasma, and Bose-Einstein condensates. In taking integrable nonlinear wave systems as a starting point, this book will be of interest to a broad cross section of researchers and graduate students in physics and applied mathematics who encounter nonlinear waves.