

<<非线性孤立子和混沌>>

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### 内容概要

This revised and updated second edition of a highly successful book is the only text at this level to embrace a universal approach to three major developments in classical physics; namely nonlinear waves, solitons and chaos. The authors now include new material on biology and laser theory, and go on to discuss important recent developments such as soliton metamorphosis. . A comprehensive treatment of basic plasma and fluid configurations and instabilities is followed by a study of the relevant nonlinear structures. Examples of these are coherent entities like nonlinear waves and solitons, as well as the incoherent structures associated with chaos. The first part of the book is a self-contained introduction to general topics associated with nonlinear graduate physics, and would be accessible to final-year undergraduates and beginning graduate students. The remainder of the book, for example the treatment of cylindrical solitons, is more advanced and will have a wide appeal to specialists in a number of branches of physics. Each chapter concludes with a set of problems. .. This text will be particularly valuable for students taking courses in nonlinear aspects of physics. In general, it will be of value to final-year undergraduates and beginning graduate students studying fluid dynamics, plasma physics or applied mathematics.

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