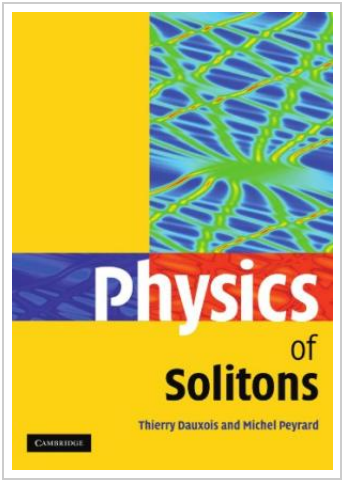

Physics of Solitons (Paperback)

By Thierry Dauxois, Michel Peyrard

CAMBRIDGE UNIVERSITY PRESS, United Kingdom, 2010. Paperback. Condition: New. Language: English . Brand New Book ***** Print on Demand *****.Solitons are waves with exceptional stability properties which appear in many areas of physics. The basic properties of solitons are introduced here using examples from macroscopic physics (e.g. blood pressure pulses and fibre optical communications). The book then presents the main theoretical methods before discussing applications from solid state or atomic physics such as dislocations, excitations in spin chains, conducting polymers, ferroelectrics and Bose-Einstein condensates. Examples are also taken from biological physics and include energy transfer in proteins and DNA fluctuations. Throughout the book the authors emphasise a fresh approach to modelling nonlinearities in physics. Instead of a perturbative approach, nonlinearities are treated intrinsically and the analysis based on the soliton equations introduced in this book. Based on the authors graduate course, this textbook gives an instructive view of the physics of solitons for students with a basic knowledge of general physics, and classical and quantum mechanics.

Reviews

It is really an remarkable ebook that we actually have ever read through. I actually have study and i also am confident that i am going to gonna study once more yet again in the foreseeable future. It is extremely difficult to leave it before concluding, once you begin to read the book.

-- ***Ewell Rempel***

Great eBook and useful one. it was actually writtern really completely and useful. You are going to like the way the article writer publish this publication.

-- ***Prof. Ernestine Emard***