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<<非线性物理入门NONLINEAR PHY>>

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内容概要

Almost all real systems are nonlinear. For a nonlinear system the superposition principle breaks down.The system's response is not proportional to the stimulus it receives; the whole is more than the sum of its parts. This book contains the basics of nonlinear science, with applications in physics. It is divided into three parts. Part I contains an overview of fractaLs, chaos, solitons, pattern formation,ceLLular automata and complex systems. Part II includes reprints of 15 review papers and essays written by pioneers and 11 research articles. Part III is a collection of 17 student projects, includingcomputer algorithms for simulation models. The book can be used for seLf-study, as a textbook for a one-semester course, or as a supplement to other courses in linear and nonlinear systems. The reader is required to have some knowledge of introductory college physics, but computer Literacy and mathematical knowledge beyond caLcuLus are not necessary.作者简介： Lui Lam obtained his BSc (with First Class Honors) from the University of Hong Kong and his MSc from the University of British Columbia. He went on to do his thesis at Bell Laboratories and received his PhD from CoLumbia University. He is currently a professor at San Jose State University. Professor Lam is the originator of active walks, bowlic liquid crystals, the book series Partially Ordered Systems,and the international Liquid Crvstal Society. He is aLso-noted for his contributions to Compton profiles,the.dissipation function formulation of hydrodynamics and ifreversibLe thermodynamics of complex materials, and so,irons in liquid crystals.

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