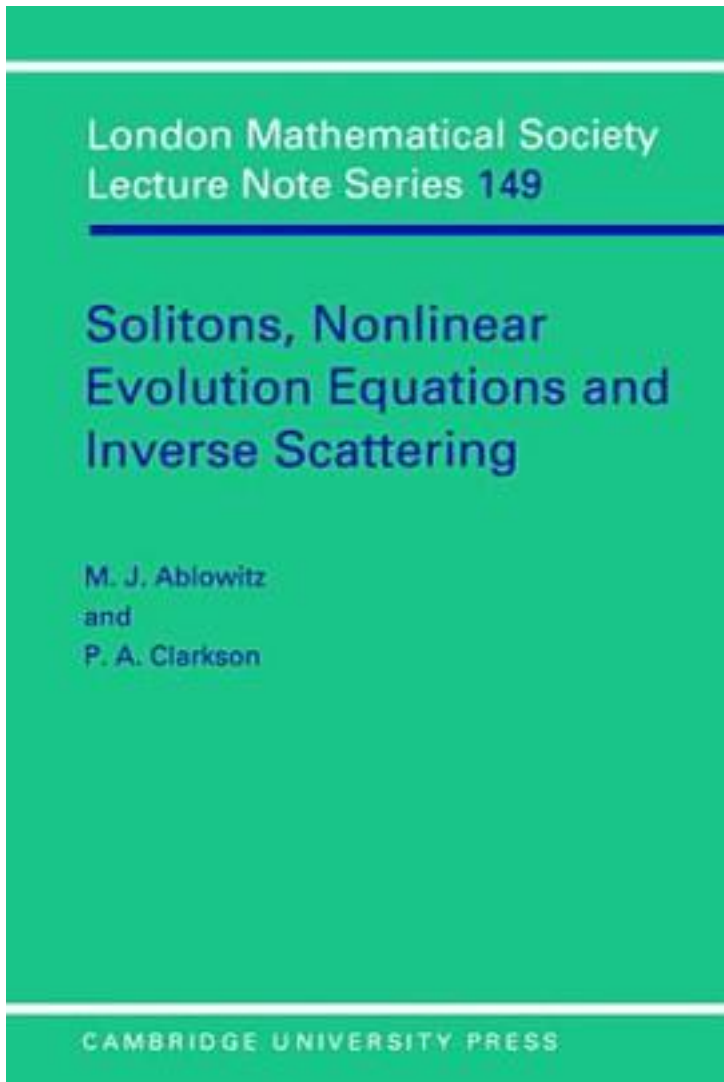


Solitons, Nonlinear Evolution Equations and Inverse Scattering



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Solitons have been of considerable interest to mathematicians since their discovery by Kruskal and Zabusky. This book brings together several aspects of soliton theory currently only available in research papers. Emphasis is given to the multi-dimensional problems arising and includes inverse scattering in multi-dimensions, integrable nonlinear evolution equations in multi-dimensions and the method. Thus, this book will be a valuable addition to the growing literature in the area and essential reading for all researchers in the field of soliton theory.

作者介绍:

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标签

数学

soliton

评论

杨米尔斯方程是最本质的结构对象：可积系统---杨米尔斯---黎曼希尔伯特问题-Painlevé 方程--逆散射问题--随机矩阵-量子群，逆散射方法类比于傅里叶变换；KdV 方程-在1 + 1維(一維空間, 一維時間) 孤立子,Sine-Gordon 方程且其解 牽涉到稱為扭結(kinks) 和反扭結(anti kinks) 的東西, 當兩個扭結孤立波碰撞時會互相排斥, 兩個反扭結碰撞時亦然; 但是一個扭結和一個反扭結則彼此吸引, 這情形就好像是電荷相反的基本粒子一般, Gauss' hypergeometric function---椭圆函数--黎曼希尔伯特问题

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