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Nota di contenuto	Preface; CONTENTS; Soliton Excitations and Periodic Waves without Dispersion Relation in $(2 + 1)$ -Dimensional Dispersive Long Wave Equation; 1. Introduction; 2. Extended Painleve Expansions; 3. Periodic Solutions of the DLWE; 4. Summary and Discussions; References; Global Bifurcation from the Eigenvalues of Some Semilinear Biharmonic Equations; 1. Introduction; 2. The Linearized Problem; 3. Global Bifurcation Results for the Biharmonic Operator; References; The Multisoliton Solutions of the KP Equation with Self-consistent Sources; 1. Introduction 2. The KP Equation with Self-consistent Sources3. Hirota Form's Solution; 4. Wronskian Form's Solution; References; A Direct Extension of Lie Algebra $A_{n-1}$ ; 1. Introduction; 2. Hierarchy of Evolution Equations Associated with Lie Algebra $gl(2, C)$ ; References; On Gauge-gravity Correspondence and Open-closed String Duality; 1. Introduction; 2. Large N and Strings; 3. Gauge-Gravity Correspondence for Less Supersymmetries; 4. Confinement; References; Integrable Semi-discretizations of the AKNS Equation and the Hirota-Satsuma Equation; 1. Introduction 2. Integrable Semi-discretization of the AKNS Equation4. An Integrable Differential-Difference Equation for (5); 5. Another Integrable

Differential-Difference Equation for (5); 6. Conclusion and Discussion; References; Differential Equations and Conformal Field Theories; 1. Introduction; 2. Conformal Field Theories; 3. Differential Equations and Chiral Genus-Zero Correlation Functions; 4. Differential Equations and Chiral Genus-One Correlation Functions; References; Lie Symmetries for Lattice Equations; 1. Introduction; References

Multi-scale Reduction for Differential Difference Equations and Integrability 1. Introduction; 2. Multiscale reduction for PDE; 3. Multiscale reduction for DDE; 4. Study of the NDNLS; 5. Conclusions; References; p-Harmonic Maps with Applications; 1. Introduction; 2. Existence Theory; 3. Uniqueness; 4. Regularity; 5. Solutions to Dirichlet Problem; 6. n-Energy Identities; 7. Representing Homotopy Classes by p-Harmonic Maps; 8. A Bernstein-type Theorem; 9. Isoperimetric Inequalities and Sphere Theorems; References

The Infinitely Many Conservation Laws of the Lax Integrable Differential-difference Systems 1. Introduction; 2. The CLs for the (1+1)-Dimensional Differential- Difference Systems; 3. The CLs for the High Dimensional Differential- Difference Systems; 4. Conclusions; References; Quivers and Hopf Algebras; 1. Path Algebras and Path Coalgebras; 2. Cotensor Product Coalgebras; 3. Hopf Bimodules over Group Algebras; 4. Hopf Quivers; 5. Hopf Structures on Path Coalgebras; References; Theory of Bidirectional Solitons on Water; 1. Introduction

2. The Algebraic Properties of the Model Equation (3) and its Related Equivalent Equations

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Sommario/riassunto

This book contains the papers presented at the ICM2002 Satellite Conference on Nonlinear Evolution Equations and Dynamical Systems. About 50 mathematicians and scientists attended the meeting - including E Witten (IAS), C Nappi (Princeton), K Khanin (Cambridge), D Phong (Columbia), d'Hoker (UCLA) and Peng Chiakuei (CAS). The book covers several fields, such as nonlinear evolution equations and integrable systems, infinite-dimensional algebra, conformal field theory and geometry. The proceedings have been selected for coverage in: Index to Scientific & Technical Proceedings (ISTP CDROM versi

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