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| Titolo | Supersymmetry and Integrable Models [[electronic resource]] : Proceedings of a Workshop Held at Chicago, IL, USA, 12–14 June 1997 / / edited by Henrik Aratyn, Tom D. Imbo, Wai-Yee Keung, Uday Sukhatme |
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| Disciplina | 539.7/25 |
| Soggetti | Quantum field theory String models Physics Quantum Field Theories, String Theory Mathematical Methods in Physics |
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| Nota di contenuto | Constrained KP hierarchy as a ratio of differential operators -- Infinite dimensional symmetries in massive integrable models -- On the Whittaker equations and $(X, ?)$ duality -- Poisson brackets for densities of functionals -- Hamiltonian dynamics, classical R-matrices and isomonodromic deformations -- Integrable systems with singular rational spectral varieties -- Lectures on the asymptotic expansion of a Hermitian matrix integral -- Solitons and generalized tau-functions for affine integrable hierarchies -- Constrained and rational reductions of the KP hierarchy -- Matrix membranes and integrability -- Vertex operators and solitons of constrained KP hierarchies -- Zero curvature formalism in superspace -- N=2 KdV hierarchies and classical r-matrix -- Reduction of self-dual Yang-Mills systems and super nonlinear Schrödinger equations -- Darboux transformations for SUSY integrable systems -- Susy hierarchies and affine Lie algebras -- A semiclassical approach to level crossing in supersymmetric quantum mechanics -- One-dimensional disordered supersymmetric quantum mechanics: A brief survey -- Zero modes and self-isospectral potentials in periodic |

supersymmetric quantum mechanics -- Shape invariance and its connection to potential algebra -- Supersymmetry in quantum mechanical models: a quantum hamilton-jacobi approach -- Quantum-mechanical supersymmetry in traps -- Cyclic shape invariant potentials.

Sommario/riassunto

This book combines supersymmetry modelling in quantum mechanics and integrable models in a unique way. It addresses researchers as well as graduate students. Along with articles that present new technical results, the reader will also find pedagogically written reviews. Recent applications of supersymmetric integrable models are also given.
