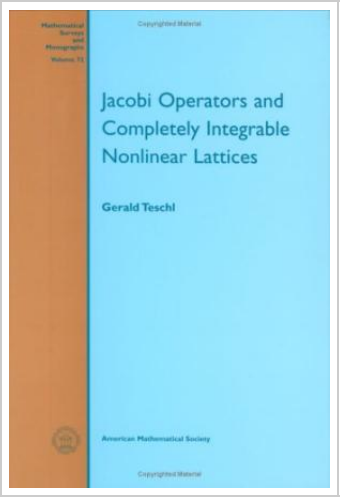




# Jacobi Operators and Completely Integrable Nonlinear Lattices (Hardback)

By Gerald Teschl

American Mathematical Society, United States, 1999. Hardback. Condition: New. Language: English . Brand New Book. This volume can serve as an introduction and a reference source on spectral and inverse spectral theory of Jacobi operators (i.e., second order symmetric difference operators) and applications of those theories to the Toda and Kac-van Moerbeke hierarchy. Beginning with second order difference equations, the author develops discrete Weyl-Titchmarsh-Kodaira theory, covering all classical aspects, such as Weyl $m$-functions, spectral functions, the moment problem, inverse spectral theory, and uniqueness results.Teschl then investigates more advanced topics, such as locating the essential, absolutely continuous, and discrete spectrum, subordinacy, oscillation theory, trace formulas, random operators, almost periodic operators, (quasi-)periodic operators, scattering theory, and spectral deformations. Utilizing the Lax approach, he introduces the Toda hierarchy and its modified counterpart, the Kac-van Moerbeke hierarchy. Uniqueness and existence theorems for solutions, expressions for solutions in terms of Riemann theta functions, the inverse scattering transform, Backlund transformations, and soliton solutions are derived. This text covers all basic topics of Jacobi operators and includes recent advances. It is suitable for use as a text at the advanced graduate level.



### *Reviews*

*Very beneficial for all type of folks. It can be rally intriguing throgh studying time. You will like how the writer publish this ebook.*
-- ***Nathan Cruickshank***

*Totally one of the better pdf I have at any time read through. It really is simplified but shocks within the 50 % from the ebook. Once you begin to read the book, it is extremely difficult to leave it before concluding.*
-- ***Mariano Spinka***