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| Sommario/riassunto | "Difference equations are playing an increasingly important role in the natural sciences. Indeed many phenomena are inherently discrete and are naturally described by difference equations. Phenomena described by differential equations are therefore approximations of more basic discrete ones. Moreover, in their study it is very often necessary to resort to numerical methods. This always involves a discretization of |

the differential equations involved, thus replacing them by difference equations. This book shows how Lie group and integrability techniques, originally developed for differential equations, have been adapted to the case of difference ones. Each of the eleven chapters is a self-contained treatment of a topic, containing introductory material as well as the latest research results. The book will be welcomed by graduate students and researchers seeking an introduction to the field. As a survey of the current state of the art it will also serve as a valuable reference"
