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Sommario/riassunto	Considering that the motion of strings with finitely many masses on them is described by difference equations, this book presents the spectral theory of such problems on finite graphs of strings. The direct problem of finding the eigenvalues as well as the inverse problem of finding strings with a prescribed spectrum are considered. This monograph gives a comprehensive and self-contained account on the subject, thereby also generalizing known results. The interplay between the representation of rational functions and their zeros and poles is at the center of the methods used. The book also unravels connections between finite dimensional and infinite dimensional spectral problems on graphs, and between self-adjoint and non-self-adjoint finite-dimensional problems. This book is addressed to researchers in spectral theory of differential and difference equations as well as physicists and engineers who may apply the presented results and methods to their research. .