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Sommario/riassunto	The topic of this book is located at the intersection of complex analysis, operator theory and partial differential equations. It begins with results on the canonical solution operator to restricted to Bergman spaces of holomorphic d-bar functions in one and several complex variables. These operators are Hankel operators of special type. In the following the general complex is investigated on d-bar spaces over bounded pseudoconvex domains and on weighted d-bar spaces. The main part is devoted to the spectral analysis of the complex Laplacian and to compactness of the Neumann operator. The last part contains a detailed account of the application of the methods to Schrödinger operators, Pauli and Dirac operators and to Witten-

Laplacians. It is assumed that the reader has a basic knowledge of complex analysis, functional analysis and topology. With minimal prerequisites required, this book provides a systematic introduction to an active area of research for both students at a bachelor level and mathematicians.