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Titolo	Linear Functional Analysis for Scientists and Engineers / / by Balmohan V. Limaye
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Descrizione fisica	1 online resource (XIV, 254 p. 15 illus.)
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Soggetti	Functional analysis Functions of real variables Functional Analysis Real Functions
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1. Preliminaries -- Chapter 2. Basic Framework -- Chapter 3. Bounded Linear Maps -- Chapter 4. Dual Spaces, Transposes and Adjoints -- Chapter 5. Spectral Theory.
Sommario/riassunto	This book provides a concise and meticulous introduction to functional analysis. Since the topic draws heavily on the interplay between the algebraic structure of a linear space and the distance structure of a metric space, functional analysis is increasingly gaining the attention of not only mathematicians but also scientists and engineers. The purpose of the text is to present the basic aspects of functional analysis to this varied audience, keeping in mind the considerations of applicability. A novelty of this book is the inclusion of a result by Zabreiko, which states that every countably subadditive seminorm on a Banach space is continuous. Several major theorems in functional analysis are easy consequences of this result. The entire book can be used as a textbook for an introductory course in functional analysis without having to make any specific selection from the topics presented here. Basic notions in the setting of a metric space are defined in terms of sequences. These include total boundedness, compactness, continuity and uniform continuity. Offering concise and to-the-point treatment of each topic in the framework of a normed space and of an inner product

space, the book represents a valuable resource for advanced undergraduate students in mathematics, and will also appeal to graduate students and faculty in the natural sciences and engineering. The book is accessible to anyone who is familiar with linear algebra and real analysis.

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