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	Autore	Li Yinqin
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	Nota di contenuto	1 Generalized Herz Spaces of Rafeiro and Samko -- 2 Block Spaces and Their Applications -- 3 Boundedness and Compactness Characterizations of Commutators on Generalized Herz Spaces -- 4 Generalized Herz–Hardy Spaces -- 5 Localized Generalized Herz–Hardy Spaces -- 6 Weak Generalized Herz–Hardy Spaces -- 7 Inhomogeneous Generalized Herz Spaces and Inhomogeneous Block Spaces -- 8 Hardy Spaces Associated with Inhomogeneous Generalized Herz Spaces.

The real-variable theory of function spaces has always been at the core of harmonic analysis. In particular, the real-variable theory of the Hardy space is a fundamental tool of harmonic analysis, with applications and connections to complex analysis, partial differential equations, and functional analysis. This book is devoted to exploring properties of generalized Herz spaces and establishing a complete real-variable theory of Hardy spaces associated with local and global generalized Herz spaces via a totally fresh perspective. This means that the authors view these generalized Herz spaces as special cases of ball quasi-Banach function spaces. In this book, the authors first give some basic properties of generalized Herz spaces and obtain the boundedness and the compactness characterizations of commutators on them. Then the authors introduce the associated Herz–Hardy spaces, localized Herz–Hardy spaces, and weak Herz–Hardy spaces, and develop a complete real-variable theory of these Herz–Hardy spaces, including their various maximal function, atomic, molecular as well as various Littlewood–Paley function characterizations. As applications, the authors establish the boundedness of some important operators arising from harmonic analysis on these Herz–Hardy spaces. Finally, the inhomogeneous Herz–Hardy spaces and their complete real-variable theory are also investigated. With the fresh perspective and the improved conclusions on the real-variable theory of Hardy spaces associated with ball quasi-Banach function spaces, all the obtained results of this book are new and their related exponents are sharp. This book will be appealing to researchers and graduate students who are interested in function spaces and their applications.
