1. Record Nr.   UNINA9910672436503321

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   Titolo   Real-Variable Theory of Hardy Spaces Associated with Generalized Herz
                      Spaces of Rafeiro and Samko / / Yinqin Li, Dachun Yang, and Long
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   Pubbl/distr/stampa Singapore : , : Springer Nature Singapore Pte Ltd., , [2022]
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   ISBN   981-19-6788-1

   Edizione   [1st ed. 2022.]

   Descrizione fisica 1 online resource (663 pages)

   Collana   Lecture Notes in Mathematics Series ; ; Volume 2320

   Disciplina   515.2433

   Soggetti   Fourier analysis
                      Espais de Hardy
                      Anàlisi de Fourier
                      Llibres electrònics

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Nota di bibliografia   Includes bibliographical references and index.

   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.

   Sommario/riassunto 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.