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Soggetti	Hardy spaces Maximal functions Littlewood-Paley theory Singular integrals Harmonic analysis on Euclidean spaces -- Harmonic analysis in several variables -- H^p -spaces Harmonic analysis on Euclidean spaces -- Harmonic analysis in several variables -- Maximal functions, Littlewood-Paley theory Harmonic analysis on Euclidean spaces -- Harmonic analysis in several variables -- Singular and oscillatory integrals (Calderon-Zygmund, etc.)
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Nota di contenuto	Cover -- Title page -- Acknowledgement -- Notation -- Chapter 1. Introduction and Statement of Main Results, Applications -- 1.1. Background and Main Results -- 1.2. Statement of Main Results -- 1.3. Strategy of Proofs of the Main Results -- 1.4. Applications and Related Open Questions -- Chapter 2. Flag Littlewood-Paley Estimate: $ _{\{ \} ()}$, $ _{\{ \} ()}$ and $ _{\{ \} ()}$ -- 2.1. Discrete Calderón Reproducing Formula -- 2.2. Flag Plancherel-Pólya Type Inequalities -- 2.3. The Equivalence of $ _{\{ \} ()}$ and $ _{\{ \} ()}$ -- 2.4. The Estimate $ _{\{ \} ()} _{\{ \} ()}$ -- Chapter 3. Estimates of Area Functions, Maximal Functions and Riesz Transforms via Flag Poisson Integral Technique -- 3.1. The Estimate $ _{\{ \} ()}$

{}()|| *| -- 3.2. The Estimate | *|| | -- 3.3. The Estimate |
 |^{ + }_{-} { =1 }^{ } { }| _{ , } { } ()| + | | -- Chapter 4. Flag Maximal
 Functions: from Poisson Kernel to General Schwartz Kernels -- 4.1. The
 Equivalence | *|| *()| -- 4.2. The Equivalence | || ()| --
 Chapter 5. Atomic Decompositions of Flag Hardy Spaces -- 5.1. Heat
 Kernel and Finite Speed Propagation -- 5.2. Atomic Decomposition for
 $1_{-} \{ \} (x^{ } \{ \})$. -- 5.3. Proof of the Atomic Decomposition -- Chapter
 6. Estimates of Riesz Transforms and Area Function via Atomic
 Decomposition -- Bibliography -- Back Cover.

Sommario/riassunto

"In this monograph, we develop via real variable methods various
 characterisations of the Hardy spaces in the multi-parameter flag
 setting. These characterisations include those via, the non-tangential
 and radial maximal function, the Littlewood- Paley square function and
 area integral, Riesz transforms and the atomic decomposition in the
 multi-parameter flag setting. The novel ingredients in this paper
 include (1) establishing appropriate discrete Calderon reproducing
 formulae in the flag setting and a version of the Plancherel-Polya
 inequalities for flag quadratic forms; (2) introducing the maximal
 function and area function via flag Poisson kernels and flag version of
 harmonic functions; (3) developing an atomic decomposition via the
 finite speed propagation and area function in terms of flag heat
 semigroups. As a consequence of these real variable methods, we
 obtain the full characterisations of the multi-parameter Hardy space
 with the flag structure"--