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Descrizione fisica	1 online resource (491 p.)
Collana	Applied and numerical harmonic analysis
Altri autori (Persone)	CasazzaPeter G KutyniokGitta
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Soggetti	Frames (Vector analysis)
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Constructing Finite Frames with a Given Spectrum.-Spanning and Independence Properties of Finite.-Alegebraic Geometry and Finite Frames -- Group Frames -- Gabor Framses in Finite Dimensions -- Frames as Codes -- Quantization and Finite Frames -- Finite Frames for Sparse Signal Processing -- Finite Frames and Filter Banks -- Finite Frame theory in Pure Mathematics -- Probabilitstic Frames -- Fusion Frames.
Sommario/riassunto	Hilbert space frames have long served as a valuable tool for signal and image processing due to their resilience to additive noise, quantization, and erasures, as well as their ability to capture valuable signal characteristics. More recently, finite frame theory has grown into an important research topic in its own right, with a myriad of applications to pure and applied mathematics, engineering, computer science, and other areas. The number of research publications, conferences, and workshops on this topic has increased dramatically over the past few years, but no survey paper or monograph has yet appeared on the subject. Edited by two of the leading experts in the field, Finite Frames aims to fill this void in the literature by providing a comprehensive, systematic study of finite frame theory and applications. With carefully selected contributions written by highly experienced researchers, it

covers topics including: * Finite Frame Constructions; * Optimal Erasure Resilient Frames; * Quantization of Finite Frames; * Finite Frames and Compressed Sensing; * Group and Gabor Frames; * Fusion Frames. Despite the variety of its chapters' source and content, the book's notation and terminology are unified throughout and provide a definitive picture of the current state of frame theory. With a broad range of applications and a clear, full presentation, this book is a highly valuable resource for graduate students and researchers across disciplines such as applied harmonic analysis, electrical engineering, quantum computing, medicine, and more. It is designed to be used as a supplemental textbook, self-study guide, or reference book.