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Titolo	Representations, wavelets, and frames [[electronic resource]] : a celebration of the mathematical work of Lawrence W. Baggett // Palle E.T. Jorgensen, Kathy D. Merrill, Judith A. Packer, editors
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Edizione	[1st ed. 2008.]
Descrizione fisica	1 online resource (351 p.)
Collana	Applied and numerical harmonic analysis
Altri autori (Persone)	JørgensenPalle E. T. <1947-> MerrillKathy Donovan PackerJudith A BaggettLawrence W. <1939->
Disciplina	515.2433
Soggetti	Wavelets (Mathematics) Frames (Combinatorial analysis) Representations of Banach modules Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Classical and Abstract Harmonic Analysis -- Some Riemann Sums Are Better Than Others -- Gelfand Pairs Associated with Finite Heisenberg Groups -- Groups with Atomic Regular Representation -- Wavelet Transforms and Admissible Group Representations -- Frames and Multiresolution Structures -- The Density Theorem and the Homogeneous Approximation Property for Gabor Frames -- Recent Developments on Dual Wavelet Frames -- Characteristic Wavelet Equations and Generalizations of the Spectral Function -- Baggett's Problem for Frame Wavelets -- Wavelet Sets -- Simple Wavelet Sets for Scalar Dilations in \mathbb{R}^2 -- Interpolation Maps and Congruence Domains for Wavelet Sets -- Applications to Dynamical Systems and C^* -Algebras -- Orthogonal Exponentials for Bernoulli Iterated Function Systems -- A Survey of Projective Multiresolution Analyses and a Projective Multiresolution Analysis Corresponding to the Quincunx Lattice --

Signal and Image Processing -- Sampling and Time-Frequency
Localization of Band-Limited and Multiband Signals -- Entropy
Encoding in Wavelet Image Compression.

Sommario/riassunto

Motivated by applications, an underlying theme in analysis is that of finding bases and understanding the transforms that implement them. These may be based on Fourier techniques or involve wavelet tools; they may be orthogonal or have redundancies (e.g., frames from signal analysis). Representations, Wavelets, and Frames contains chapters pertaining to this theme from experts and expositors of renown in mathematical analysis and representation theory. Topics are selected with an emphasis on fundamental and timeless techniques with a geometric and spectral-theoretic flavor. The material is self-contained and presented in a pedagogical style that is accessible to students from both pure and applied mathematics while also of interest to engineers. The book is organized into five sections that move from the theoretical underpinnings of the subject, through geometric connections to tilings, lattices and fractals, and concludes with analyses of computational schemes used in communications engineering. Within each section, individual chapters present new research, provide relevant background material, and point to new trends and open questions. Contributors: C. Benson, M. Bownik, V. Furst, V.W. Guillemin, B. Han, C. Heil, J.A. Hogan, P.E.T. Jorgensen, K. Kornelson, J.D. Lakey, D.R. Larson, K.D. Merrill, J.A. Packer, G. Ratcliff, K. Shuman, M.-S. Song, D.W. Stroock, K.F. Taylor, E. Weber, X. Zhang.
