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Titolo	Framelets and Wavelets : Algorithms, Analysis, and Applications / / by Bin Han
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Descrizione fisica	1 online resource (XXXIII, 724 p. 73 illus.)
Collana	Applied and Numerical Harmonic Analysis, , 2296-5009
Disciplina	515.2433
Soggetti	Approximation theory Fourier analysis Applied mathematics Engineering mathematics Optical data processing Computer-aided engineering Approximations and Expansions Fourier Analysis Applications of Mathematics Image Processing and Computer Vision Computer-Aided Engineering (CAD, CAE) and Design
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Marking a distinct departure from the perspectives of frame theory and discrete transforms, this book provides a comprehensive mathematical and algorithmic introduction to wavelet theory. As such, it can be used as either a textbook or reference guide. As a textbook for graduate mathematics students and beginning researchers, it offers detailed information on the basic theory of framelets and wavelets, complemented by self-contained elementary proofs, illustrative examples/figures, and supplementary exercises. Further, as an advanced reference guide for experienced researchers and practitioners in mathematics, physics, and engineering, the book addresses in detail

a wide range of basic and advanced topics (such as multiwavelets/multiframelets in Sobolev spaces and directional framelets) in wavelet theory, together with systematic mathematical analysis, concrete algorithms, and recent developments in and applications of framelets and wavelets. Lastly, the book can also be used to teach on or study selected special topics in approximation theory, Fourier analysis, applied harmonic analysis, functional analysis, and wavelet-based signal/image processing.
