

1. Record Nr.	UNINA9910254303703321
Autore	Debnath Lokenath
Titolo	Lecture Notes on Wavelet Transforms // by Lokenath Debnath, Firdous A. Shah
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2017
ISBN	3-319-59433-8
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XII, 220 p. 32 illus., 3 illus. in color.)
Collana	Compact Textbooks in Mathematics, , 2296-4568
Disciplina	515.2433
Soggetti	Harmonic analysis Functional analysis Fourier analysis Signal processing Image processing Speech processing systems Abstract Harmonic Analysis Functional Analysis Fourier Analysis Signal, Image and Speech Processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	The Fourier Transform -- The Time-Frequency Analysis -- The Wavelet Transforms -- Construction of Wavelets via MRA -- Elongations of MRA Based Wavelets. .
Sommario/riassunto	This book provides a systematic exposition of the basic ideas and results of wavelet analysis suitable for mathematicians, scientists, and engineers alike. The primary goal of this text is to show how different types of wavelets can be constructed, illustrate why they are such powerful tools in mathematical analysis, and demonstrate their use in applications. It also develops the required analytical knowledge and skills on the part of the reader, rather than focus on the importance of more abstract formulation with full mathematical rigor. These notes differs from many textbooks with similar titles in that a major emphasis is placed on the thorough development of the underlying theory before

introducing applications and modern topics such as fractional Fourier transforms, windowed canonical transforms, fractional wavelet transforms, fast wavelet transforms, spline wavelets, Daubechies wavelets, harmonic wavelets and non-uniform wavelets. The selection, arrangement, and presentation of the material in these lecture notes have carefully been made based on the authors' teaching, research and professional experience. Drafts of these lecture notes have been used successfully by the authors in their own courses on wavelet transforms and their applications at the University of Texas Pan-American and the University of Kashmir in India. .
