1.	Record Nr.	UNINA9910350247503321
	Autore	Farkov Yu. A
	Titolo	Construction of Wavelets Through Walsh Functions / / by Yu. A. Farkov, Pammy Manchanda, Abul Hasan Siddiqi
	Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
	ISBN	981-13-6370-6
	Edizione	[1st ed. 2019.]
	Descrizione fisica	1 online resource (XXII, 382 p. 7 illus.)
	Collana	Industrial and Applied Mathematics, , 2364-6837
	Disciplina	515
	Soggetti	Mathematical analysis Analysis (Mathematics) Analysis
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	Chapter 1. Introduction to Walsh Analysis and Wavelets -- Chapter 2. Walsh-Fourier Series -- Chapter 3. Haar–Fourier Analysis -- Chapter 4. Construction of Dyadic Wavelets through Walsh Functions -- Chapter 5. Orthogonal And Periodic Wavelets On Vilenkin Groups -- Chapter 6. Haar-Vilenkin Wavelet -- Chapter 7. Construction Biorthogonal Wavelets and Frames -- Chapter 8. Wavelets associated with Nonuniform Multiresolution analysis on positive half line -- Chapter 9. Orthogonal Vector Valued Wavelets on R+ -- Appendices.
	Sommario/riassunto	This book focuses on the fusion of wavelets and Walsh analysis, which involves non-trigonometric function series (or Walsh–Fourier series). The primary objective of the book is to systematically present the basic properties of non-trigonometric orthonormal systems such as the Haar system, Haar–Vilenkin system, Walsh system, wavelet system and frame system, as well as updated results on the book's main theme. Based on lectures that the authors presented at several international conferences, the notions and concepts introduced in this interdisciplinary book can be applied to any situation where wavelets and their variants are used. Most of the applications of wavelet analysis and Walsh analysis can be tried for newly constructed wavelets. Given its breadth of coverage, the book offers a valuable resource for theoreticians and those applying mathematics in diverse areas. It is

especially intended for graduate students of mathematics and engineering and researchers interested in applied analysis.