1. Record Nr. UNINA9910337648703321

Autore Averbuch Amir Z

Titolo Spline and Spline Wavelet Methods with Applications to Signal and Image Processing : Volume III: Selected Topics / / by Amir Z. Averbuch, Pekka Neittaanmäki, Valery A. Zheludev

Pubbl/distr/stampa Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019

ISBN 3-319-92123-1

Edizione [1st ed. 2019.]

Descrizione fisica 1 online resource (xxiv, 287 pages)

Disciplina 511.42

Soggetti Signal processing
Image processing
Speech processing systems
Optical data processing
Engineering design
Algorithms
Signal, Image and Speech Processing
Computer Imaging, Vision, Pattern Recognition and Graphics
Engineering Design

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Nota di bibliografia Includes bibliographical references and index.

Nota di contenuto Chapter 1. Introduction: Periodic Signals and Filters -- Chapter 2. Periodic Polynomial Splines -- Chapter 3. Periodic Discrete and Discrete-time Splines -- Chapter 4. Periodic Orthogonal Wavelets and Wavelet Packets -- Chapter 5. Two-dimensional Orthogonal Wavelets and Wavelet Packets -- Chapter 6. Local Splines on Non-uniform Grid -- Chapter 7. Spline-based Wavelet Transforms -- Chapter 8. Biorthogonal Wavelet Transforms Originating from Discrete and Discrete-time Splines -- Chapter 9. Wavelet Frames Generated by Spline-based p-lter Banks -- Chapter 10. Snapshot Spectral Imaging -- Chapter 11. Delineation of Malignant Skin Tumors by Hyperspectral Imaging -- Chapter 12. Acoustic Detection of Moving Vehicles -- Chapter 13. Detection of Incipient Bearing Fault in a Slowly Rotating Machine Using Spline Wavelet Packets.

Sommario/riassunto   This book provides a practical guide, complete with accompanying Matlab software, to many different types of polynomial and discrete splines and spline-based wavelets, multiwavelets and wavelet frames in signal and image processing applications. In self-contained form, it briefly outlines a broad range of polynomial and discrete splines with equidistant nodes and their signal-processing-relevant properties. In particular, interpolating, smoothing, and shift-orthogonal splines are presented. .