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Autore	Chang Chein-I
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Soggetti	Signal processing Image processing Speech processing systems Optical data processing Pattern recognition Biometrics (Biology) Signal, Image and Speech Processing Image Processing and Computer Vision Pattern Recognition Biometrics
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Overview and Introduction -- PART I: Fundamentals -- Simplex Volume Calculation -- Discrete Time Kalman Filtering in Hyperspectral Data Procoessing -- Target-Specified Virtual Dimesnionality -- PART II: Sample Spectral Statistics-Based Recursive Hyperspectral Sample Procoessing -- Real Time Recursive Hyperspectral Sample Processing of Constrained Energy Minimization -- Real Time Recursive Hyperspectral Sample Processing of Anomaly Detection -- PART III: Signature Spectral Statistics-Based Recursive Hyperspectral Sample Procoessing -- Recursive Hyperspectral Sample Processing of Automatic Target Generation Process -- Recursive Hyperspectral Sample Processing of Orthogonal Subspace Projection -- Recursive Hyperspectral Sample Processing of Linear Spectral Mixture Analysis -- Recursive Hyperspectral Sample Processing of Maximimal Likelihood Estimation

-- Recursive Hyperspectral Sample Processing of Orthogonal Projection-Based Simplex Growing Algorithm -- Recursive Hyperspectral Sample Processing of Geometric Simplex Growing Simplex Algorithm -- PART IV: Sample Spectral Statistics-Based Recursive Hyperspectral Band Processing -- Recursive Hyperspectral Band Processing of Constrained Energy Minimization -- Recursive Hyperspectral Band Processing of Anomaly Detection -- Signature Spectral Statistics-Based Recursive Hyperspectral Band Processing -- Recursive Hyperspectral Band Processing of Automatic Target Generation Process -- Recursive Hyperspectral Band Processing of Orthogonal Subspace Projection -- Recursive Hyperspectral Band Processing of Linear Spectral Mixture Analysis -- Recursive Hyperspectral Band Processing of Growing Simplex Volume Analysis -- Recursive Hyperspectral Band Processing of Iterative Pixel Purity Index -- Recursive Hyperspectral Band Processing of Fast Iterative Pixel Purity Index -- Conclusions -- Glossary -- Appendix A -- References -- Index.

Sommario/riassunto

This book explores recursive architectures in designing progressive hyperspectral imaging algorithms. In particular, it makes progressive imaging algorithms recursive by introducing the concept of Kalman filtering in algorithm design so that hyperspectral imagery can be processed not only progressively sample by sample or band by band but also recursively via recursive equations. This book can be considered a companion book of author's books, Real-Time Progressive Hyperspectral Image Processing, published by Springer in 2016. Explores recursive structures in algorithm architecture Implements algorithmic recursive architecture in conjunction with progressive sample and band processing Derives Recursive Hyperspectral Sample Processing (RHSP) techniques according to Band-Interleaved Sample/Pixel (BIS/BIP) acquisition format Develops Recursive Hyperspectral Band Processing (RHBP) techniques according to Band SeQUential (BSQ) acquisition format for hyperspectral data.
