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Autore	Reynolds Bruce J
Titolo	A guide for the development of purchasing cooperatives [[electronic resource] /] / [Bruce Reynolds, James Wadsworth]
Pubbl/distr/stampa	Washington, D.C. : , : USDA Rural Development, , [2009]
Descrizione fisica	1 online resource (ii, 11 pages)
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Altri autori (Persone)	WadsworthJames J
Soggetti	Cooperative societies - United States Agriculture, Cooperative - United States Cooperation - United States
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Livello bibliografico	Monografia
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2. Record Nr.	UNINA9910830955003321
Autore	Liu Jian-Guo
Titolo	Essential image processing and GIS for remote sensing // Jian Guo Liu, Philippa J. Mason
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ISBN	1-118-68797-3 1-118-68796-5 1-282-18887-9 9786612188879 0-470-51031-5 0-470-74604-1
Descrizione fisica	1 online resource (461 p.)
Disciplina	621.36/78 910.285
Soggetti	Remote sensing Geographic information systems Image processing Earth (Planet) Surface Remote sensing
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Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Essential Image Processing and GIS for Remote Sensing; Contents; Overview of the Book; Part One: Image Processing; 1 Digital Image and Display; 1.1 What is a digital image?; 1.2 Digital image display; 1.2.1 Monochromatic display; 1.2.2 Tristimulus colour theory and RGB colour display; 1.2.3 Pseudo colour display; 1.3 Some key points; Questions; 2 Point Operations (Contrast Enhancement); 2.1 Histogram modification and lookup table; 2.2 Linear contrast enhancement; 2.2.1 Derivation of a linear function from two points; 2.3 Logarithmic and exponential contrast enhancement 2.3.1 Logarithmic contrast enhancement2.3.2 Exponential contrast enhancement; 2.4 Histogram equalization; 2.5 Histogram matching and Gaussian stretch; 2.6 Balance contrast enhancement technique; 2.6.1

\*Derivation of coefficients, a, b and c for a BCET parabolic function; 2.7 Clipping in contrast enhancement; 2.8 Tips for interactive contrast enhancement; Questions; 3 Algebraic Operations (Multi-image Point Operations); 3.1 Image addition; 3.2 Image subtraction (differencing); 3.3 Image multiplication; 3.4 Image division (ratio); 3.5 Index derivation and supervised enhancement  
 3.5.1 Vegetation indices 3.5.2 Iron oxide ratio index; 3.5.3 TM clay (hydrated) mineral ratio index; 3.6 Standardization and logarithmic residual; 3.7 Simulated reflectance; 3.7.1 Analysis of solar radiation balance and simulated irradiance; 3.7.2 Simulated spectral reflectance image; 3.7.3 Calculation of weights; 3.7.4 Example: ATM simulated reflectance colour composite; 3.7.5 Comparison with ratio and logarithmic residual techniques; 3.8 Summary; Questions; 4 Filtering and Neighbourhood Processing; 4.1 Fourier transform: understanding filtering in image frequency  
 4.2 Concepts of convolution for image filtering 4.3 Low-pass filters (smoothing); 4.3.1 Gaussian filter; 4.3.2 The k nearest mean filter; 4.3.3 Median filter; 4.3.4 Adaptive median filter; 4.3.5 The k nearest median filter; 4.3.6 Mode (majority) filter; 4.3.7 Conditional smoothing filters; 4.4 High-pass filters (edge enhancement); 4.4.1 Gradient filters; 4.4.2 Laplacian filters; 4.4.3 Edge-sharpening filters; 4.5 Local contrast enhancement; 4.6 \*FFT selective and adaptive filtering; 4.6.1 FFT selective filtering; 4.6.2 FFT adaptive filtering; 4.7 Summary; Questions; 5 RGB-IHS Transformation  
 5.1 Colour coordinate transformation 5.2 IHS decorrelation stretch; 5.3 Direct decorrelation stretch technique; 5.4 Hue RGB colour composites; 5.5 \*Derivation of RGB-IHS and IHS-RGB transformations based on 3D geometry of the RGB colour cube; 5.5.1 Derivation of RGB-IHS Transformation; 5.5.2 Derivation of IHS-RGB transformation; 5.6 \*Mathematical proof of DDS and its properties; 5.6.1 Mathematical proof of DDS; 5.6.2 The properties of DDS; 5.7 Summary; Questions; 6 Image Fusion Techniques; 6.1 RGB-IHS transformation as a tool for data fusion; 6.2 Brovey transform (intensity modulation)  
 6.3 Smoothing-filter-based intensity modulation

## Sommario/riassunto

Essential Image Processing and GIS for Remote Sensing is an accessible overview of the subject and successfully draws together these three key areas in a balanced and comprehensive manner. The book provides an overview of essential techniques and a selection of key case studies in a variety of application areas. Key concepts and ideas are introduced in a clear and logical manner and described through the provision of numerous relevant conceptual illustrations. Mathematical detail is kept to a minimum and only referred to where necessary for ease of understanding. Such concepts are exp