Abstract

Pansharpening technique is used for fusion of low spatial resolution multispectral image and high spatial resolution panchromatic image, to increase the spatial resolution of multispectral image. Intensity-Hue-Saturation pan sharpening method has been used for most of the practical pansharpening applications but it offers some spectral distortion. Therefore, it has been used in integration with wavelet transform based pansharpening technique because wavelet transform based pansharpening techniques preserve spectral information via multilevel decomposition. In this paper, the integrated IHS and wavelet based pansharpening technique has been implemented using different types of wavelet transforms. Different fusion rules have been used for fusion of corresponding details and approximation coefficients obtained by
multilevel decomposition of images for implementation of integrated pansharpening technique. The results have been analysed and compared using some important image quality metrics like spatial and spectral correlation coefficient, entropy and root mean square error and conclusions have been drawn.

References


Index Terms

Computer Science
Image Processing
Keywords
Image Fusion  Pansharpening  Multispectral  IHS  Wavelets.