عنوان مقاله:

High Spatial Resolution and Hyperspectral Image Fusion

محل انتشار:

نوزدهمین کنفرانس مهندسی برق ایران (سال: 1390)

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خلاصه مقاله:

Efficient multi-resolution image fusion aims to take advantage of the high spectral resolution of hyperspectral images and high spatial resolution of panchromatic images simultaneously. This paper presents a multi-resolution data fusion scheme, based on our algorithm: Retina-Inspired-Model (RIM), and three algorithms: Gram-Schmidt, principal component and Colour-Normalized Transform. This allows to spatially enhancing the multispectral images, by adding the highresolution spatial features (extracted from the panchromatic image) to hyperspectral images. This technique finds application in Remotely sensed image interpretation. In this paper, the low resolution earth observation (EO) 1-hyperion hyperspectral images (with 30-m pixel size and 220 bands of 10nm spectral resolution) are spatially enhanced to the 10-m pixel size by fusing them with the 10-m ALI high-resolution PAN image. Results show it preserves more spectral features with less spatial distortion

کلمات کلیدی:

Image fusion, remote sensing, hyperspectral images, retina-inspired model (RIM),Gram-Schmidt transform (GST), principalcomponent transform (PCT), colour normalised transform (CNT