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Hyperspectral image super-resolution using deep convolutional neural network

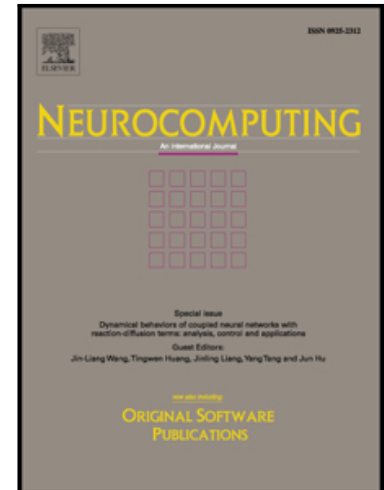
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Highlights

- It is challenging to obtain a hyperspectral image (HSI) with a high spatial resolution, and the spectral information of an HSI is important and cannot be distorted.
- We propose an HSI super-resolution (SR) method by combining a spatial constraint (SCT) strategy with a deep spectral difference convolutional neural network (CNN) model.
- The SCT strategy constrains that the low resolution (LR) HSI generated by the reconstructed high resolution (HR) should be spatially close to input LR HSI.
- The SDCNN model is utilized to preserve the important spectral information. Experimental data on different databases have validated the effectiveness of the proposed method.

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