Abstract
The classification of remotely sensed images knows a large progress taking in consideration the availability of images with different resolutions as well as the abundance of classification’s algorithms. A number of works have shown promising results by the fusion of spatial and spectral information using Support vector machines (SVM). For this purpose, we propose a methodology exploiting a composite kernel that easily combines multi-spectral features, Haralick texture features and Hybrid Median Filter, with different window sizes. The proposed approach was tested on common scenes of urban imagery. The result shows that the combined use of spectral and texture information together significantly improved the accuracy of satellite image classification.

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**Index Terms**

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