



A sub-pixel resolution enhancement model for multiple-resolution multispectral images

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We present a new resolution enhancement model, with application to MODIS and Sentinel-2 data. For applications like land cover monitoring, the availability of multispectral bands at multiple resolutions limits the classification accuracy at full resolution. We introduce a new model to separate pixel content from color information at high-resolution bands. This sub-pixellic model is then applied to unmix low-resolution bands. This technique drastically improves the overall land cover classification accuracy, especially in the MODIS cases, and it is particularly effective on Sentinel-2 data.