

## **ABSTRACT**

A method to extract features from hyperspectral images with a technique based on neural Networks is presented. In the first stage, the type of considered neural networks is the Kohonen's SOM, able to associate autonomously pixels considering their intrinsic relationships. A processing module consisting of a pixel classification based on supervised neural networks is chained to the previous one. The entire workflow has been based on the use of spectral, textural and spatial characteristics of an image. The final accuracy was above 93 %, reaching satisfactory results to identify four classes: vegetation, water, buildings and roads.