

## Abstract

This bachelor thesis is focused on processing and classification of radar data. The images recorded in 2009 by the AMI-SAR sensor placed on the ERS-2 satellite were used for a pixel and object-based classification of agricultural land. The classifications were tested for two selected areas of interest. The legend was taken from the LPIS database and includes three classes – arable land, grassland and a class that involves hop fields, vineyards, and orchards. Preprocessing of the images was held in the NEST software and the subsequent classification in the ENVI software. The classification outcomes were compared and it was found out that the object classification seems to be significantly better using the SVM algorithm. The best result of the classification reached the overall accuracy of 90.74 % and the Kappa coefficient of 0.5.