

# **The use of LIDAR data for vegetation detection and visualization**

## **Abstract**

The main object of this thesis is to evaluate the available software products for vegetation detection and visualization through the use of LIDAR data. The area of interest covers 200 ha and is situated in the area of Klínový důl nearby Špindlerův Mlýn. Data which are used in this thesis was provided by The Krkonoše mountains national park administration. The cloud of points was analyzed by five different programs: ArcGIS 10.1, LAStools, ENVI LIDAR 3.2, BCAL LIDAR Tools a LP 360. Cloud of points was separated in each program to obtain just the points which represent vegetation only. In the next step the elevation above ground level of every single point was calculated and then the cloud of points was divided in to three categories appropriate with the vegetation height. Outcomes of each program are compared and evaluated at the thesis conclusion.

**Keywords:** LIDAR, airborne laser scanning, vegetation detection