Quality of LIDAR data filtering in GRASS

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LIDAR technique allows us to determine digital terrain models at high vertical accuracy and planimetric resolution. One of the problem still open in the processing of LIDAR data is the filtering of the measurement point-cloud in order to distinguish bare earth points and object (vegetation and artificial features crafted by human hand) points.
Different algorithms have been proposed by diverse research groups and companies to date. The ISPRS Working group III/3 (3D Reconstruction from Airborne Laser Scanner and INSAR Data) has proposed a comparison test between the different methods. From that it comes out that the different filtering methods behave in inhomogeneous way depending on the morphological features of the area under study.
One of the method proposed for the comparison is that developed within GRASS at the Politecnico di Milano – Campus Como. The algorithm characteristics and the corresponding software tools were already shown in previous conferences.
In this presentation we discuss the filtering quality of our method by analyzing the statistics of the comparison between the obtained automatic classification and the manual one. This comparison was done on actual data which correspond to different landscape morphologies.