

Michał DĄBROWSKI¹

¹ Nicolaus Copernicus University, Faculty of Earth Sciences, Lwowska 1, 87-100 Toruń, Poland,
mh.dabrowski@gmail.com

Possibilities of application the numerical terrain model in the interpretation of GPR data as a topographical correction obtained from a photogrammetric mapping by Unmanned Aerial Vehicle and LiDAR scanning

Abstract

In rough terrain it is necessary to apply topography correction on geophysical data to reconstruct real slope and shape of geological structures. Using aerial mapping like LiDAR and Unmanned Aerial Vehicle (UAV, DRONE) can be usefully apply numerical data to reconstruct real elevation. Aerial mapping is a very fast method with good accuracy and can be effectively apply to geophysical data. As an example will be showed GPR data with topography correction obtained from LiDAR data in Władysławowo and GPR section obtained near Cracow with applied NMT from photogrammetry mapping by UAV. Correction showed that method is effective and can be used instead classic nivelation. GPR data were collected thanks to GEOSCANNERS.PL by GPR U-Explorer manufactured by Geoscanners AB and 200 MHz ground coupled, bistatic antenna.