Re-shaping LiDAR Data for Landscape Archaeology Research

In this workshop, participants will explore the application of Light Detection and Ranging (LiDAR) technology within the field of archaeology. The session commences with an overview of LiDAR, highlighting how it fundamentally diverges from traditional remote sensing approaches such as satellite and aerial imagery. This provides a theoretical foundation for understanding its unique capabilities. Transitioning into hands-on activities, attendees will work with open-source data to navigate the steps required for processing and interpreting LiDAR data, from raw point clouds to final interpretations.

Initially, we will introduce a step-by-step guide for filtering raw point clouds, aiming to assist participants in creating a Digital Elevation Model (DEM) tailored for archaeological applications. Building on this, the workshop will guide participants through various visualization techniques designed to maximize the interpretive value of LiDAR data. Hands-on practice will clarify the most effective methods for accentuating archaeological features within the dataset.

The latter part of the workshop will be dedicated to vectorization strategies for these archaeological features. Attendees will learn about common pitfalls encountered during both the data processing and interpretation stages, alongside insights on how to circumvent them. The session will conclude with an open discussion about the potential and limitations of LiDAR technology in archaeological research, offering a platform for participants to share experiences and pose questions. This final segment aims to deepen attendees' understanding of how LiDAR can be optimally utilized in archaeological investigations.

Targeted primarily at students, this workshop does not require prior experience with LiDAR. However, familiarity with Geographic Information Systems (GIS) is essential. Specifically, participants will need to install QGIS software prior to the workshop.