

IALA honours Dutch archaeologist for groundbreaking Lidar research



The International Association of Landscape Archaeology (IALA) has chosen a PhD thesis titled 'Learning to look at Lidar: combining CNN-based object detection and GIS for archaeological prospection in remotely-sensed data' for a Best Dissertation prize. The thesis was written by Wouter Verschoof-Van der Vaart, a former PhD candidate and current postdoctoral

researcher in the Faculty of Archaeology at Leiden University.

The IALA granted the Best Dissertation prize in 2022 to three theses that clearly demonstrate the strength and quality that international landscape archaeology reached in 2022. [Verschoof-Van der Vaart's thesis](#) was praised for its innovative nature and the fact that it shows "the enormous potential of this integrated method".

Remote sensing-based identification of archaeological features

Verschoof-Van der Vaart said: "I was very happy and honoured that my thesis was recognized as a valuable contribution to the topic of landscape archaeology." Dr Karsten Lambers, his PhD supervisor, also expressed his excitement about the news. "This is great news and a welcome recognition of his groundbreaking research on the automated archaeological analysis of remote sensing data by the landscape archaeology community," said Karsten, filled with pride.

In his PhD research, Verschoof-Van der Vaart combined his interest in the practical application of remote sensing techniques, specifically Lidar, with citizen science, deep learning and GIS for the automated detection of multiple classes of archaeological objects in remotely sensed data.

Keeping the practical application of methods in mind

"Apart from feeling honored, I am also thrilled that the potential of my research is recognized by the wider landscape archaeology community, as one of the main goals and topics of my thesis was to investigate the applicability of these computer algorithms in archaeological practice/prospection," Verschoof-Van der Vaart elaborated. "Because of my background as a field archaeologist, I always tried to keep the practical application of these methods in mind while working on my research, and this award shows that this is recognized."

Regarding his future plans, Verschoof-Van der Vaart has a clear vision, including many more exciting research projects. "My plans for the future are to continue my research into the use of automated detection and citizen science for mapping archaeology on a landscape scale," he said. "For instance, I am currently finishing another citizen science project where we mapped traces of conflict, such as bomb craters, in the central part of the Netherlands. Furthermore, I am also working on making an overview of Roman military activity in the Ermelo region."



A figure excerpt from Verschoof-Van der Vaart's doctoral thesis displays both recorded barrows and potential new ones. (Courtesy: Verschoof-Van der Vaart, 2022)