

This manuscript discusses the contribution of 3D photogrammetric recording of archaeological sites to research involving site topography, such as its value in the preservation of changing archaeological landscapes or its ability to ask new questions about a site's history and features. In particular, the authors emphasize the "Archaeology of Archaeology" approach, currently being applied to the site of Troy. They outline three ways that 3D photogrammetry contributes to this approach: by recording change over time in the present and future, by reconstructing past excavation activities and how they reshaped the topography of the site, and by creating tools to share the results of the analysis. Additional perspectives are also brought in through comparison to other projects from around the world that use similar methods, brought together by a session at the 2023 Computer Applications in Archaeology conference in Amsterdam.

As the authors note, the use of 3D photogrammetry has developed rapidly within archaeology, and it is necessary to interrogate how this method is being applied and understood. This manuscript is valuable as a brief overview of the research potential of one application of 3D photogrammetry and as a guide for future research. The manuscript is well-written and generally clear (though I have some notes on particular points below). I also think that the title and abstract adequately describe the manuscript as a whole.

I have one broad thought on revisions that I think would be valuable, as well as some more specific recommendations. At multiple points the authors emphasize the importance of designing a data collection strategy with specific goals in mind. This is a very important point, but I think it merits more discussion than is present in the current manuscript. It would be nice to see some discussion of data collection strategies for particular sites; for example, what were the specific goals of documenting Troy at two resolutions? I am also curious, given the manuscript's focus on the "Archaeology of Archaeology" approach, about competing priorities. To use Troy as an example again, it is my understanding that the "Archaeology of Archaeology" project is working alongside continuing traditional excavations. How do the needs of these two different projects influence decisions about data collection? This would also be a useful area to expand the discussion of the other papers from the CAA session; these discussions sometimes feel a little too brief to me (also addressed below), and I think that more information on their data collection and management strategies would be useful for readers of the manuscript. This discussion might also help connect these papers a little more clearly to the "Archaeology of Archaeology" framework.

As for specific recommendations:

- 1) Regarding the mapping of the citadel at Troy, I think some rewording for clarity would be beneficial. In "Concepts, questions, and applications" the authors mention two campaigns to collect the drone imagery (lines 68–70), and in "Current and future site topography" they mention that the site has been documented twice at two different resolutions (lines 105–106). The mention of two campaigns could be read as together producing one model of the citadel and lower town, which can make the reader unsure about the site being "documented by drone twice"—does that refer to the two campaigns or to an earlier unmentioned documentation with older drone technology? Some minor rephrasing would clear this up and help the reader understand the research design and goals of the documentation (also relevant to my recommendation above).

- 2) Regarding Figure 1, will there be a link to a 3D model of the site here? If not, I think the caption should be rephrased slightly.
- 3) As noted above, I think that the discussion of other papers from the CAA roundtable would benefit from a little more detail, which may or may not be practical given the authors' plans for publication. Below are some points that I was confused or curious about:
 - a. Regarding the project led by R. Brunchi (see line 113), there is mention of a need to monitor site destruction. Is this site under particular threat from natural or anthropogenic forces? A little more detail here about the threat would demonstrate the importance of this work.
 - b. Regarding the project led by T. Zoldoske (see lines 124–125), there is mention of the 3D recording being used to reconstruct the archaeological landscape; to what extent can this documentation contribute to reconstructions of the ancient landscape (e.g., analyzing processes of erosion and deposition)?
 - c. Regarding the project led by P. Wolf and B. Ulrich (see lines 146–148) I was a little confused about the use of old photographs to identify features visible in GPR. Does this mean that these features were previously excavated, or that there are patterns on the surface in old photography that correlate to what has been seen more recently in the GPR?
 - d. Also regarding the project above, and the project led by N. Lercari (see lines 151–153), I was unclear on what 3D technologies were being used and how; 3D is specifically mentioned in the discussion of these projects, so I think it would be helpful to have a little more context. This is the only one of these recommendations that I think is necessary to address prior to publication.