

Interactive comment on “Effects of soil settlement and deformed geometry on a historical structure” by Y. Yardim and E. Mustafaraj

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Dear Sir/Madam,

Thank you for taking your time to read our manuscript and make valuable comments and suggestions. Below we are responding point-by-point to your suggestions:

1. A number of places it felt like other references could be included. So for example in the very introduction, and in sentences like “The usage of the TLS technology to assess historic structures has increased in the last decade”. There are a number of other places, although many ARE well referenced, just a few places are not.

- The references have been placed at the end of the paragraph in most of the cases

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and at the end of the sentence when needed based on the journal’s format. In this case “(González et al., 2010; Ustundag et al., 2010; Lourenco et al., 2001)”

2. Page 5916, just a bit more information could be included on the laboratory techniques used (not a lot more, but a bit more so we have some idea of the uncertainties of the reported values).

- The inclusion of the laboratory techniques is beyond the scope of this study. In the earlier version of this paper more details were found about this tests, but it was suggested by the reviewers to remove them. Additionally, in the ASTM the tests which are mentioned in this paper “The laboratory works include grain size analysis, natural water content, bulk density, strength parameters, internal friction angle and cohesion based on ASTM.” are clearly explained.

3. MINOR: Please be careful of precision. So “18.5-19.0 m” not “18.5-19 m”

- Accepted and corrected.

4. “Albania and Balkan Peninsula are part of the Alpine–Mediterranean seismic belt. The released energy from the earthquakes of this belt is estimated to be about 15% of the total amount of the overall energy released from the earthquakes around the world (Papazachos, 1988).” This is a bit old as references go.

- This is a source we found during our literature work. Unfortunately, we could not find any other later study regarding this topic. We would be grateful if you could recommend us one.

5. Please ensure all terms are well defined (e.g., a.g.l. – altitude above ground level, needs to be defined first time used).

- The term “a.g.l – above ground level” was used as an abbreviation after the proof reading and typesetting process from the journal.

6. Please make sure that it is clear for EVERY sentence, the in-text citation if it is

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appropriate. For instance, you have put at the end of the paragraph on p. 5917 an in-text citation, but have nothing in previous sentences. This is not a good way of indicating your sources. So for example, “Koçak and Köksal in their study of: : :” needs a ‘year’. The next two sentences need an in-text citation. Please go through the ENTIRE paper and check it for proper in-text citations.

- Accepted and corrected accordingly.

7. UNCERTAINTY: Although it is fairly clear throughout your procedure, it is not as clear the uncertainty associated with your measurements. Please discuss throughout uncertainty, and give associated ranges for key values found what the uncertainty might be.

- The uncertainty about the measurements is related to the equipment used as well as lack of knowledge about the construction materials and retouches of the structure during the years.

8. FIGURE CAPTIONS. All figure captions need to be more self-standing, so the reader does have to go to the text to figure out what they are.

- Many of the captions were also changed during the previous review phases. In order to avoid repetition, we tried to give only brief explanations.

9. DOT vs. COMMA: Please ensure you use ‘.’ for a decimal point not a ‘,’.

- Accepted and corrected accordingly.

10. FIGURE 1. There is no scale or N arrow on Figure 1.

- Accepted and corrected accordingly.

11. FIGURE 1. Somewhat confusing to have some text vertical, some text horizontal, and the ‘N’ also horizontal and vertical. I would suggest first three columns have text at 90 degrees, then the next ones normal horizontal. I had no idea what the ‘last’ column was (the profile) other than a ‘pretty’ picture? You can include it, but perhaps

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half the distance.

- The shape of Figure 1 came to today’s stage after 2 other reviewer’s comments. It provides the overview of the soil characteristics which have also been included in the text, clearly.

12. FIGURE 2. Tell the reader where the photos are from (their source), how old is the façade on the left, and for the one in the middle, give the year (don’t say “present day” as this dates the paper).

- Accepted and changed accordingly.

13. FIGURE 3. The “Albanian National Archive” is very vague. There is still a source of where the figure came from.

- The photo was taken from Albanian national archive upon our request. It was found under section of “Ottoman Architecture of Albania” (according to the official who handled the old photos to us). There is no publication of this photo in any book or article so that we could cite it correctly.

14. FIGURE 4. Needs a lot more detail in the figure caption. The figures themselves should be 2 at most, so they can be a lot larger, otherwise we won’t be able to see anything in the final paper. Label them A to E so you can discuss the figures.

- This was brought to this shape after other reviewers’ comments. In the text it is mentioned about the details of this photo which is related to the scanning points outside and inside of the mosque.

15. FIGURE 5. Figure caption not very complete, no indication of when the pictures were taken (month/year) or of a scale.

- Accepted and corrected accordingly.

16. Figures 5 to 8. Ensure that any legends (e.g., Figure 5) has a variable and units, and what it refers to. All figure captions should be much more complete. Be careful the

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text is not too small in any given Figure caption.

- Accepted and corrected accordingly.

Thank you again for your contribution in improving our manuscript.

Best regards.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 1, 5911, 2013.

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