

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

**Anonymous Referee #3**

Received and published: 26 June 2014

The manuscript "EFFECTS OF SOIL SETTLEMENT AND DEFORMED GEOMETRY ON A HISTORICAL STRUCTURE" describes an interesting case study of integration of geometrical data obtained by laser scanning and the soil settlement data in assessing the structural conditions of the studied mosque.

The main objectives of the impact of the soil settlement on a structure's stress concentrations and the influence of the laser scanning techniques on structure seem to be well described and also supported by additional geological information. The comparison between the finite element modelling results of as-built and assumed perfect geometrical model of the studied mosque shows a considerable difference which supports your approach too.

C3193

Another point which I find interesting, apart from natural factors, is the consideration of the external (man-made) factors, too. The inclusion of the effect of the railway in the diagnosis (and backing it up with another similar case study) shows that the authors have tried to consider as many high influence factors.

The authors have also done a comprehensive literature review, touching different aspects of laser scanning techniques and main uses for assessment. They have also not forgotten to mention about the seismic risk, which proves why this detailed geometrical acquisition techniques need to be used. The figures look neat and can easily understood. They seem to explain well the purpose they have been used for.

In my opinion this study should be accepted as it is for publication in NHESS.

---

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

C3194