

Interactive comment on “Seismic detection of rockslides at regional scale: Examples from the Eastern Alps and feasibility of kurtosis-based event location” by Florian Fuchs et al.

Anonymous Referee #1

Received and published: 30 July 2018

In this paper, the authors use the seismic data to automatically detect the rockslide and locate the events in the Eastern Alps. It's an important work for the practical application in the future. However, there are some major issues need to be classified.

1. The authors mentioned that the purpose of research focuses on automatic location and automatically distinguish earthquake events. But the research uses the known database and construct the algorithms. I would suggest the authors revise the purpose of this research.
2. From the reference photo, some rock disaster seems like a free fall event. It has better to define rockslide in the introduction part.

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3. In page 5, The STA/LTA method common uses in signal analysis. I think the authors should add some references in this part. Further, why the authors set the different thresholds of trigger-on and trigger-off ratio?

4. In page 6, Many research support that the P and S wave can't be classified in rockslide/landslide events. From the right part of the Fig.3, the event also looks like containing two parts. The minor event happened first and a major event occurred following. It's a common situation in rockslide event. I suggest the authors carefully check the data again. If this is P and S wave, I think the authors should describe it in detail.

5. From the automatic detection, I think it may detect some unknown rockslides, but from authors' data, all rockslides are known events. In advance, I would suggest the authors use different values (like different frequency range) to run the automatic detection. And some deviations of location are quite large. It's a little bit impractical for further application.

6. The authors construct eq.(4) to distinguish the earthquakes and rockslides. I would suggest the authors validate the equation with rockslides after February 2017.

7. From the fig 6, two events' local magnitude is zero. If the authors remove these two points, the R2 should be higher. From the Table1, the two are with the volume of 150,000 m³ and 500 m³, respectively. From the event with 500 m³, there are no stations which record the signal. I suggest the authors can remove this case. From the other case, it's a little strange that the case is with the high volume, but the local magnitude is zero. I think the authors should check the data again or describe the mechanism detail. Final, I also suggest the authors can use different parameters like PGV or envelope area to address this issue.

Interactive comment on Earth Surf. Dynam. Discuss., <https://doi.org/10.5194/esurf-2018-54>, 2018.

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