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Discussions

Interactive comment on "Automatic landslide flow direction estimation based on the geometric processing of the bounding box and the geomorphometric analysis of DEMs" *by* M. Niculiţă

Anonymous Referee #3

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The paper describes a method to classify landslides as wide or long based on their morphology and DEM attributes. Although interesting, I believe it needs more works before being accepted for publication.

Reviewers #1 and #2 already pointed out many of the issues with the paper, including a detailed list of corrections by reviewers #2. To me, the paper needs to be expanded to describe in a better way the methods used, and needs a deep revision of English language.

The author does not describe, for instance, the 'rotating calipers method' (page 3,

line 10), or AUROC (not even the meaning of the acronym). A revised version of the manuscript needs a clear description of the methods used.

The figures could be improved as well. 3D views like Fig.1 are not always the best way to show the geomorphology of the area (and I don't see a need for two views of the same area). A schematic cartoon showing the differences of wide and long landslides, as well as some ones that could be missclassified would be much more informative. Fig.2 has so much information that is hard to read it. A simple map of Romania (written 'Romania') is sufficient. No need for hypsometry or the global map. Using a square as a scale bar is not usual, and the analitical shading scheme is not needed. Try to simplify as much as possible.

In Fig.3 I would rethink the use of colors and gradients. Think of people printing your paper in a black and white printer.

Fig.4 could be merged with the new Fig.1.

Fig.5 needs a scalebar. To what elements the colorbars refer to? Are both colorbars for the MFD-D8 pictures? Of so, they are the same and you can use only one.

I don't see the reason for Fig.6, and if you don't explain in the methodology what is AUROC and why you used it, then Fig.7 might not be understood by some readers.