

Interactive comment on “3-Dimensional modeling of 2014-Malin Landslide, Maharashtra using satellite-derived data: A quantitative approach to numerical simulation technique” by Shovan Lal Chatteraj et al.

Anonymous Referee #2

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Dear authors, dear editor, The paper “3-Dimensional modeling of 2014-Malin Landslide, Maharashtra using satellite derived data: A quantitative approach by numerical simulation technique” presents a case study of propagation modelling based on the debris flow of Malin 2014. The text is clearly written and easy to understand, however the main problems is that there is no innovative content. In the present form, it looks more like a report for a local survey than a scientific paper. Several elements about input data are missing, some assumptions about the representativeness of lab values should be discussed. I do not think that this paper can be used by somebody working

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outside from the specific case of Malin, then I propose not to consider this contribution for further publication.

Here are some points that should be significantly improved if the authors want to re-submit their work:

- The goals expressed in the introduction (lines 60-70) are quite far from the work actually achieved. These goals should be reformulated. For instance it could be refocused on the assessment of using lab measurements to constrain Voellmy's parameters for this kind of debris movement.
- Input data should be better described. For instance there is no proper discussion of the DEM quality built for this project, and Fig4 doesn't allow to have a feeling of how it looks. Line 204 “representative samples” for shear tests: how many, how do you know they are representative, what is the variability of these measurements, where are these measurements ?
- The authors state that the internal friction required by the model can be directly extracted from shear tests on samples. That's by far not so simple: scaling problems, representativeness of samples, grain size effect, etc. The role of cohesion is not clear (it doesn't appear in line 151). All this part about lab measurement is treated too superficially for a scientific contribution.

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