

Interactive comment on “Shear rate effect on the residual strength characteristics of saturated loess” by Baoqin Lian et al.

Anonymous Referee #2

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This paper deals with the effect of the shear rate on the residual shear strength of loess from three landslides by using a ring shear apparatus. Overall, this is an interesting manuscript because the topic can be considered of large significance for international researches in the field; however, this manuscript needs some important improvements to get it into a position to be acceptable for publication. Thus, a major revision is recommended. My critical review is summarized in the following sentences:

- The title could be more informative although it is pertinent and understandable;
- The abstract should be more precise and clear, although the most important results have been mentioned (Please, find the file attached for details). Authors should better emphasize the aim, importance and results of this study, and why it should be considered as relevant to be published in an international journal;
- The introduction

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provides relevant background information. Important scientific publications, on which the work is based, are cited but some recent original papers are not considered;

- Geological setting and sampling sites if, on the one hand, require a brief description, on the other hand, should contain all the useful information for the purpose of the work. Congruent bibliographic references are missing. Please, find the file attached for details;
- Description of the materials used (grain size distribution, percentage and mineralogy of the clay fraction, plasticity of fine) is very important and can explain some discrepancies between different interpretations. Please, find the file attached for details;
- Description of the method used in this study should be detailed and complete. What does it mean for low or high shear rate and low or high effective normal stress? Please, find the file attached for details;
- Results and discussion may be combined into a single section to avoid repetitions in the discussion, which would thus be more interesting and complete, also with references to earlier or contemporary studies relevant to the topic. Discussion of the results should include aspects related to dilatancy and critical state;
- Conclusions summarize the main findings of the experimental research but could describe their significance or implication, in light of what was already known about the subject of the study, and present fresh insights or possible new ways of approaching research questions;
- Text, tables, citations and references should be formatted according to the journal's instructions;
- A thorough revision of the text with the help of a native English speaker is suggested.

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2019-156/nhess-2019-156-RC2-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-156>, 2019.

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