

## ***Interactive comment on “Behavior analysis by model slope experiment of artificial rainfall” by M. C. Park***

### **Anonymous Referee #2**

Received and published: 23 July 2015

This paper is an interesting work, attempting to propose a warning of rainfall-induced slope failure, based on a real-time monitoring system of pore water pressure or matric suction. The comparison between the model slope experiment with rainfall seepage with the unsaturated slope stability analysis method is an interesting way to validate the results presented.

However, the reviewer finds that the significance of this study not clearly presented and discussed in a Discussion part. The paper, in its actual form, presents well the experiments realized, but not enough the results obtained from it. I then suggest to add a Discussion part on the paper to improve its significance and impact.

Moreover, I have some specific comments (see below): 1) Concerning the “Material

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and Methods” part (pages 4163 to 4166): I suggest to cut this part in two sub-sections. The first one can presents the experimental model, and the second one can presents the tools used to analyze the model. Grouping everything as actual is confusing for the reader.

2) Concerning the “results and discussion” part (pages 4166 to 4169): Again, I suggest to cut this part to make it more clear. The discussion part had to be separated and completed.

Finally, I suggest to do some technical corrections, listed bellow: 3) p 4163-L3: I suggest to use the word “unstable” and not “unsteady”, which is less commonly used.

4) p 4163.: I can’t find the call for the Figure 1 in the text. You have to add it.

5) p 4163. L24: What is SW?

6) p 4163-4164: I can’t find neither call for the Table 1, and the Figure 2.

7) p 4165. L16: The graph of the Figure 3b is not presented.

8) p 4165. L20: It seems that the model of the numerical analysis is in 2D, and the experiment is in 3D. Is there an influence coming from this difference ?

9) p 4166. L 4-5: “which the design standards have presented” : what does that means ?

10) p 4166. Equation 1: I suggest to give another name to the base length variable (lbase). This is really confusing in Italic. It seems like a divide sign.

11) p 4166 Equation 2.: Please remind the meaning of the different variables of the equation.

12) p 4166. L16: I’m not sure that it is really the Figure 5 and the Table 3 which are showing the results that you are presenting in this paragraph. It seems to me that the results, state in this paragraph, are presented from the Figure 5, and the results of the

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Table 3 are presented from the line 20.

13) p 4167.l12: Here again, in this paragraph, you don't present the results of the both Figure 6 and Table 4.

14) p 4170: Please, remove "Summary and". It's only the Conclusion part.

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