

## ***Interactive comment on “A comparative assessment of two different debris flow propagation approaches – blind simulations on a real debris flow event” by L. M. Stancanelli and E. Foti***

**Anonymous Referee #2**

Received and published: 25 January 2015

It is useful to publish research where theoretical models are compared with each other and against measured data. Therefore, I support the publication of the paper.

However, I have some comments:

- 1) The formulation of the input hydrographs is not completely clear. Was the same hydrograph used with both models? What value of alpha was used in Equation 12?
- 2) I suggest that the authors should show the input hydrograph in a figure. At what

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location was the hydrograph applied?

- 3) I cannot find what values of  $cd$ ,  $fi$  and  $d50$  were used. Possibly, there are some other input quantities that are not clearly specified. Perhaps, a tabular summary of all input parameters for both models should be added.
- 4) While the calculated flow depths seem to be in the right order, the velocity fields calculated by the two models are dramatically different. Also, the paper makes no mention of real velocities observed or estimated in the field. The model performance in "predicting" velocities should be mentioned.
- 5) What predictions did the TRENT model make with respect to material erosion? Were they realistic?
- 6) The English could use some minor editing.

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 2, 7089, 2014.