

Interactive comment on “Saturated Hydraulic Conductivity and Textural Heterogeneity of Soils” by Carlos García-Gutiérrez et al.

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Please note that our work is not aimed constructing pedotransfer function for Ksat using the heterogeneity parameters obtained from the texture fractions. We do not intend to predict Ksat. Therefore we do not intend to compare our regressions to previously obtained pedotransfer functions. We do not need a validation exercise.

Sure a development of a PTF can be undertaken in further work, and, at that time, the cross-validation you propose should be done. Even more, further soil information, such as organic matter, can be included in the PTF.

Our work is a natural continuation of the published work "On soil textural classifications and soil texture-based estimations" on Solid Earth (<https://doi.org/10.5194/se-2017->

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84), where the relationship among the new heterogeneity parameters (IE) and soil bulk density is investigated. In that work, as in this one, a physical interpretation of this relationship is intended, not a PTF development.

Our regressions are not intended to be used as predicting tools, but to find out whether a relationship can be found among the newly used parameters and an important soil hydraulic property as Ksat. The focus of the work is the strength of such relationship. We agree however that R2 should not be the only indicator of the relationship strength, and it is possible to research residual distributions within the textural triangles.

About the nomenclature change you propose: this nomenclature was previously used and published in the Solid Earth paper. We believe that altering it now might bring confusion.

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