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Interactive comment on "On soil textural classifications and soil texture-based estimations" *by* Miguel Ángel Martín et al.

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We are grateful to the reviewer for the positive evaluation of the work and for stimulating comments. The Comment 1 requests the information about models suitable to do reconstruct the detailed particle size distribution from a limited number of textural fractions contents. The self-similarity model of this work was chosen mostly because the authors have an experience of working with it, past applications of it appeared to be successful, and a hypothetical physical explanation of its applicability can be put forward (Martin and Taguas, 1998; Martin et al., 2005). There are other models of particle size distribution in soils based on scaling hypothesis (Posadas et al., 2001, Bird et al., 2000). There exists a line of studies in which the detailed particle size distribution is obtained by fitting various empirical non-linear equations to the data (Fredlund et al.,

2000). It should be interesting to how this methodology may work with textural triplets other than standard 'sand-silt-clay'.. It may well be that the efficiency of using various triplets depends on/not only on the task at hand – reconstruction of the detailed particle size distribution – but also on the technique or model used to perform the task. The Comment 2 indicates the need to clearly define the type of linear regression used in this work. This will be done in the revised Materials and Methods section as the Reviewer have suggested. The comment 3 indicates that modified textural triangle may provide better inputs for pedotransfer functions to estimate soil hydraulic properties. This is definitely an exiting avenue for further research, and this will be acknowledged in the revised manuscript.

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