Comment on hess-2021-86
Anonymous Referee #1

Referee comment on "Compositional balance should be considered in the mapping of soil particle-size fractions using hybrid interpolators" by Mo Zhang and Wenjiao Shi, Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2021-86-RC1, 2021

Dear authors please see the following comments: I think the major problem is the presentation of an extended uncertainty analysis.
1) why 29 ECs and not groups of categorical and continuous or mixture of them, a test is needed like PCA and others
2) It is not clear mathematically how you apply the proposed methodologies
3) For RK: you should provide more details about the RK process: regression type, variogram types, parameters, nugget, fitting method, suitability of data for geostatistical analysis e.t.c
4) Table 2 needs better explanation
5) It is not explained how the uncertainty has been calculated. A more clear and extended presentation and calculation of uncertainty is required.
6) Generally different algorithms have been applied but it is unclear how the uncertainty propagation affects the final results
7) The mixture of categorical and continuous data needs more explanation in terms of methods applications and uncertainty of the results