

Interactive comment on “Using geomorphometry for hydro-geomorphological analysis in a Mediterranean research catchment” by D. Guida et al.

Anonymous Referee #2

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Generally well written paper fully within the scope of HESS. It presents modern hydrogeomorphological approach investigating space-time variability of runoff process including innovative combination of hydrochemograph analyses and geomorphometric land surface classification. Because the original hydrochemograph analyses should be independently published (Cuomo, Guida, under revision) it is possible to suppose that geomorphometric classification and interpretation of results are main innovative moment. Unfortunately the process of used land surface segmentation is not sufficiently explained and justified. Using of sum of weighted plan and profile curvature is declared in the Abstract and Conclusion, but only weighted plan curvature is mentioned on p. 8 and no specification of the procedure is done. Production of flow accumulation maps is

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unclear too as well as specifications of the multisegmentation algorithm and criterion of accordance between expert based mapping and multiresolution segmentation. Table 3 and Fig. 14 presents a synthesis of results obtained. However majority of variables are not explained in the table. Systematic shift of extreme values in Fig 14 could point to systematic underestimation of contributing area in 5th scenario, but it is not discussed as well as quality of geomorphometric procedures and results in general. . Particulars, some other vagueness, mistakes and other problems are in attached commented version of pdf. Without clarification of marked problems is not possible fully evaluate the paper. However the title I feel as appropriate, abstract, structure, supplementary material and language are generally OK. Formal insufficiency are marked in the pdf.

Please also note the supplement to this comment:

<http://www.hydrol-earth-syst-sci-discuss.net/hess-2016-68/hess-2016-68-RC2-supplement.pdf>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2016-68, 2016.

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