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Hydrology and Earth System Sciences Discussions

Interactive comment on "Assessing the impact of uncertainty on flood risk estimates with reliability analysis using 1-D and 2-D hydraulic models" *by* L. Altarejos-García et al.

Anonymous Referee #2

Received and published: 13 March 2012

Please be advised that my observations on this paper are from a practitioner's perspective with respect to how I see this scientific paper benefiting modeling work that I perform.

The author is suggesting that the Point-Estimate Method (PEM) could be used to validate model parameters, or at least bound the uncertainty, and uses channel roughness as an example. A challenge I see in using PEM for roughness is roughness can vary with flow, but don't see this function being made clear in the results.

Does the author intend to show that PEM was reasonable validated for channel roughness, and thus could be used (or should be tested) for other input variables?

Are the test models documented "calibrated" models? This fact is not clear in the paper, and should be stated, or model calibration results referenced if possible. And if the models are calibrated, how well would the PEM method compare to a "calibrated" model if PEM was used blindly to estimate depth values based on defined PDF's for roughness? One would expect the results of such a test would be biased how well the PDF used for the roughness values matched the calibrated values.

One editorial comment: please define PMF used on P1259 line 5

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 1251, 2012.