**Hydrology and
Earth System
Sciences
Discussions**

# *Interactive comment on* "Application of Weighted Semivariogram Model (WSVM) based on fitness to experimental semivariogram on estimation of rainfall amount" *by* S.-J. Wu et al.

**Anonymous Referee #1**

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The manuscript (hessd-8-4229-2011) aims at devising a weighted average semivariogram (WAS) model instead of using best-fit theoretical semivariogram (TS) models which is less time-consuming and more accurate. The manuscript is very well-written and concise and contributes to the related literature by demonstrating the merit of deriving WAS model in order to reduce uncertainties associated with the selection of best-fit TS models and their parameters.

In conclusion, the manuscript should be accepted for publication after the below comments are addressed.

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I would suggest testing whether or not the difference among the model results based on WSVM and TSVMs is statistically significant?

A few minor comments: Page 4240; 3.2.1 Identification of best-fit TSVM; line 10: "...Ertekin, 2007" mistakenly reads "Frtekin, 2007". Page 4245; 4 Conclusions: WSVM and TSVMs do not need to be re-abbreviated.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 4229, 2011.

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