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Nonlinear Processes in Geophysics
Discussions

Interactive comment on "Extended Application of the CNOP-P method in the Inner Mongolia using the Common Land Model" *by* B. Wang et al.

Anonymous Referee #2

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Comments:

I have to point out that this paper (referred as NPGD) is very similar to this one:

Wang, B., and Z. H. Huo, 2013: Extended application of the conditional nonlinear optimal parameter perturbation method in the Common Land Model. Adv. Atmos. Sci., 30(4), 1213–1223, doi: 10.1007/s00376-012-2025-8.

Which is referred as AAS in the following comments. AAS (Advances in Atmospheric Sciences) is a formal IAP journal with IF=1.479.

The editor has mentioned that 22% of the text of the NPGD paper is borrowed from the AAS paper. They have similar title, abstract, keywords, using the same CNOP-P method to optimize the parameters of CoLM. The structures of the two papers are

similar, but the NPGD paper has been paraphrased so that only 22% of text is identified as 'copied'. At the first glance, the only difference between NPGD paper and AAS paper is their study area. After a thoroughly comparison between them, I can't find any significant novel contributions from the NPGD paper.

For my all due respect, I can't accept a paper which is so similar with another peer reviewed paper, even if that one was also written by the same authors. It's impossible to do new works without the foundation of previous researches (by others, or by the authors themselves), but if the authors decide to publish their work, the structure of the manuscript has to be carefully organized to avoid duplication. A well-written paper should be an interesting story, or continuation of another story if you have published another paper talking about the same topic. In my opinion, it is better to organize this paper as follows:

1) In the introduction part, review your previous research and highlight its advantages and disadvantages. Usually one of the disadvantages will by the novel contribution of this paper. You are telling a totally different story, so the literature review should be reorganized to highlight your new contributions in the new paper.

2) If you are using exactly the same method or model, it's unnecessary to repeat their details. It's better to briefly introduce the method with one or two paragraphs, and move the methodology details to appendix, or give some references.

3) The results and discussion section is usually the most important part. If you have done similar work in other area, and you have find something new in another place, it's better to plot the previous results together with the new results in order to intuitively show the differences and similarities between them. Emphasis your research significance comparing with previous researches by others, and by yourselves.

4) In the conclusion part, summary the whole paper and highlight your novel contribution comparing with others works and your previous works. Put a concise 'take home message' at the end of the paper.

Although this paper is similar with the AAS one, the AAS paper has been cited for 8 times (line 139, 171, 180, 222, 257, 430, 432, 492). The authors tried to make some discussion about the novel contributions comparing with the ASS paper, but I don't think they are really novel. It has long been the common sense that the uncertainties of land surface modeling comes from (1) initial/boundary conditions, observation error; (2) parameterization; (3) model structure [Gupta et al., 2005; Duan et al., 2006; Kavetski et al., 2006a, 2006b; Ajami et al., 2007]. In this paper, only 2 parameters in one model were tuned and nothing have been done to the forcing data. There is no evidence to support the conclusion that the input error of forcing data is the main source of uncertainty.

Ajami, N. K., Q. Y. Duan, and S. Sorooshian (2007), An integrated hydrologic Bayesian multimodel combination framework: Confronting input, parameter, and model structural uncertainty in hydrologic prediction, Water Resour. Res., 43, W01403, doi:10.1029/2005wr004745.

Duan, Q. et al. (2006), Model Parameter Estimation Experiment (MOPEX): An overview of science strategy and major results from the second and third workshops, J. Hydrol., 320(1-2SI), 3–17, doi:10.1016/j.jhydrol.2005.07.031.

Gupta, H. V., T. Wagener, and K. J. Beven (2005), Model Calibration and Uncertainty Estimation, in Encyclopedia of hydrological sciences, edited by M. G. Anderson and J. J. McDonnell, pp. 1–17, John Wiley & Sons, Ltd.

Kavetski, D., G. Kuczera, and S. W. Franks (2006a), Bayesian analysis of input uncertainty in hydrological modeling: 1. Theory, Water Resour. Res., 42, W034073, doi:10.1029/2005wr004368.

Kavetski, D., G. Kuczera, and S. W. Franks (2006b), Bayesian analysis of input uncertainty in hydrological modeling: 2. Application, Water Resour. Res., 42, W034083, doi:10.1029/2005wr004376.

Please also note the supplement to this comment:
http://www.nonlin-processes-geophys-discuss.net/npg-2016-13/npg-2016-13-RC2-supplement.pdf

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