

A “constraint-based” strategy for parameter specification of environmental models

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Authors' response:

- 1- As the reviewers suggested and to improve the quality and acceptability of the proposed constraint based search (CBS) method elaborated in the manuscript, a synthetic case study was designed and the efficiency of CBS to find behavioral parameter set, *uncalibrated but constraints*, has been discussed.
- 2- We tried to improve the explanation of proposed CBS strategy in the manuscript.
- 3- The introduction was enriched by bringing in a more complete literature review.
- 4- We added a new section for reasoning why we do need constraints and why they are crucial in hydrological modeling by elaborating the results from the companion paper and other recent studies (Gao et al., 2014; Hrachowitz et al., in review).
- 5- The title is changed to better represent the scientific message of the manuscript.

References

- Gao, H.; Hrachowitz, M.; Fenicia, F.; Gharari, S. & Savenije, H. H. G. Testing the realism of a topography-driven model (FLEX-Topo) in the nested catchments of the Upper Heihe, China Hydrology and Earth System Sciences, 1895-1915, 18(5), 2014.
- Hrachowitz, M.; Fovet, O.; Ruiz, L.; Euser, T.; Gharari, S.; Freer, J.; Savenije, H. H. G.; Gascuel-Oudou, C.: Process Consistency in Models: the Importance of System Signatures, Expert Knowledge and Process Complexity, Water Resource Research, in review.