

“Analyzing the generalization capabilities of hybrid hydrological models for extrapolation to extreme events”

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Second iteration

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Minor remarks

L31 “... does provide ~~a sense of~~ interpretability ...”

L36 “Building on this research line, and ...”

L44 “Does the combination of process based and data driven techniques **hybrid modeling** offer ...”

L61 “... we split the training and test ~~periods~~ **set temporally** by years ...”

Figure 1 Use “Time” or “Date” as label for x-axis (also in Figure 5). The legend label “obs” should be changed to “Observed”, also for consistency with Figure 5.

L151 “~~The result that both the LSTM and the hybrid model outperform the stand alone HBV~~ **This** is not surprising, ~~and as ...~~”

L154 “... attributed to the fact that **conceptual** process-based models ...”. Some process-based models are very complex, maybe use “conceptual”?

L158 “Moreover, we ~~also~~ show ...”

Figure 2 Here and in other figures: I usually re-introduce abbreviations (NSE, later APE) in figure captions.

225 “This saturation limit **could** explains ...”

Figure 6 For consistency, I suggest to remove the last sentence in the caption. You don’t do this for figure 1, for example, and it is clear anyway.

L261 Also glacier melt in addition to snow?

L280 Semicolon between “Kraft et al. (2022); Hoge et al. (2022)” probably wrong.

S3.6 Limitations you could mention here taht you did not test for spatial generalizability.

Appendix D I appreciate the inclusion of a brief analysis of the learned hybrid model dynamic parameters in Appendix D. The appendix/figure is not mentioned in the main body. This would be an opportunity to briefly discuss “interpretability” of hybrid models and the usefulness for understanding / debugging / establishing trust in the model.

L393 It is **Högge** with umlaut.