Ocean Science
Discussions

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Interactive comment on "Hybrid improved EMD-BPNN model for the prediction of sea surface temperature" *by* Zhiyuan Wu et al.

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This article is about the prediction of sea surface temperature based on Ensemble empirical mode decomposition (EEMD) algorithm and Complementary Ensemble Empirical Mode Decomposition (CEEMD). This manuscript is focused on characterization the regional distribution of SST in the period 1982 to 2016 based on the OISST dataset. This topic is interesting. The questions that this paper aims to answer make sense and deserve the investigative effort made by the authors. But I have some detailed comments listed below to further improve this manuscript.

1. The introduction should make the key points stand out, directly point out the significance of the study and the existing problems, as well as the highlights of this paper.

2. The presentation of the OISST dataset contains details which are based on current conventions and so will mean nothing in the future when these conventions have changed. Better to stick with statements that have a meaning in plain language if you can.

3. The introduction of EMD method, EEMD method and CEEMD method should be more specific, especially the relationship and difference between them should be clear.

4. In order to improve the readability and repeatability of the article, the authors should introduce in more detail how to use BP neural network method and EMD methods to build the hybrid model.

5. The explanations of some nouns are not clear enough, such as statistical analysis, non-linearity and statistical signals. These words seem to require some more professional elaboration.

To summarise, this paper has the potential to be a useful contribution to the literature but will require revision before publication. Some references that are not usually quoted have been identified which is helpful. While the topic is of interest for the ocean community, I believe that requires many formal and substantial improvements before being published. Therefore, I cannot recommend its publication in the present form, and ask the authors to provide a minor revision of the manuscript.

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