

Dear Anonymous Referee #2,

We would like to thank you for your constructive and useful comments on how to improve our manuscript. We have already revised our paper according to your comments. The details are as follows.

Comment 1: Line 9 of page 6, the sub-title “3 Methodology” should be changed to “3 Methods”.

Response of authors: Yes, we revised that according to your suggestion.

Comment 2: In order to facilitate the readers to iterate the computing process, the MATLAB program for EEMD should be indicated by denoting the related references in the section “3.1 EEMD method”.

Response of authors: Yes, according to your suggestion, we gave the related references and the web site where the MATLAB program for EEMD can be downloaded. We indicated that the MATLAB programs for EEMD are provided by RCADA, National Central University, which can be downloaded at the website (http://rcada.ncu.edu.tw/research1_clip_ex.htm).

Comment 3: Generally, the coefficient of determination is denoted as R^2 in statistics. The CD in formula (14) on page 12 seems to be the R^2 . Please confirm that the CD is the same meaning with R^2 . If my understanding correct, they should be unified. The related question is that the R^2 value of the formula (16) on page 15 should be marked out.

Response of authors: Yes, you are right. We already confirmed that the coefficient of determination is denoted as R^2 in statistics, and the CD in our paper is the same meaning with R^2 . In order to unify express, we already changed the “CD” to “ R^2 ” in the whole text.

Comment 4: The section “4 Results and discussion” needs more discussions. The authors should give an explanation why the hybrid model is much better than a single BPANN. What is the reason for this?

Response of authors: Yes, we have done as your suggestion. We explained that the reason for “the hybrid model is better than a single BPANN” as follows: All the indices illustrate that the hybrid model is much better than a single BPANN. The reason for this is that the hybrid model concentrated the advantages of both EEMD and BPANN. Where the EEMD can precisely decompose the non-linear and non-stationary signal of AR to intrinsic mode functions (IMFs), and the BPANN can well recognize and accurately simulate the IMFs. Because the non-linear and non-stationary AR signal contains many components and each component has its own intrinsic mode, a single BPANN can not accurately recognized and simulated the all change patterns in AR series. For this reason, this study used an integrated approach to conduct the hybrid model. In order to identify the pattern of each component in the non-linear and non-stationary AR signal, we firstly used the EEMD to decompose the AR series to four intrinsic mode functions (i.e. IMF1, IMF2, IMF3 and IMF4) and a trend (RES). Then we used the BPANN to accurately recognize the pattern of each IMF by net learning and training, while using the nonlinear regression to exactly simulate the pattern of the trend (RES). The above simulated results have already proved that our hybrid model is effective.

Comment 5: To avoid any error, please carefully check all words and sentences in the whole text

before the manuscript to be resubmitted again. For example: (1) Line 22 of page 3, the first alphabet of the first word in the sentences “physically based land surface model....” should be capital, i.e. “physically” should be change to “Physically”. (2) Line 24~25 of page 15, the sentences “All the indices illustrate that the hybrid model much better that a single BPANN” should be changed to “All the indices illustrate that the hybrid model is much better than a single BPANN”.

Response of authors: Yes, According to the comments and suggestions, some grammars and spelling errors have been corrected, and the English has also been polished by one of my colleagues from America.

Again, we would like to thank you for your generous comments given to the improvement of our manuscript.

Best wishes,

Yours sincerely,

Authors,

Jianhua Xu, Yaning Chen, Ling Bai, Yiwen Xu

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