

Dear reviewer,

We would like to thank you for handling and reviewing our paper. These valuable reflections assisted us in improving our paper. The manuscript ( Title: **Optimal Power Allocation for Channel-Based Physical Layer Authentication in Dual-Hop Wireless Networks**) ) has been carefully revised according to your suggestions. We have corrected the grammatical errors you raised and made some modifications to the content. The main revisions in the paper are as follows.

- 1) In section I, we added more details. References 1 and 9 you provided and other references were cited to add details about 6G. In addition, we merged the statement about reference 8 and 9, and removed the statement about reference 10.  
At the end of section I, we add two tables, which are to explain all the symbols we used in the article and performance of different authentication.
- 2) In section II, we modified some of the text at the top of figure 1 following the authentication logic to make process in figure 1 easier to understand.
- 3) In section VI, we changed the y-axis 'Pd' to 'Detection Probability' in Figure 2 and 3. And we described the parameters selected in the table and deleted some elements in the table. For convenience, we colored the curves in figures.
- 4) In section VII, we explained the limitations and follow-up of the scheme.

Thank you again for your generosity with your precious time invested in improving the paper.

We sincerely hope you will be satisfied with the revised paper.

Sincerely

The Authors