

Dear reviewer,

Thank you for your valuable feedback on our manuscript. We truly appreciate your insightful comments, which we believe will significantly enhance the quality of our work. All changes in the revised manuscript are highlighted in red. And below are our replies to the comments point-by-point:

**(1) The language of the manuscript needs to be further improved for clarity, coherence and linguistic accuracy (like, line 107 “easy implemented”, line 571 “the self-wight consolidation”), a thorough proofreading is recommended to eliminate any grammatical errors, spelling mistakes, or inconsistencies in terminology.**

**Response:** Thanks for your suggestion. We have conducted a comprehensive review to improve the language of the manuscript to eliminate grammatical error, spelling mistake and inconsistency in terminology. Hoping that the revised manuscript meets the standard of scientific writing.

**(2) In section 4.2, how long is the simulation time?**

**Response:** Sorry for the mistake, the simulation time of example 2 is 0.1s, and we have added it in the revised manuscript.

**(3) The introduction provides useful background information, but the specific research gap addressed by this study could be more clearly stated to show the research motivation.**

**Response:** Thank you for this suggestion. We have revised the first paragraph of the introduction to further emphasize the motivation behind this study. The revised version provides a clearer understanding of the rationale behind our work and how our study is motivated.

**(4) The discussion and conclusion section could be refined to strengthen the connection**

**between results and broader implications, clarify the limitations and highlight the significance of the findings.**

**Response:** Thank you for the suggestion. We have refined the section of discussion and conclusion to better establish the connection between our results and their broader implications, and provide more detailed findings that emphasize the significance of our work. Additionally, we have also clarified the limitations of our study. We believe these revisions effectively address your concerns and improve the clarity and depth of our conclusions.

Best,

Xiong (on behalf of all co-authors)