

### **Editor's Comment:**

The authors have revised the manuscript according to the reviewers' feedback. Theoretical equations have been derived to determine the dynamic buckling load of an imperfect spherical cap with a step load. The topic is interesting. However, I suggest the authors do the following modification before I recommend the manuscript for publication.

1. On line 124, please add some sentences to explain why you neglect the pre-buckling inertia term.
2. It is difficult to understand line 163 and 164. Please re-phrase them and explain the sentence "we equate to zero" in EQ. (36). How do you get Eq. (37a) and (37b) from Eq.(36)?
3. From line 359 to 365, the authors gave several important conclusions without detail interpretation. Would you please explain more how you make each of your conclusions? For instance, the authors stated "The above results indicate that dynamic buckling load increases if the structure is less imperfect" on line 359. Do you get this conclusion from Eq.(68)? How? Please validate it.
4. Please re-phrase the sentences from line 361 to 363. What is the meaning "is felt is" on line 362?
5. From line 365 to 367, the authors provided several parameters to plot figure 1 and 2 from equation (68). For repeatability and validation, would you please list a table to give the values of other intermediate parameters such as  $I_{10}$ ,  $I_{20}$ ,  $R$ ,  $S$ , ....etc. in Eq.(68)?
6. In the paper body, please explain and highlight you following conclusion shown in the abstract. "We also determine the effects of each of the non-linear terms as well as the effects of the coupling term."

### **Authors feedback**

**Checked, and the corrections and observations are effected therein.**