Response to Reviewer 1 Comments

Point 1: The authors are suggested to go through a careful proofreading to correct the following typos and grammar mistakes:

1.1) "PDMeshNet proposes a novel method, which convert the mesh"

1.2) "We follow the setup in MeshCNN [14], two evaluation methods are adopted"

1.3) In Equation (1), the symbol "-->=" should be explained.

Response 1: Thank you very much for finding these errors. We are sorry for these mistakes and have corrected it. All modifications are marked in red in the revised manuscript.

1.1) The original "PDMeshNet proposes a novel method, which convert the mesh to the primal-dual graph" is modified as "PDMeshNet proposes a novel method, which converts the meshes to the primal-dual graphs". **(p. 2, lines 43-44)**

1.2) The original "We follow the setup in MeshCNN, two evaluation methods are adopted, 16 training and 4 tests in each class (Split 16) and 10 training and 10 tests in each class (Split 10)" is modified as "We follow the setup in MeshCNN, where the dataset contains two different splits: 16 training and 4 tests in each class (Split 16) and 10 training and 10 tests in each class (Split 10)". **(p. 8, lines 217-220)**

1.3) We are very sorry, this is indeed an inappropriate symbol. The original "[b,c,d] →= [d,b,c]" is modified as "[b,c,d] → [d,b,c]". And we add some descriptions as "where b, c, d are the indices of adjacent faces, and after sorting, the original unordered face indexes become the ordered on the right." **(p. 5, lines 145-146)**

Point 2: The proposed algorithm seems a bit involved, and it would be helpful to the readers if the authors provide a demo of the source code (once the manuscript is accepted for publication).

Response 2: Thanks a lot for your suggestion, we would also like to share our codes. If there are readers who need the complete source code, they can contact the author. If time permits, we will open source our demo soon.

Point 3: The proposed method is based on calculating simple geometrical features. Another direction to deal with mesh data is using simplicial complexes. It is interesting to see some discussions on difference between the proposed models and simplicial-type neural networks.

Response 3: Thank you very much for your professional advice, and we did neglect some discussion with simplicial-type neural networks in the section of the experiment. We supplement the discussion in section 4.5: "HodgeNet, which generalizes simple complex to mesh-based deep learning, can obtain good results with small number of parameters. However, this is difficult to use GPU to accelerate its operation by relying only on existing deep learning tools, which are more suitable for matrix processing instead of geometry processing. On the contrary, our method generalizes CNNs to the meshes, which is very efficient with the help of existing CNNs." **(p. 12)**