**Reviewer 2**

**Corrections by Authors**

Title: **Dynamic Analysis of Viscoelastic Circular Diaphragm of a MEMS Capacitive Pressure Sensor using Modified Differential Transformation Method**

|  |  |
| --- | --- |
| **Reviewer 2** | **Actions and Response by Authors** |
| 1. A comparison with results obtained by other analytical expressions is highly recommended | It was done in the Study,  By comparing the DTM, MDTM with another numerical method FDM.  See Figure 2 and Table 1 in the Study |
| 1. I take exception to what the authors claim in the second paragraph on page 2 when they claim that “it is more efficient than ADM, HPM, HAM, VIM, FEM, RK4” for the following reasons: 2. This claim in not established neither in this article nor elsewhere. Therefore, it is required that the authors gives a proof of this claim or provide references where such a proof can be found.   (b) The list of methods that the authors provided as potential approaches for solving underlined model comes short of sufficiency. Other powerful analytical and numerical methods that are known to deliver highly accurate results include, but not limit to, modified homotopy perturbation method, Green’s function iterative methods, and wavelets-based methods. These methods must be referenced in order for the literature to provide a comprehensive pool of renown methods as proved in modern research.  The following list of papers are very recent and give good descriptions of these methods:  <https://pubs.acs.org/doi/pdf/10.1021/acs.jpcb.9b07191>  <https://doi.org/10.1177/1461348418822135>  <https://doi.org/10.1115/1.4036813>  <http://dx.doi.org/10.18576/amis/110128>  <https://doi.org/10.1007/s11042-019-7695-0>  <https://doi.org/10.1177/1077546316657781> | The claim has been corrected and the **INTRODUCTION** has been reconstructed.  More publications have been reviewed and used in place of the former ones.  See Papers 13 – 19 in the Introduction and References  See the new **MANUSCRIPT** |
| 1. Every analytical method is known to have some undesired drawback or limitations. I suspect that this method would also have some of these setbacks. | The drawback of DTM is that DTM shows slowed convergent rate and may oscillate.  This has been addressed and treated in the study by applying the Modified Differential Transform Method (MDTM).  See the Introduction highlighted in yellow  See the new **MANUSCRIPT** |
| 1. Global convergence of the method must be discussed. | The Modified Differential Transform Method (MDTM) is an effective approximate analytical method for solving both Linear and Nonlinear differential Equations.  It is applied to obtain solutions where non-convergence of solution is observed.  In the MDTM, the model is first solved by differential transform method. The solution obtained is transformed by Laplace transform into s-domain and the Padé approximant of the resulting solution is obtained. Finally, the inverse Laplace transform is applied to obtain the final solution in time-domain. |
| 1. There is no discussion for Figure. It is noticed that the DTM and FDM don’t extend beyond the range [0, 1].   In fact, I don’t see the FDM being recorded at all in Figure 2. | It has been done.  The discussion was placed before the Figure, but it has been corrected.  The FDM is the **RED PLOT** in Figure 2  The MDTM is applied to correct this defect. That is the reason for applying MDTM.  See the new MANUSCRIPT |
| 1. Figure 10 discussion needs to be revised. | It has been done  The Figure 10 discussion has been revised  It is now Figure 9, because of the removal and addition of graphs as suggested by other Reviewers  See the new MANUSCRIPT |
| 1. The conclusion needs to be revised in away that reflects the novelty of the proposed approach. | It has been done.  The Revision with the novel approach is highlighted in yellow background in the Conclusion.  See the new MANUSCRIPT |
| 1. English language, style and punctuations should be revisited. | It has been done.  A careful study of the Manuscript will show that.  The English language used in the **MANUSCRIPT** has been reconstructed.  See the new MANUSCRIPT |