Response to review of paper entitled:

Nonlinear dynamic analysis of a nonlocal nanobeam resting on fractional visco-Pasternak foundation by using the incremental harmonic balance method

<u>Reviewer 1:</u>

The originality is in the inclusion of the Pasternak foundation as this implies the use of the fractional order derivative (second term in equation (2)). The remaining terms in (2) are conventional, despite the physical system being at the nano-scale.

The writing is generally fine, but there are a few minor points to consider:

Summary - line 3: the wording is unclear at the end of this line.

Could the mention of the carbon nanotube physical system be moved up to the introduction? What is the justification physically for the Pasternak foundation? It is only this feature that distinguishes this problem as one at nano-scale.

<u>Answer:</u>

- Sentence is grammatically corrected by removing "the by". Now is:
  "Corresponding forced Mathieu-Duffing equation is solved by using the incremental harmonic balance (IHB) method for the strong nonlinear case."

- Following text is moved from problem statement into introduction:
  "It should be noted that, under certain assumptions, a nonlocal beam model could represent nanostructures such as carbon nanotubes. In that case, boundary conditions to analyze the free or forced vibration of a nanobeam structure can be prescribed based on the end conditions in a carbon nanotube i.e. a number of layers of fixed atoms in the lattice (e.g. see [7]). If only one layer of atoms is fixed at both ends of carbon nanotube, we can use simply supported (S-S) boundary conditions in the mechanical model, and if several layers of atoms are fixed, we can use boundary conditions of clamped-clamped (C-C) nanobeam."

- Justification physically for the Pasternak foundation. Following sentence is introduced:
  "Pasternak elastic foundation model is usually used for materials which besides normal deflection contains shearing distortion."
  Following reference confirms in that nano mechanics between carbon nano tube and supstrate exists shear stress:
  [1] PAN, Huiyan. Determination of shear stress between single-walled carbon nanotubes and substrates using NEMS devices. 2013. PhD Thesis. Northeastern University.

The problem under consideration is original. Ir seems that new interesting results are obtained.

The authors are asked to explane transfer from eq. (1) to eq. (2). A sense of the variable q must be explained too.

Please, correct Title and References according to Template.

Answer:

- By adding following text transfer from eq.(1) to eq.(2) and sense of the variable q are explaned
  "and we assume the solution of nondimensional version of Eq.(1) as $\bar{w}(\bar{x}, \tau) = \phi(\bar{x})q(\tau),$"
  More detailed explanation was not possible due to limitation of abstract length to 2 pages.

- Title and references are corrected according to Template.