Comments on the paper

“A Modification Fractional Homotopy Perturbation Method for Solving Helmholtz and Coupled Helmholtz Equations on Cantor Sets”

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The paper needs major revisions.

1. Lines 29-30. The authors use abbreviations without their explanation. The reader does not know what does it mean: “LFDM, LFVIM, LFDTM, LFSEM, LFSTM, LFLTLM, LFRDTM, LFLVIM, LFFSM, LFHPM”?

2. In mathematical equations “sinh” should be written in roman type, not in italics “\(\sinh\)” (see Equation (2.5) and lines 145 and 149).

3. Section 2. “Mathematical Fundamentals” does not contain any reference. Definition 1 of the local fractional derivative was not proposed by the author of the paper under review. This definition was proposed by Kolwankar and Gangal:


These paper should be added to References.

4. In all the examples, the domain for the coordinate \(\mu\) and for the coordinate \(\tau\) should be indicated. The standard Helmholtz equation is considered in the spatial domain. It is not clear in which domain is considered “the Helmholtz equation” studied in the paper. On line 85, the authors write: “the initial value conditions”. In my opinion, there should be “the boundary value conditions”. The same concerns other examples.

5. It would be a good idea to present some numerical results.

6. References should be prepared according to the MDPI rules.

7. English of the paper should be improved (grammatical mistakes, wrong use of articles and punctuation marks, non-English structure of sentences, etc.).