

Peer Review

Review of: "On the Fractional Dynamics of Kinks in sine-Gordon Models"

Abdulla - Al - Mamun¹

1. State Key Laboratory of Hydrology-Water Resources and Hydraulic Engineering, Nanjing, China

The paper titled "On the Fractional Dynamics of Kinks in sine-Gordon Models" explores the dynamics of single kinks, kink-anti-kink pairs, and bound states in the prototypical fractional Klein-Gordon example of the sine-Gordon equation. The authors must look carefully at the following points:

1. The authors suggested making the title more apparent and more specific.
2. In the abstract, the aim of this paper needs to be clarified.
3. Please confirm the punctuation mark for each equation.
4. The whole manuscript should be checked for typos and grammatical errors.
5. What is the novelty of the work, and where does it go beyond previous efforts in the literature?
6. What are the real-life and physical explanations of your paper?
7. It is suggested that more content about the physical interpretation of the solutions and more descriptions of the figures are given.
8. Some important works related to recent developments in the study of fractional calculus, numerical methods, and its applications may be discussed in the introduction part:

<https://doi.org/10.1016/j.chaos.2024.114892>

<https://doi.org/10.1038/s41598-024-60156-w>

<https://doi.org/10.1038/s41598-024-55215-1>

<https://doi.org/10.1016/j.padiff.2023.100522>

<https://doi.org/10.1016/j.rinp.2022.105969>

<https://doi.org/10.1016/j.rinp.2022.105845>

<https://doi.org/10.1016/j.rinp.2020.103517>

<https://doi.org/10.1016/j.heliyon.2021.e07483>

<https://doi.org/10.1016/j.heliyon.2021.e07704>

<https://doi.org/10.1016/j.padiff.2021.100237>

<https://doi.org/10.1016/j.padiff.2021.100238>

9. The Concluding Remarks section should discuss the limitations and recommendations for further work.

Declarations

Potential competing interests: No potential competing interests to declare.