

Review of: "Multiplicity of solutions for nonlocal fractional equations with nonsmooth potentials"

Mustafa Yıldız¹

¹ Bulent Ecevit University

Potential competing interests: No potential competing interests to declare.

Report on the paper entitled "Multiplicity of solutions for nonlocal fractional equations with nonsmooth potentials"

This article delves into the exploration and analysis of nonlocal fractional Laplace problems with nonsmooth potentials. Within the scope of this research, the authors demonstrated the existence of at least three weak solutions to the nonlocal destruction problem. In order to show these results, they used the abstract critical point theorem for non-smooth functions and Servadei and Valdinoci's theoretical account for fractional Sobolev functions.

After reviewing this manuscript in detail, it has been seen that it contains interesting and good results. Additionally, this study improves on several outcomes reported in the existing literature.

The paper has a good structure. It contains interesting ideas and in my opinion, the main results are new with correct proofs and has a potential for researchers.

The paper needs a minor revision with respect to the following comments:

1. In Abstract, the first sentence "This paper is concerned a..." should be rewritten as "This paper is concerned with a...".
2. This paper could benefit from some information about the equation and its applications in other disciplines or in nature. These sentences would enrich the Introduction section.
3. Please check the second page of the manuscript for some typos. For example, at the end of paragraph 3, the statement "et. al." should be rewritten as "et al.". Also, the statement in paragraph 4, "To the best of our knowledge, there exist no results..." should be restated as "To the best of our knowledge, there exists no results...".
4. The format of the references should be checked. When it comes to punctuation and abbreviation, there are some inconsistencies between the references, (e.g. Reference 6 and 7).

After these corrections, I am pleased to recommend this paper for publication.