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

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Potential competing interests: No potential competing interests to declare.

Report on the manuscript

Description of the content. This paper deals with a special category of nonlocal fractional problems involving nonsmooth potentials. The authors proved existence of at least three weak solutions for the problem by utilizing an abstract critical point theorem.

Reviewer's evaluation

This paper aims to keep on the study of fractional problems with nonsmooth potentials. The authors previously in [32, Theorem 3.4] have extended a smooth Ricceri three critical points theorem to a no-smooth case and in the current paper, they utilized the obtained theorem in [32] to obtain new multiplicity result.

The authors gived a comparison with the previous obtained result and they mentioned a remarkable feature of their new results.

As far as I know, such nonlocal fractional problems have applications in nonsmooth mechanics and engineering and such problems have been studied rarely. So, I found the results of the paper interesting .

The paper contains some typos, So I suggest to reread the paper and correct misprints. For example:

- Page 2, line 20, please replace " problem 1.1" by " problem (1.1)".
- In Preliminaries, line 5, replace "linear" by " linear space ".
- Page 6, line 18, replace " Theorem 3.3" by " Theorem 3.4"
- Page 9, line 5, replace " Fadou's lemma" by " Fatou's lemma".
- Page 9, line 3, replace

$$\langle I'(u) - I'(v), u - v\rangle$$

by

$$\langle I'(u_n) - I'(u), u_n - u\rangle$$

- Page 12, line 11, replace "$ \lambda$" by " $ \lambda_1$" in the equality.
- Page 13, line 2, replace "M" by " M_1" in the inequality.