

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

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A specific category of nonlocal fractional Laplacian problems that involve nonsmooth potential has been reviewed. Then, the utilization of an abstract critical point theorem for nonsmooth functionals developed by Servadei and Valdinoci, and combining it with the analytical framework on fractional Sobolev Space has been well-analyzed.

In this paper, the authors mainly focus the existence of at least three weak solutions for nonlocal fractional problems. Also, this work generalizes and improves upon certain results presented in the existing literature.

The basic preliminaries of this paper are enough to understand the main result contents. Also, I appreciate the authors for utilizing the existing results to prove their results.

In this article, the hypotheses for described functions  $F$ ,  $G$ , and  $H$  are well defined and equipped.

Page 8, Remark 3.1, Check the hypothesis consideration... ( $H_4$ ) is not described.

Page 8, the proof of Lemma 3.1 is clearly and remarkably proved. They showed the monotonicity of  $I'$ , but I cannot understand that how to showed the fact  $I'$  is strictly monotonic from the above result.

Lemma 3.2 is proved by using Hahn-Banach theorem to show the result of the lemma.

The proof of theorem 3.1, Line 2, please abbreviate the l.s.c. Is this lower semicontinuous?

Please describe for getting the equation (3.7) from  $G_3$  and  $G_4$ .

The technical part of the theorem is executed well.