Review of: "New adaptative numerical algorithm for solving partial integro-differential equations"

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Potential competing interests: No potential competing interests to declare.

Referee's Report on Manuscript Entitled:

New Adaptive Numerical Algorithm for Solving Partial Integro-Differential Equations

In this work, the author introduces an accurate numerical approach based on orthonormal Bernoulli polynomials for solving parabolic partial integro-differential equations. Some operational matrices are given for these polynomials and are also used to obtain the numerical solution.

I read the work carefully. The paper was written smoothly, but the paper suffers from some minor weaknesses that I explain hereafter.

In conclusion, I recommend it be accepted for publication with minor modifications.

Detailed Comments:

(1) Please improve the language and the structure of the whole manuscript. There are some errors and typos in the manuscript. For example, in the Abstract, "acurrate", "appraoch", and "matrix" must be changed to "accurate", "approach", and "matrices" respectively.

(2) Equation (1) should be elaborated in detail.

(3) Clear statements of the novelty of the work should also appear briefly in the Abstract and Conclusion sections.

(4) Authors should improve the introduction and add the below references for better representation.

a. https://doi.org/10.1080/00207160.2017.1417593

b. https://doi.org/10.22128/gadm.2021.491.1065

c. https://doi.org/10.22128/gadm.2021.492.1064

(5) In relation (10), "u(x)" and "Pj-1,T (x)" must be changed to "u(x, t)" and "Pj-1,T (t)", respectively.

(6) Is it possible to check the stability of the method in this problem?