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.

1. How do the orthonormal Bernoulli polynomials contribute to the accuracy of your numerical algorithm, and how are they utilized in solving PIDEs?

2. The abstract mentions a comparison with other well-known methods. Could you elaborate on the specific methods you compared your approach to and the criteria used for comparison?

3. The introduction mentions various applications of orthonormal functions in solving numerical problems. Could you provide a more detailed explanation of how orthonormal Bernoulli polynomials specifically benefit the solution of parabolic PIDEs?

4. How do you determine the order of the orthonormal Bernoulli polynomials (N+1 and M+1) in the approximation process?

5. In Equation (9), what is the significance of the matrices $\Phi_{b,N}(x)$, U, and $\Phi_{T,M}(t)$, and how are they related to the overall approximation?

6. Could you provide more details on how the pseudo-spectral method is employed to solve PIDEs, and why the choice of N=M is made in your work?

7. In Example 3, a comparison is made with another method. Could you explain the criteria used for comparison and the reasons for the observed better accuracy in your method?