

Review of: "A Novel Computational Approach for Solving Fully Implicit Singular Systems of Ordinary Differential Equations"

Zuzana Pátíková¹

¹ Tomas Bata University in Zlin

Potential competing interests: No potential competing interests to declare.

I find the paper of good quality, I suggest to accept it for publication after minor modifications.

The novelty of the result is average. The area is far more studied then indicated. I suggest to look for more results in the field so that the references include more workplaces, where similar topics are/were studied (e.g., Parker - Sochacki group, Šmarda - Rebenda, and others). According to the literature, compound functions can be translated by DT either by Adomian polynomials, but also by Bell polynomials which do not need symbolic differentiation. The result would be stronger, if some coding was made, showing that the algorithm can be easily applied also in the cases when the exact solution is not known. I also recommend to comment on convergence of the sums in general. However, overall, the paper is well written, in good English. There are some issues that could be taken into account and modified:

- Some phrases are repeated many times (usually those emphasizing the "novelty"). They do not have to be.
- Clear up the numbering of equations. Let the numbers only where the reference is later used.
- Unify the references/literature. Now there is a mix of styles. Go through each single item.
- In the formulation of theorems, I suggest to omit the first part describing the situation and to put it out of the statements.
- In Example 1: relation (44), there are mistakes in signs in the very last vector. It would be also good to write down the explicit form of exact solution here.
- In Example 3 and 4 I think you use Theorem 2 (but there is Theorem 1 mentioned).