

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

Wen-Xiu Ma¹

¹ University of South Florida

Potential competing interests: No potential competing interests to declare.

The author construct approximate solutions to a class of singular ODEs by applying Adomian polynomials. In all examples, $tx(t)$ will be analytic and so the Frobenius theory covers such ODEs. The convergence of the suggested series solutions will be more important, and new examples without exact analytic solutions will be very interesting. Generally speaking, the topic is of interest to applied science researchers and the results amend the existing literature on computational mathematics.

We point out that in theory, N -soliton solutions, a kind of exact multiple wave solutions, can be presented systematically by the Hirota direct method for integrable equations (see, e.g., *Opt Quantum Electron*, 52(2020), 511), and it is of much interest to see if such Adomian polynomials could be applied to presenting approximate solutions to such integrable equations and even multi-component integrable equations recently proposed (see, e.g., *Mod Phys Lett B*, 37(2023), no. 32, 2350143 and *Rom Rep Phys*, 75(2023), no. 3, 115). A revised and amended version of the manuscript, together with comments on those exiting studies on related topics, will be reconsidered and recommended for publication in the journal.