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Title:

A PARTICULAR NEWELL-WHITEHEAD-SEGEL EQUATION BY VARIOUS METHODS

By:

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Abstract: In this paper, we consider various methods for finding approximate and exact solutions of a particular Newell-Whitehead-Segel equation: Laplace transform method, differential transform method and homotopy perturbation method. The numerical solution is found by replacing the second-order partial derivatives with a centered difference approximation. The equation presented herein is aimed also at demonstrating the use of Scilab in numerical solutions to PDEs.

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