Two and three point one-step block methods for solving delay differential equations

ABSTRACT

In this paper, initial value problems of first order delay differential equations (DDEs) are solved using two and three point one step block method. Nevilleôs interpolation will be implemented for the solutions of the delay argument. The general formulation of one-step block method for solving ordinary differential equations is adapted to solve DDEs. The P- and Q-stability are also discussed. Numerical results are given to illustrate the performance of those block methods for solving delay differential equations.

Keyword: Delay differential equations; Variable step size; Block method