Implementation of 2-point 2-step methods for the solution of first order ODEs.

ABSTRACT

In this paper the 2 point 2 step methods (2PG, M2PG, M2PF) for solving system of first order ordinary differential equations are proposed. These methods at each step will approximate the solutions of initial value problems at two points simultaneously using variable step size. In addition, the stability of the proposed method are discussed. Examples are presented to illustrate the computational aspect of these methods.

Keyword: Block methods; Ordinary differential equation; Numerical results.