

A direct 4-point predictor-corrector block method for solving general third order ODEs

ABSTRACT

A multistep integration method based on Adams type formulae subject to varying step size is proposed for direct solution of general third order ordinary differential equations (ODEs). This direct 4-point block method will be implemented in Pk-1 E(Ck E)m mode and the numerical solution will be generated at four equally distance points simultaneously. Numerical results are given to compare the efficiency of this developed block method to the existence method in [1].

Keyword: 4-point block method; ODEs; Block method; Third-order ordinary differential equations