A new algorithm for solving higher order IVPs of ODEs

ABSTRACT

In this paper, aPk-1E(CkE)m scheme of 3-point block method for solving general higher order ordinary differential equations (ODEs) directly is considered. This direct multistep integration method is implemented with variable step size strategy and the approximation solution will be computed at three points simultaneously. Several tested problems of higher order initial value problems (IVPs) of ODEs are taken into account to emphasize the main features of the proposed method.