

عنوان مقاله:

Global error estimation of linearmultistep methods through theRunge-Kutta methods

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خلاصه مقاله:

In this paper, we study the global truncation error of the linear multi- step methods (LMM) in terms of local truncation error of the corresponding Runge-Kutta schemes. The key idea is the representation of LMM with a cor- responding Runge-Kutta method. For this. we need to consider the multiple - step of a linear multistep method as a single step in the corresponding Runge Kutta method. Therefore, the global error estimation of a LMM through the runge kutta method will be provided in this estimation, we do not take into account the e ects of roundo errors. The numerical .illustrations show the accuracy and efficiency of the given estimation

کلمات کلیدی:

Linear multistep methods; Runge-Kutta methods; Local trun- cation error, global error, error estimation

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