

Formulation of Corrector Methods from 3-Step Hybrid Adams Type Methods for the Solution of First Order Ordinary Differential Equation

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Abstract : This paper focuses on the formulation of 3-step hybrid Adams type method for the solution of first order differential equation (ODE). The methods which was derived on both grid and off grid points using multistep collocation schemes and also evaluated at some points to produced Block Adams type method and Adams moulton method respectively. The method with the highest order was selected to serve as the corrector. The convergence was valid and efficient. The numerical experiments were carried out and reveal that hybrid Adams type methods performed better than the conventional Adams moulton method.

Keywords : adam-moulton type (amt), corrector method, off-grid, block method, convergence analysis

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