

The Taylor series method of order p and Adams-Bashforth method on time scales

Svetlin Georgiev¹ and Inci Erhan²

¹Sorbonne Universite

²Atilim Universitesi

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Abstract

A recent study on the Taylor series method of second order and the trapezoidal rule for dynamic equations on time scales has been continued by introducing a derivation of the Taylor series method of arbitrary order p on time scales. The error and convergence analysis of the method is also obtained. The 2 step Adams-Bashforth method for dynamic equations on time scales is concluded and applied to examples of initial value problems for nonlinear dynamic equations. Numerical results are presented and discussed.

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taylor_series_orderp_submitted.pdf available at <https://authorea.com/users/449353/articles/547898-the-taylor-series-method-of-order-p-and-adams-bashforth-method-on-time-scales>









