

On the derivation of second order variable step variable order block backward differentiation formulae for solving stiff ODEs

ABSTRACT

In this paper, we derive a second order Variable Step Variable Order Block Backward Differentiation Formulae (VSVO-BBDF (2)). This method pertains to the study of solving stiff Ordinary Differential Equations (ODEs) of second order (y''). The pertinent findings in term of total number of steps, accuracy and computational time are displayed and discussed through distinct tables.

Keyword: BBDF methods; Second order ODEs; Stiff ODEs