

## **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