

## Stability of block backward differentiation formulas method

### ABSTRACT

In this paper, a technique for finding  $A(\lambda)$  - stability interval for the Block Backward Differentiation Formulas (BBDFs) are presented. The stability region is obtained for a single equation and stable step size restriction is indicated for the BBDF of order four, (BBDF(4)), and BBDF of order five, (BBDF(5)). Numerical examples are given to illustrate the stability interval in choosing a suitable step size in the implementation of the method.

**Keyword:** Backward differentiation formulas; Block method; Stability