

On the convergence of two point block backward differentiation formula for second order ODEs

ABSTRACT

The Two Point Block Backward Differentiation Formula (BBDF2) is a direct solver for second order Ordinary Differential Equations (ODEs). It had shown its efficiency by having less total number of steps and less computational time over the first order ODEs solver. In this paper, the convergence of the BBDF2 is justified by its consistency and zero-stability properties.

Keyword: Two point block backward differentiation formula; Second order ODEs