

Half-sweep two parameter alternating group explicit iterative method applied to fuzzy poisson equation

Abstract

Iterative methods particularly the Two Parameter Alternating Group Explicit (TAGE) methods are used to solve system of linear equations generated from the discretization of two-point fuzzy boundary value problems (FBVPs). The formulation and implementation of the Full-Sweep TAGE (FSTAGE) and Half-Sweep TAGE (HSTAGE) methods are also presented. Then numerical experiments are carried out onto two example problems to verify the effectiveness of the method. The results show that TAGE method is superior compare to AGE method in the aspect of number of iterations, execution time and Hausdorff distance.