28th Southeastern-Atlantic Regional Conference on Differential Equations, October 10–11, 2008, University of Arkansas at Little Rock, Little Rock Arkansas, USA

Coauthors: Behnam Sepehrian, Bijan Farokhi

A NUMERICAL SOLUTION OF THE GENERALIZED BURGER'S-HUXLEY EQUATION USING CUBIC B-SPLINE

MAHMOOD LASHANI

In this paper, numerical solutions of the nonlinear generalized Burger's-Huxley equation are obtained by a method based on collocation of cubic B-splines over finite elements. Applying the Von-Neumann stability analysis, the proposed method is shown to be conditionally stable. The accuracy of the presented method is demonstrated by test problems. The numerical results are found to be in good agreement with the exact solutions.

E-mail address: mahmoodlashani200@gmail.com