

Sufficient condition of stability of finite element method for symmetric T-hyperbolic systems with constant coefficients

ABSTRACT

In this note, Finite Element Method is applied to solve the symmetric t-hyperbolic system with dissipative boundary condition and its stability is proved. In two-dimensional space, complex program is developed for the numerical solution of the mixed problem in simple connected region on the uniform grid. Delphi-7 is used for the code of the complex program. Numerical results are in line with the theoretical findings.

Keyword: Finite element method; Mixed problem; Hyperbolic system; Difference scheme; Stability