论文

A PRIORI L~2 ERROR ESTIMATES FOR GALERKIN METHODS FOR NONLINEAR SOBOLEV EQUATIONS

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摘要   In this paper we study Galerkin approximations to the solution of the nonlinear Sobolev equation $c(u)u_t = \nabla \cdot \{a(u)\nabla u_t + b(u)\nabla u\} + f(u)$ in two spatial dimensions and derive optimal L~2 error estimates for the continuous-time, Crank-Nicolson and extrapolated Crank-Nicolson discrete-time approximations.

关键词   Error estimates, Galerkin method, Sobole

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