WAVE EQUATION WITH $p(x,t)$–LAPLACIAN AND DAMPING TERM: EXISTENCE AND BLOW–UP

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Abstract. In this work, we consider the Dirichlet problem for equation

$$u_{tt} = \text{div}(a(x,t)|\nabla u|^{p(x,t) - 2} \nabla u) + \alpha \Delta u + b(x,t)|u|^\sigma \Delta u^{-2} u + f(x,t).$$

Under suitable conditions on the functions $a$, $b$, $f$, $p$, $\sigma$ the local, global and blow up solutions have been discussed.


Keywords and phrases: nonlinear wave equations, energy estimates, global existence, blow up, non-standard growth conditions.

REFERENCES


