1100-35-45 **Dung Le***, Department of Mathematics, UTSA, One UTSA Circle, San Antonio, TX 78249.
Regularity for Fully Nonlinear P-Laplacian Parabolic Systems: the Degenerate Case.

We will discuss nonlinear heat approximation and L^∞ preserving homotopy techniques and investigate regularity properties of bounded weak solutions of strongly coupled p-Laplacian parabolic systems which consist of more than one equation defined on a domain of any dimension. The main results imply everywhere Hölder continuity of bounded weak solutions and the global existence of strong solutions to nonlinear p-Laplacian parabolic systems. (Received January 22, 2014)