

Meeting: 998, Houston, Texas, SS 4A, Special Session on Nonlinear Analysis

998-35-235 **Dung Le***, Dept. of Applied Mathematics, UTSA, 6900 North Loop 1604 West, San Antonio, TX
78249. *Global Existence for a Class of Strongly Coupled Parabolic Systems.*

A class of strongly coupled parabolic systems is investigated. Sufficient conditions on the structure of the systems are found to assure that weak solutions are bounded and that they are Hölder continuous. Together, these results give global existence of solutions. The theory is then applied to the general Shigesada-Kawasaki-Teramoto model in population dynamics. (Received February 28, 2004)