1056-35-1982   **Yi Li*** (`yi-li@uiowa.edu`), Department of Mathematics, University of Iowa, and Xian Jiaotong University, Iowa City, IA 52242, and **Baishun Lai** (`laibaishun@yahoo.com.cn`), Departmen of Mathematics, Hunan Normal University, and Henan University, Changsha, Peoples Rep of China. *Stability of the Positive Steady States for a Nonhomogeneous Semilinear Parabolic Problem.*

This talk is contributed to the Cauchy problem

$$\begin{cases} \frac{\partial u}{\partial t} = \Delta u + K(|x|)u^p + \mu f(|x|) & in \ R^n \times (0, T), \\ u(x, 0) = \varphi(x) & in \ R^n. \end{cases} \tag{1}$$

The monotonicity/separation property and stability of the positive radial steady states, which are positive solutions of

$$\Delta u + K(|x|)u^p + \mu f(|x|) = 0,$$

are discussed, μ is some positive constant, $0 \leq f \in C^1(R^n \backslash \{0\})$, $K(x)$ is a given local Hölder continuous function in $R^n \backslash \{0\}$, and φ is a bounded non-negative continuous function in R^n. (Received September 22, 2009)