1051-34-19   **Lingju Kong*** (`Lingju-Kong@utc.edu`), Department of Mathematics, University of Tennessee at Chattanooga, Chattanooga, TN 37403. *Uniqueness and dependence of positive solutions of second order singular boundary value problems with integral boundary conditions.*

We study the second order singular boundary value problem

$$u'' + \lambda f(t, u) = 0, \ t \in (0, 1),$$

$$u(0) = \int_0^1 u(s)d\xi(s), \ u(1) = \int_0^1 u(s)d\eta(s).$$

Sufficient conditions are obtained for the existence and uniqueness of positive solutions. The dependence of positive solutions on the parameter λ is also studied. Moreover, application of our theory to a special problem is discussed. To prove our theorem, we utilize some results from the mixed monotone operator theory. (Received June 24, 2009)

1