1014-92-531   **Ryusuke Kon*** (`kon-r@math.kyushu-u.ac.jp`), Hakozaki 6-10-1, Higashi-ku, 812-8581 Fukuoka, Japan. *Dominance in the periodic Lotka-Volterra difference equation and existence of heteroclinic orbits in the Leslie matrix model.* Preliminary report.

In population ecology, in order to understand the influence of environmental or abiotic factors on population dynamics, non-autonomous systems have been studied. In addition to such an important role of non-autonomous systems, other importance is gradually recognized in the study of age-structured population models (e.g, see [Davydova, Diekmann and van Gils, J. Math. Biol., 46 (2003), pp. 95–131]). In this talk, we show that some kind of solution of the Leslie matrix model with a single fertile age-class corresponds to a solution of a periodic difference equation for multi-species population dynamics. By studying such a periodic difference equation, we consider existence of heteroclinic orbits in the Leslie matrix model. Furthermore, we provide a condition for attractivity of heteroclinic orbits (see [Cushing, J. Difference Equ. Appl., 9 (2003), pp. 655–670]). (Received September 20, 2005)