

1116-39-1177      **Nika Lazaryan\*** (lazaryans@vcu.edu) and **Hassan Sedaghat**. *Periodic and Non-Periodic Solutions and Multistability in a Second-Order Ricker Equation with Periodic Coefficients*. Preliminary report.

We study a second-order nonautonomous difference equation with periodic coefficients. The equation is derived from stage-structured population model with Ricker-type recruitment function. We show that the equation has periodic solutions, as expected. However, the range of variation, or amplitude of the periodic coefficients, as well as whether their period is even or odd also play decisive roles. We show that the two cases where the coefficients have even or odd period lead to fundamentally different types of behaviors for the solutions of the equation. (Received September 17, 2015)