1062-39-18

April Harry and Candace M. Kent\* (cmkent@vcu.edu), Virginia Commonwealth University,
Department of Mathematics and Applied Math., P.O. Box 842014, Richmond, VA 23284-2014, and
Vlajko L. Kocic. Global Behavior of Solutions of a Periodically Forced Sigmoid Beverton-Holt
Model.

Our aim in this talk is to investigate the boundedness, the extreme stability, and the periodicity of positive solutions of the periodically forced Sigmoid Beverton-Holt model

$$x_{n+1} = \frac{a_n x_n^{\delta}}{1 + x_n^{\delta}}, \ n = 0, 1, \dots,$$

where  $\{a_n\}_{n=0}^{\infty}$  is a positive periodic sequence with period p and  $\delta > 0$ . In the special case when  $\delta = 1$ , the above equation reduces to the well-known periodic Pielou logistic equation, which is known to be equivalent to the periodically forced Beverton-Holt model. (Received June 08, 2010)