1135-39-1892 **ARZU BILGIN*** (bilgin_a@my.uri.edu). *Basins of Attraction of Period- Two Solutions of Monotone Difference Equations.*

I investigate the global character of the difference equation of the form

$$x_{n+1} = f(x_n, x_{n-1}), \quad n = 0, 1, \ldots$$

with several period-two solutions, where f is increasing in all its variables. I show that the boundaries of the basins of attractions of different locally asymptotically stable equilibrium solutions or period-two solutions are in fact the global stable manifolds of neighboring saddle or non-hyperbolic equilibrium solutions or period-two solutions. An application of our results give global dynamics of three feasible models in population dynamics which includes the nonlinearity of Beverton-Holt and sigmoid Beverton-Holt types. (Received September 25, 2017)