

1077-39-669

Tyrus Berry* (tyrus.berry@gmail.com), 4400 University Drive, Mail Stop 3F2, Fairfax, VA 22030, and **Tim Sauer**. *Convergence of periodically forced rank-type equations*.

We study periodically-forced rank-type difference equations, which evolve according to the k th largest output of m functions of the previous m terms of the sequence. We show that with appropriate contraction and more general hypotheses, such non-autonomous difference equations are shown to converge to a periodic limit, which is independent of the initial condition. The solution period is equal to the period of the forcing, and does not depend on how far back each term is allowed to look back in the sequence. (Received September 09, 2011)