

1092-39-329

**Martin Bohner\*** (bohner@mst.edu), Department of Mathematics and Statistics, 400 West 12th Street, Rolla, MO 65409-0020. *Positive periodic solutions of higher-order functional  $q$ -difference equations.*

In this talk, using the recently introduced concept of periodic functions in quantum calculus, we study the existence of positive periodic solutions of a certain higher-order functional  $q$ -difference equation. Just as for the well-known continuous and discrete versions, we use a fixed point theorem in a cone in order to establish the existence of a positive periodic solution. (Received August 13, 2013)