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**Jeffrey Thomas Neugebauer\***, jeffrey.neugebauer@eku.edu, and **Murat Adivar, Muhammad N. Islam** and **H. Can Koyuncuoglu**. *Periodic solutions of  $q$ -Volterra integral equations.*

We study the periodicity properties of functions that arise in quantum calculus. First, a linkage between two existing periodicity notions is established. Second, the existence of periodic solutions of a  $q$ -Volterra integral equation, which is a general integral form of a first order  $q$ -difference equation, is obtained. At the end, some examples are provided. (Received August 11, 2015)