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**Timothy D Sauer\*** (tsauer@gmu.edu), Department of Mathematics, George Mason University, Fairfax, VA 22030. *Detection of periodic driving in systems of difference equations.*

We investigate methods for determining structure in an unknown system of  $n$  difference equations using time series observations from each component. In particular, we focus on ways to tell whether the system is autonomous or has a common driver, and in the latter case, to identify the dynamical characteristics of the driver. (Received September 27, 2005)