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			authors	• A. Ardjouni • A. Djoudi	NOT DUPLICATES	525
	authors	• A. Ardjouni • A. Djoudi	**title**	Existence of Periodic Solutions for Nonlinear Neutral Dynamic Equations with Functional Delay on a Time Scale		
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	urls	• https://www.semanticscholar.org/paper/f1e1faa5abc02d8d06d5cad847cdcbd7c60ca9fc	**id**	id-2648452187545823082		
	id	id7703244393954780233	**abstract**	Let $\mathbb {T}$ be a periodic time scale. The purpose of this paper is to use a modification of Krasnoselskiiâ€™s fixed point theorem due to Burton to prove the existence of periodic solutions on time scale of the nonlinear dynamic equation with variable delay $x^{\triangle }\left(t\right) =-a\left(t\right) h\left(x^{\sigma }\left(t\right) \right) +c(t)x^{\widetilde{\triangle }}\left(t-r\left(t\right) \right) +G\left(t,x\left(t\right) ,x\left(t-r\left(t\right) \right) \right)$, $t\in \mathbb {T}$, where $f^{\triangle }$ is the $\triangle $-derivative on $\mathbb {T}$ and $f^{\widetilde{\triangle }}$ is the $\triangle $-derivative on $(id-r)(\mathbb {T})$. We invert the given equation to obtain an equivalent integral equation from which we define a fixed point mapping written as a sum of a large contraction and a compact map. We show that such maps fit very nicely into the framework of Krasnoselskiiâ€“Burtonâ€™s fixed point theorem so that the existence of periodic solutions is concluded. The results obtained here extend the work of Yankson [Yankson, E.: Existence of periodic solutions for totally nonlinear neutral differential equations with functional delay Opuscula Mathematica 32, 3 (2012), 617â€“627.].		
	abstract	. In this paper, we use a modiï¬cation of Krasnoselskiiâ€™s ï¬xed point theorem introduced by Burton (see [6] Theorem 3) to establish new results on the existence and positivity of solutions for the totally nonlinear neutral periodic differential equation of the form We invert this equation to construct a sum of a completely continuous map and a large contraction which is suitable for the application of a modiï¬cation of Krasnoselskiiâ€™s theorem.	**versions**			
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