cases	doc_1		doc_2		decision	id
			authors	• A. Ardjouni • A. Djoudi	NOT DUPLICATES	528
	authors	• A. Ardjouni • A. Djoudi	**title**	Existence of Periodic Solutions for Nonlinear Neutral Dynamic Equations with Functional Delay on a Time Scale		
	title	EXISTENCE OF POSITIVE PERIODIC SOLUTIONS FOR TWO KINDS OF NONLINEAR NEUTRAL DIFFERENTIAL EQUATIONS WITH VARIABLE DELAY	**publication_date**	None		
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	urls	• https://www.semanticscholar.org/paper/f668ff71ee7ddcdfff55efc899a6f8cf31766976	**id**	id-2648452187545823082		
	id	id-6912237984354180230	**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 article we study the existence for of positive periodic solutions for kinds of nonlinear neutral differential equations with variable delay. The main tool employed here is the Krasnoselskii's hybrid fixed point theorem dealing with a sum of two mappings, one is a contraction and the other is completely continuous. The results obtained here generalize the work of Luo, Wang and Shen (13).	**versions**			
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