1023-35-713 **Leonard Karshima Shilgba*** (shilgba@yahoo.com), Abti-American University of Nigeria, School of Arts and Sciences, PMB 2250, Yola, Adamawa 0000, Nigeria. *An application of a critical points theorem.*

In this paper we have applied a variant of Ricceri's three critical points theorem provided by Averna and Bonanno to establish an existence and multiplicity result for periodic solutions of a system of differential equations involving a real parameter.

We consider the existence and multiplicity of periodic solutions of the system

$$(P) \qquad \ddot{u} - A(t)u = \lambda b(t)V'(u) \quad t \in [0,T]$$

$$\dot{u}(T) - \dot{u}(0) = u(T) - u(0) = 0$$

where λ is a real parameter,$A \in L^{\infty}(\mathbb{R}, \mathbb{R}^{N\times N})$ is positive definite, $V : \mathbb{R}^N \to \mathbb{R}$, and $b : \mathbb{R} \to \mathbb{R}$.

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