Review of: "Periodic second-order systems and coupled forced Van der Pol oscillators"

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Potential competing interests: No potential competing interests to declare.

Report on the article titled: Periodic second-order systems and coupled forced Van der Pol oscillators.

The authors present an existence and localization result for periodic solutions of second-order nonlinear coupled planar systems, without requiring periodicity for the nonlinearities. The arguments in favor of the existence tool are based on a variation of Nagumo's condition and the theory of topological degree. The location tool is based on a technique of superior and inferior solutions without order, which involves functions with translations. We apply our result to a system of two coupled Van der Pol oscillators with a forcing component.

Remark. This article is interesting; however, there are some details that need to be improved:

Lemma 2 plays a fundamental role in the proof of the main theorem of the work; however, there is a detail in the proof of this lemma that must be clarified. Let us assume that $z(t_2)=N_1$ instead of assuming that $z(t_2)>=N_1$, to conclude that $z(t_2) < N_1$.

If the authors carry out this test with greater rigor and improve the writing of the article in the sense of correctly placing commas and periods and correcting some sentences, the article may be published.