

## عنوان مقاله:

Bifurcation and chaos in a one mass discrete time vocal fold dynamical model

## محل انتشار:

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## خلاصه مقاله:

In this article, we are going to study the stability and bifurcation of a two-dimensional discrete time vocal fold model. The existence and local stability of the unique fixed point of the model is investigated. It is shown that a Neimark-Sacker bifurcation occurs and an invariant circle will appear. We give sufficient conditions for this system to be chaotic in the sense of Marotto. Numerically it is shown that our model has positive Lyapunov exponent and is sensitive dependence on initial conditions. Some numerical simulations are presented to illustrate our theoretical results.

## کلمات کلیدی:

Vocal fold, Neimark-Sacker bifurcation, Limit cycle, Marotto's chaos, Lyapunov exponent, Sensitive dependence on initial conditions

## لینک ثابت مقاله در پایگاه سیویلیکا:

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