Accepted Manuscript

Effects of a periodic drive and correlated noise on birhythmic van der Pol systems

R. Mbakob Yonkeu, R. Yamapi, G. Filatrella, C. Tchawoua

PII: S0378-4371(16)30628-8
DOI: http://dx.doi.org/10.1016/j.physa.2016.09.012
Reference: PHYSA 17508

To appear in: *Physica A*

Received date: 10 April 2016
Revised date: 5 July 2016

Please cite this article as: R.M. Yonkeu, R. Yamapi, G. Filatrella, C. Tchawoua, Effects of a periodic drive and correlated noise on birhythmic van der Pol systems, *Physica A* (2016), http://dx.doi.org/10.1016/j.physa.2016.09.012

***Highlights (for review)**

Highlights

- A forced, stochastic van der Pol type birhythmic oscillator is considered
- The noise is correlated
- The analytical treatment allows the reduction to a bistable pseudopotential
- Numerical simulations confirm the effectiveness of the stochastic averaging
- The interplay of the drive and noise produces structural changes