SLOW-PASSAGE THROUGH BIFURCATIONS OF THE PIECEWISE LINEAR MORRIS-LECAR MODEL

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The slow-passage phenomenon is given in slow-fast differential systems as a changing behavior presented when orbits cross near a bifurcation point of the fast-subsystem. Although it is widely known in the field of dynamical systems for understanding some dynamical aspects, it has not been further studied in the piecewise linear (PWL) framework. Hence, in this poster, we show the slow-passage phenomenon in a PWL simplification of the Morris-Lecar neural model. In particular, we focus on the behavior provided by the homoclinic orbits of the system.

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