Abstract

In this work we prove chaotic properties for a class of unidimensional continuous family map presenting a unique turning point and having some properties when increasing the parameter value. This set ($F$–function) is not conjugate to the tent map, furthermore it is not stretchable so we cannot use the well-known results about complex dynamics for these functions. However, we prove that the $F$–function set is chaotic in the Li–Yorke sense for a given value of the parameter onwards. We also apply the results obtained to the study of the dynamics exhibited by the economic model describing a small open economy subject to credit constraint due to moral hazard problems presented in [3]. A key role is played by the degree of financial development achieved by the economy; in fact we prove that complex behaviour can be exhibited at high level of financial development.