Symbolic dynamics generated by an idealized time-delayed Chua's circuit. (English summary)


Summary: “In recent years, some attempts have been made to distinguish classes of boundary value problems (BVPs) for partial differential equations (PDEs) whose solutions are essentially determined by the iteration of a map. The advantages are clear, since even the notion of chaos can be taken from discrete dynamical systems: we say that such a PDE system is chaotic if the map that determines its solution exhibits chaos as a discrete dynamical system. In this paper we consider the time-delayed Chua circuit, the behavior of which is determined by properties of a one-dimensional map. We study this map in terms of symbolic dynamics, which makes it possible to characterize the associated time evolution of the time-delayed Chua circuit.”

{For the entire collection see MR2144817 (2005m:39001)}

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