

Title: Complicated behaviour for some Hénon–type maps

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Abstract: The generalized Hénon map consists of a family of diffeomorphisms that can be viewed as an extension of the, classical, Hénon map. The dynamical behaviour of such mappings can be really complicated. In this lecture, we prove that specific members of this family present hyperbolic behaviour, and explain this behaviour by locating homoclinic points in their phase space. To achieve that, we employ the, so-called, Parametrization Method, the application of which to the location of invariant sets of dynamical systems seems quite promising.