

The Existence of Absolutely Continuous Invariant Measures for q -Deformed Unimodal Maps

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Abstract: In this paper, we describe the various types of deformation schemes inspired by Heine and Tsallis in reference of q -deformed physical system related to the quantum group structures and the statistical mechanics. We discuss the dynamics of deformed unimodal maps in particular q -Logistic map and q -Gaussian map. Further we show that numerically, there exists a set of the parameter values with positive measure, for which these deformed maps admits absolutely continuous invariant probability measure with respect to the Lebesgue measure.

Keywords: acip, deformed map, deformed Logistic map, deformed Gaussian map.

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