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Xu Zhang* (zhangx94@math.msu.edu), Dept. of Math., Michigan State Univ., 619 Red Cedar Rd., East Lansing, MI 48824. *Subexponential decay of correlations for “almost Anosov” diffeomorphisms.*

The correlation function of a system is used to describe how fast the state of the system becomes uncorrelated with its future status, and to estimate this function is a very interesting problem in dynamical systems. In this talk, we will investigate the subexponential lower and upper bounds for the correlation functions of a class of two-dimensional “almost Anosov” diffeomorphisms by using the renewal theory, where the “almost Anosov” system is a system which is hyperbolic everywhere except for one point. This is a joint work with Prof. Huyi Hu. (Received January 20, 2015)