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CHAOTIC ASPECTS OF THE SHIFT MAP ON THE BI-SIDED FULL M-SHIFT

TARINI KUMAR DUTTA & ANANDARAM BURHAGOHAIN

Department of Mathematics, Gauhati University, Guwahati, Assam, India

ABSTRACT

The aim of this paper is to study some dynamical aspects of the shift map σ on the *bi-sided full m-shift* $X_{[m]} = \Sigma_m$. We mainly prove that it is *Devaneychaotic* (*Dev C*), *Auslander-Yorke chaotic* and *generically* δ - *chaotic*. We also establish that σ has *chaotic* as well as *modified weakly chaotic dependence on initial conditions*. Further we have derived the *zeta function* for this map and calculated the *entropy* for the *full m-shift*.

KEYWORDS: Shift Space, Shift Map, Topological Transitivity, Topological Mixing, Sensitivity Dependence, Zeta Function, Entropy

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