1125-65-2796 **Tulsi Upadhyay*** (tulsi.upadhyay@usm.edu), Tulsi Upadhyay, 202 S 30th Avenue, Apt 204, Hattiesburg, MS 39401. *Invariant Densities of Frobenius-Perron Operator Related to Random Maps.*

Let $\tau = \{\tau_1, \tau_2, \ldots, \tau_r; p_1, p_2, \ldots, p_r\}$ be a random map. The nonsingular transformations, $\tau_1, \tau_2, \ldots, \tau_r$, are defined from $[0, 1]$ to itself, and $p_1, p_2, \ldots, p_r$ are probabilities such that at each iteration the possibility of selecting a map τ_i is p_i, $1 \leq i \leq r$. We use piecewise linear polynomials in maximum entropy principle to approximate invariant densities of the Frobenius-Perron operator related to some random maps. The L^1 errors between the exact and approximated invariant densities are also depicted.

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