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A class of geometric quadratic stochastic operator on countable state space and its regularity

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Abstract

We have constructed a Geometric quadratic stochastic operator generated by 2-partition ξ of singleton defined on countable state space X , where $X = \{0,1,2, \dots\}$. We have studied the trajectory behavior of such operator for any initial measure μ is an element of $S(X,F)$. It is shown that such operator converges to a fixed point which indicates the existence of the strong limit of the sequence $V_n(\mu)$. This follows that such operator is a regular transformation.

Keywords

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