MULTIPARAMETER SUPERADDITIVE ERGODIC THEOREMS FOR MEAN ERGODIC $L_1$-CONTRACTIONS

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Abstract: Let $T$ and $S$ be commuting Markovian operators on $L_1(X)$. We prove that when the operators are mean ergodic and $\{F(m,n)\}$ is a directionally $(T,S)$-superadditive dominated process, then the “averages” $n^{-2}F(n,n)$ converge in $L_1$-norm. If, further, the process is strongly superadditive, then the same averages converge a.e. as well.


Key words and phrases: Superadditive processes, Markovian operators, mean ergodic $L_1$-contractions.

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