

MULTIPARAMETER SUPERADDITIVE ERGODIC THEOREMS FOR
MEAN ERGODIC L_1 -CONTRACTIONS

Doğan Cömez
Michael Lin

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.

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