



Complete convergence of weighted sums under negative dependence

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Abstract In this paper, we study the complete convergence of weighted sums. In fact, we extend the result of Amini and Bozorgnia (J Appl Math Stoch Anal 16(2):121–126, 2003) on unweighted average to a weighted average under mild conditions.

Keywords Negatively dependent · Complete convergence · Weighted sums

Mathematics Subject Classification (2000) 60F15

1 Introduction


In many statistical applications, we may suppose that the variables be independent. But in real studies, this assumption is not true. So, it is of interest of many statisticians to extend this condition to the dependent cases. One of these dependent structures is negative dependence. Informally speaking, random variables are said to be negatively dependent, if they have the following property: if any one subset of the variables is "high" then other (disjoint) subsets of the variables are "low". Such variables arise frequently in the analysis of algorithms, for which a stream of random bits influences either the input or the execution of the algorithm [see for more information and

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