ON THE STRONG LAW OF LARGE NUMBERS FOR
WEIGHTED SUMS OF $\varphi$–MIXING RANDOM VARIABLES

HAIWU HUANG, DINGCHENG WANG AND JIANGYAN PENG

Abstract. Let $\{X_n, n \geq 1\}$ be a sequence of $\varphi$–mixing random variables with non-identical distribution and $\{a_{ni}; 1 \leq i \leq n, n \geq 1\}$ be an array of real constants. In this paper, we study the strong law of large numbers for the maximal weighted sums of $\varphi$–mixing random variables. The results obtained generalize and improve the previous known result of Bai and Cheng (Z.D. Bai and P.E. Cheng, 2000. Marcinkiewicz strong laws for linear statistics. Statist. Probab. Lett. vol. 46, no. 2, pp. 105–112.) for independent and identically distributed random variables to $\varphi$–mixing case.


Keywords and phrases: $\varphi$–mixing random variables, strong law of large numbers, weighted sums.

REFERENCES