MAXIMAL INEQUALITIES FOR U-PROCESSES OF STRONGLY MIXING RANDOM VARIABLES

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Abstract: Maximal inequalities for U-processes are required in order to achieve a reduction to the first nonvanishing term in their Hoeffding's decomposition, which is the relevant quantity for statistical inference. This paper proves new maximal inequalities under strong mixing for U-processes in some function spaces. As an application we derive a uniform central limit theorem.

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