A note on U statistics. (Chinese. English summary) [Zbl 0581.62023]

Let $\phi(x_1, x_2, ..., x_m)$ be a real Borel measurable symmetrical function of the $m$ variables, and let $U_n$ denote the U-statistic with kernel $\phi$. In this note it is proved that a necessary and sufficient condition for $E|\phi| < +\infty$ is that there exists an $n \geq m$ such that $E|U_n| < +\infty$.

MSC:

62E99 Statistical distribution theory
60E99 Distribution theory

Keywords:

Borel measurable symmetrical function; U-statistic