

Zbl 046.35203

Chung, Kai Lai; Erdős, Pál

On the application of the Borel-Cantelli lemma. (In English)

Trans. Am. Math. Soc. 72, 179-186 (1952). [0002-9947]

Let a sequence of events E_k be given and define $\limsup E_k$ by $\bigcap_{n=1}^{\infty} \bigcup_{k=n}^{\infty} E_k$. The authors state conditions for the probability of $\limsup E_k$ to be unity. Their assumptions do not include independence of the events (as the Borel-Cantelli lemma does) and they are weaker than Borel's condition $\sum P(E_k | \bar{E}_1, \dots, \bar{E}_{k-1}) = \infty$. The result is applied to independent random variables which take the values ± 1 with probabilities $\frac{1}{2}$.

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Classification:

60D05 Geometric probability