REARRANGEMENTS OF SEQUENCES OF RANDOM VARIABLES AND EXPONENTIAL INEQUALITIES

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Abstract: Exponential bounds are studied for $P(\|X_1 + \ldots + X_n\| > t)$, where $(X_1, \ldots, X_n)$ denotes a sequence of independent random variables with values in a real separable Banach space $(B, \| \|)$. In our results the usual boundedness assumptions on $\|X_1\|, \ldots, \|X_n\|$, are replaced by hypotheses on the weak l_p-norm of the sequence $(\|X_1\|, \ldots, \|X_n\|)$.

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