

LOWER BOUNDS FOR DISCRETE APPROXIMATIONS TO SUMS OF  
 $m$ -DEPENDENT RANDOM VARIABLES

BY

VYDAS ČEKANA VIČIUS (VILNIUS) AND PALANIAPPAN VELLAISAMY (MUMBAI)

**Abstract.** Lower bounds for the second order Poisson, compound Poisson, negative binomial and binomial approximations to the sum of 1-dependent random variables are obtained for the Kolmogorov and local metrics. The results are then applied to sums of independent indicators and runs statistics.

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**Key words and phrases:** Poisson approximation, signed compound Poisson measure, binomial and negative binomial approximations, one-dependent variables, local norm, Kolmogorov distance.

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