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Poisson approximation for beta negative binomial distribution via the Stein-Chen identity and the z -function

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Abstract

This paper, at first we explain about beta negative binomial distribution. Then we use the Stein-Chen identity and the z -function associated with Beta negative binomial distribution to give a result on the Poisson approximation to beta negative binomial distribution in terms of the total variation distance.

Keywords: Beta negative binomial distribution, Negative binomial distribution, Stein-Chen identity, Z-function