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Title: ***The Mixing of Discrete Unimodality: Characterizations and Closure Properties***

Presented by: **M.I. A. Ageel**

ABSTRACT: Ageel and other authors had characterized the convolution of discrete unimodal and \alpha- unimodal distribution about some specified mode a in terms of probability mass function (pmf), distribution function (df), probability generating function (pgf) and characteristic function (chf). Here, we will give similar characterizations for the mixture of discrete unmorality and generalized unimodality about some specified mode a in terms of pmf, df, pgf and chf. In statistical theory and its applications, probability distributions go through some functional operations such as convolution, mixing, passage to limit and reversal. Conditions which help to preserve the unimodality or \alpha-unimodality property of distributions under convolution have been given. Although, preserving unimodality and -unimodality by mixing discrete distributions seem to be the most difficult to deal with, and this problem still remains unanswered for some discrete distributions, which hope to discuss here and to give some important results which may help to preserve the -unimodality by mixing. Preserving -unimodality under weak convergence operator will be also considered.