

Discrete Normal Distributions

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ABSTRACT

We introduce new, natural parameters in a formula defining discrete Normal distribution. One parameter is closely related to expectation and the other to variance. We show that under such a parametrization, uniformly for all sufficiently large variances and all expectations, discrete normal distributions and their first two moments are given by very simple formulae with great accuracy. We indicate relation between obtained results and Jacobi Theta functions and Jacobi summation formulae.

Keywords: *Discrete Normal Distribution, Jacobi Theta Functions, Fourier Transform, Periodic Tempered Distributions*

Mathematics Subject Classification: *Primary: 62E15, 62E20 Secondary: 60E05*

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