

COLLOQUIUM

THE MULTIVARIATE PERCENTILE POWER METHOD TRANSFORMATION

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Abstract: The conventional power method transformation is a moment-matching technique that simulates non-normal distributions with controlled measures of skew and kurtosis. The percentile power method transformation is an alternative that uses the percentiles of a distribution in lieu of moments. This presentation covers the multivariate percentile power method transformation, which is used to simultaneously simulate several non-normal variates using percentiles and a specified correlation matrix. Empirical illustrations are provided, including demonstration of the percentile power method transformation using a publicly-available SAS macro. The macro and instructions for using it can be found at <http://digitalcommons.wayne.edu/jmasm/vol15/iss1/42>.