1151-62-160 **Yuan Fang***, Department of Mathematical Sciences, Binghamton University (SUNY), 4400 Vestal Parkway E., Binghamton, NY 13902, and **Sanjeena Dang**, Department of Mathematical Sciences, Binghamton University (SUNY), 4400 Vestal Parkway E., Binghamton, NY 13902. *Bayesian infinite mixtures of multivariate normal-inverse Gaussian distributions for clustering of skewed data.*

Mixtures of multivariate normal inverse Gaussian (MNIG) distributions can be used to cluster data that exhibit features such as skewness and heavy tails. However, for cluster analysis, using a traditional finite mixture model framework, either the number of components needs to be known *a-priori* or it is estimated *a-posteriori* using a model selection criterion after running the algorithm for a range of possible number of components. However, different model selection criteria can sometimes result in different number of components yielding uncertainty. Here, we present an infinite mixture model framework, also known as Dirichlet process mixture models, for the mixtures of MNIG distributions that alleviate the need for such model selection criteria. This Dirichlet process mixture model approach allows the number of components to grow or decay freely from 1 to inf (in practice from 1 to n) and the number of components is inferred along with the parameter estimates in a Bayesian framework. The proposed methods will be illustrated using simulation and real data. (Received August 16, 2019)