

1135-VT-2906 **Sheida Riahi*** (sr1315@msstate.edu) and **Prakash Patil**. *Numerical Approach to Testing Central Symmetry in Bivariate Settings*. Preliminary report.

A concept of symmetry become important many domains such as detection of abnormalities as asymmetrical patterns in the thermographic images which is linked to the concept of symmetric regression functions. Or else when the null distributions of t and F statistics in the univariate general linear model depend on spherical symmetry of the error distribution. For a multivariate distribution one can define different kinds of symmetry, e.g. central, spherical, elliptical symmetry etc. Our interest here is to study these symmetries in bivariate set-up with the intention of quantifying and testing for different kinds of asymmetries. For that here as a primery step we have numerically exhibited that the recently proposed tests for symmetry in Partlett and Patil (2015) could be extended to the case of central symmetry in bivariate settings. (Received September 26, 2017)