1056-62-1351   **Broderick Oluyede*** (`boluyede@georgiasouthern.edu`), Department of Mathematical Sciences, Georgia Southern University, Statesboro, GA 30460. *Characterization and Dispersive Ordering of the Cauchy, Gauss and Logistic Laws.*

In this talk, I present some results on the characterization and dispersive ordering of the general Cauchy, logistic and normal laws. The characterization of the Cauchy law is accomplished via a convex function of a symmetric random variable, as well a differential equation involving the characteristic function. Results on the characterization of the logistic distribution shed further light into its application in a wide variety of areas including the analysis of quantal response and bioassay data, as well economic and demographic data. These results lead to necessary and sufficient conditions for the stochastic and dispersive ordering of the corresponding absolute random variables. (Received September 21, 2009)