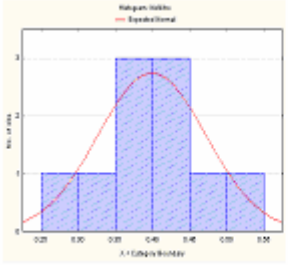
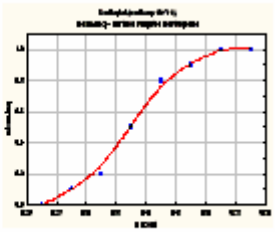


Statistics

Research (StaR) Colloquium



# Seminar

*Dept of Mathematics and Statistics*
*King Fahd University of Petroleum and Minerals*

| | |
|---|---|
| *Presenter* | **Professor Anwar H. Joarder**<br>**Dept of Mathematics and Statistics**<br>**KFUPM** |
| *Title* | **Robustness of Statistical Methods** |
| *Topic & (Level)* | Robustness<br>**(Applied, Methodological)** |
| *Audience* | All KFUPM community are cordially Invited |
| *Date* | Sunday, Dec 13 2009 |
| *Time* | 12:40 PM – 1:30 PM |
| *Location* | Building 5, Smart Classroom # 201 |

## Abstract

The classical theory of univariate or multivariate statistical analysis is broadly based on the assumption that the underlying observations follow normal distribution. Are the statistical methods robust under violation of normality? Are the *t*-test, *F*-test that we use in testing significance of a mean, equality of means or significance of correlation coefficient robust? How far can we relax the assumption of normality? This prompted statisticians to consider more general distributions called elliptical distributions. Attempts have been made in terms of the functional form one the one hand and nonparametric considerations on the other.

In this talk we will restrict ourselves to a class of univariate and multivariate distributions where indeed *t*-test, *F*-test and many other methods remain robust.

*Tea and Coffee will be served*