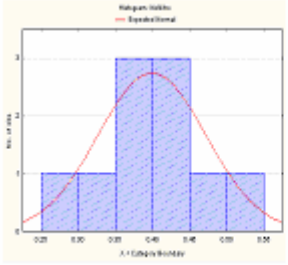
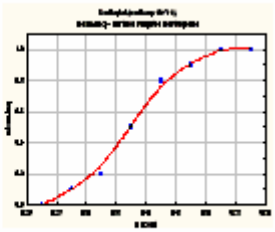


Statistics

Research (StaR) Colloquium



Seminar

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

Presenter	**Professor Anwar H. Joarder** **Dept of Mathematics and Statistics** **KFUPM**
Title	**Linear Combination of Two Correlated Chi-Square Variables**
Topic & (Level)	Distribution Theory **(Methodological)**
Audience	All KFUPM community are cordially Invited
Date	Sunday, May 23 2010
Time	12:20 PM – 1:20 PM
Location	Building 5, Smart Classroom # 102

Abstract

The distribution of the linear combination of two chi-square variables is known if the variables are independent. In this paper, we derive distribution of the linear combination of two chi-square variables when they are correlated through a bivariate chi-square distribution. Some characteristics of the distribution, namely, the characteristic function, cumulative distribution function, raw moments, mean centered moments, coefficient of skewness and kurtosis are derived. Results match with the independent case when the variables are uncorrelated.

Tea and Coffee will be served