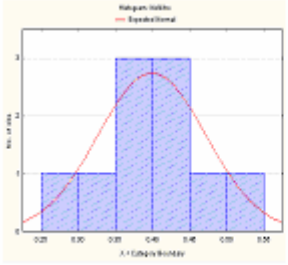
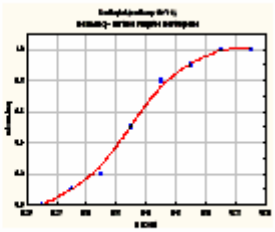


Statistics

Research (StaR) Colloquium



Seminar

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

Presenter	**Professor Hassen A. Muttlak &** **Mr. Mohammad F. Saleh** **Dept of Mathematics and Statistics** **KFUPM**
Title	Testing Hypothesis about P(Y < X) using Ranked Set Sampling in Case of the Exponential Distributions
Topic & (Level)	Reliability Testing & Sampling **(Methodology)**
Audience	All KFUPM community are cordially Invited (including undergraduate students)
Date	Sunday, Jan 10, 2010
Time	12:30 PM – 1:30 PM
Location	Building 5, Smart Classroom # 201

Abstract

The problem of making statistical inference about θ=P(Y<X) has been under great investigation in the literature using simple random sampling (SRS) data. This problem arises naturally in the area of reliability for a system with strength X and stress Y. In this study, we will consider making testing hypotheses about θ using ranked set sampling (RSS) data. Two tests are proposed to test hypotheses about θ using RSS. These tests were compared with usual test based on simple random sample (SRS) data.

The proposed tests based on RSS dominate the one based on SRS i.e. they are more powerful. A motivated example using real data set is given to illustrate the computation of the newly suggested tests.

Tea and Coffee will be served