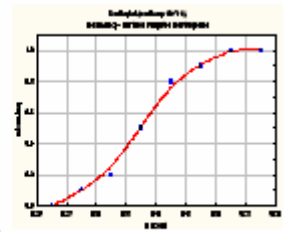


Statistics



Research (StaR) Colloquium

Seminar

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

<i>Presenter</i>	<p>Prof. Hassen A. Muttlak Mathematics and Statistics Dept KFUPM</p>
<i>Title</i>	<p>Estimating $P(Y < X)$ using Ranked Set Sampling in Case of the Exponential Distributions</p>
<i>Topic & (Level)</i>	<p>Statistical Estimation (Statistical inference, Sampling)</p>
<i>Audience</i>	<p>All KFUPM community are cordially Invited</p>
<i>Date</i>	<p>Sunday, June 1, 2008</p>
<i>Time</i>	<p>1:00 PM - 1:50 PM</p>
<i>Location</i>	<p>Building 5, Smart Classroom # 203</p>

Abstract

The problem of making statistical inference about $\theta = P(Y < X)$ 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 statistical inference about θ using ranked set sampling (RSS) data. Several estimators are proposed to estimate θ using RSS. The properties of these estimators are investigated and compared with usual estimator based on simple random sample (SRS) data.

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

Tea and Coffee will be served