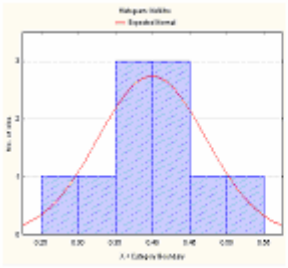
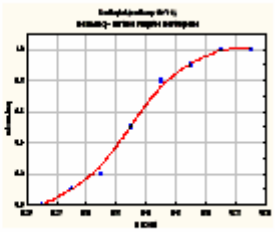


Statistics

Research (StaR) Colloquium



Seminar

Dept of Mathematical Sciences

King Fahd University of Petroleum and Minerals

Presenter	**Professor Dr. Ibrahim Rahimov** Dept of Mathematical Sciences, KFUPM
Title	Closure of the Sub-Exponential class under the convolution
Topic & (Level)	Stochastic Process & Distribution Theory **(Mathematical Statistics, Methodical)**
Audience	All KFUPM community are cordially Invited
Date	Tuesday, Mar 27, 2007
Time	1:00 PM
Location	Building 5, Smart Classroom # 203

Abstract

The family of sub-exponential distributions includes distributions most important for applications, such as, the Weibull with decreasing hazard function, Log-normal, Log-logistic, Pareto, stable distributions, distributions with regularly varying tails and some of other heavy tailed distributions. This situation explains the interest in study of the family of sub-exponential distributions by many authors who have investigated various aspects of the family. In particular question related to closure of the family under convolution is important for applications in the theory of stochastic processes. Leslie (1989) constructed an example demonstrating that the exponential family, generally speaking, is not closed under convolution. We describe a subclass of sub-exponential family which is closed with respect to convolution. Applications in stochastic models of the population dynamics will also be discussed.

Tea and Coffee will be served