



**UPM**  
UNIVERSITI PUTRA MALAYSIA  
BERILMU BERBAKTI

# INSPEM WEEKLY SEMINAR

11/2018

## Date & Time

23<sup>rd</sup> March 2018, Friday @ 3.15 pm

## Venue

Al-Farabi Seminar Room, Second Floor,  
INSPEM

## Presenter

Assoc. Prof. Dr. Akbar Asgharzadeh  
Visiting Scientist  
Laboratory of Computational Statistics and  
Operations Research



## Topic

Statistical Inference for Lindley Model based on  
Type II Censored Data

## Abstract

Lindley distribution has received a considerable attention in the statistical literature due to its simplicity. In this talk, we discuss the moment-based, maximum likelihood and Bayes estimators for the unknown parameter of the Lindley model based on Type II censored data. Existence and uniqueness of the moment-based and maximum likelihood estimators are discussed. For Bayesian estimation, since the Bayes estimator cannot be obtained in an explicit form, one approximation based on the importance sampling method is used. Asymptotic confidence intervals are also proposed. we consider the problem of predicting the failure times of experimental units that are censored in a right-censored experiment. A real data analysis is presented to illustrate the proposed methods. Finally, we describe the extensions to other censoring schemes.

Keywords: Lindely distribution; Type-II censoring; Maximum likelihood and Bayes estimators; Prediction.