

McMASTER UNIVERSITY  
GRADUATE PROGRAM IN STATISTICS

**STATISTICS SEMINAR**

**Speaker:** Dr. S. Ejaz Ahmed, Department of Mathematics and Statistics,  
University of Windsor

**Title:** *“Simultaneous Quantiles Estimation under Right Censoring and  
Left Truncation”*

**Day:** Tuesday November 30, 2004

**Time:** 3:30 - 4:30 PM

**Place:** HH/217 - Deloitte Colloquium Room (Refreshments in HH/216  
at 3:00 PM)

**SUMMARY**

In this talk, we consider the simultaneous estimation of the quantiles when the data are left truncated and right censored (LTRC). Such data arise in survival analysis, astronomy and economics. For example, in survival analysis, it often occurs that the lifetimes of some individuals are not observable if their time origin proceeds the starting time of the experiment. Only those subjects that fail after the start of the study are being followed, otherwise they are left truncated. Once entered into the study the individuals are subject to the usual right censoring during the follow-up period. An example of a truncation variable is the time from AIDS infection until the entry in the study.

We propose shrinkage estimation strategies for estimating the population quantile functions. The classical estimator is investigated as a competitor of proposed estimators. Moreover, we will assess their properties both

analytically and numerically. In fact, an over-riding theme of this paper is that shrinkage method provides a powerful extension of its classical counterpart for nonnormal populations. An extensive sampling experiment is used to investigate the finite-sample performance of the proposed estimators over a wide range of designs and distributions.



**ABOUT THE SPEAKER:** Dr. S. Ejaz Ahmed is Professor and Head, Department of Mathematics and Statistics, University of Windsor. He obtained B.Sc. (Honors) and M.Sc. degrees from University of Karachi, M.Sc. degree from University of Guelph and Ph.D. degree from Carleton University. Previously he held academic positions at University of Regina (including Department Chair) and University of western Ontario. Ahmed's areas of research interest include statistical inference, multivariate analysis and asymptotic theory. An Elected Member of the International Statistical Institute, Ahmed is author or co-author of many research articles and co-editor of two volumes. He has supervised many master and Ph.D. students in statistics.

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