

**Department of Systems Engineering and Engineering Management
&
Department of Management Science**

Seminar Series

Meta-Analysis: Making Sense or Folly

Prof. Ejaz Ahmed

Professor of Statistics and Dean of Faculty of Mathematics and Science
Brock University

Date	25 September 2014 (Thursday)
Time	10:30am (Tea/Coffee service at 10:15am)
Venue	B6619, 6/F, AC1

Abstract

Pooling data from various sources to improve the parameter estimation is an important problem from the practitioner's perspective. If pooling procedure is carried out judiciously a much more efficient estimation strategy can be achieved for the targeted parameter. However, it is imperative that underlying assumptions for pooling the data are investigated thoroughly before merging the data into a single data set, and suggesting a pooled estimator based on a grand data. In this talk, we explore various estimation strategies for pooling data from several sources. We suggest some efficient estimation strategies based on pretest and James-Stein estimation principles. We consider simultaneous estimation of several of coefficients of variation to reveal the power and beauty of pretest and shrinkage estimation in the classical problem of pooling data. We investigate the asymptotic and finite sample properties of these estimators using mean squared criterion. We demonstrate that the shrinkage estimators based on the James-Stein rule dominate the benchmark estimator of coefficients of variation.

About the Speaker

Ejaz Ahmed is professor of statistics and Dean of Faculty of Math and Science. Before joining Brock, he was a professor and head of dept. of Mathematics &

statistics at the University of Windsor and University of Regina. Prior to that, he had a faculty position at the University of Western Ontario.

His area of expertise includes statistical inference, shrinkage estimation, and big data analysis. He has numerous published articles in scientific journals, both collaborative and methodological. Further, he has written several books, edited and co-edited several volumes and special issues of scientific journals. He organized several workshops and many invited sessions. He made numerous invited scholarly presentations in many countries around the globe. Dr Ahmed serves on the editorial board of many statistical journals and review editor for *Technometrics*. He served as a Board of Director and Chairman of the Education Committee of the Statistical Society of Canada. He was a VP communication for ISBIS. Recently, he served as a member of an Evaluation Group, Discovery Grants and the Grant Selection Committee, Natural Sciences and Engineering Research Council of Canada (NSERC). He is an elected fellow of American Statistical Association.

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All are Welcome!