



SEMINAR SERIES

When: Thursday, December 7, 2017
Time: 3:30 – 4:30 pm
Refreshments at 3:15 pm
Where: Sidney Smith Hall Rm 1069
Speaker: **SÉVÉRIEN NKURUNZIZA**, University of Windsor
Host: Zhou Zhou

Shrinkage Methods in Regression Models with Change-points

In this presentation, we consider an estimation problem of the matrix of the regression coefficients in multivariate regression models with unknown change-points when the regression coefficients satisfy uncertain restriction. Under general conditions, we derive a class of estimators which includes as special cases shrinkage estimators (SEs) as well as the unrestricted estimator (UE) and the restricted estimator (RE).

Further, we derive a more general sufficient condition for the SEs to dominate the UE. To this end, we present some results underlying the multidimensional version of Mixingale Central Limit Theorem as well as some important identities for deriving the risk function of SEs. Finally, we present some simulation studies which corroborate the theoretical findings.

This is a joint with Dr. Fuqi Chen.

