



SEMINAR SERIES 2018-2019

When: Thursday, November 1, 2018
Time: 3:30 – 4:30 pm
Refreshments at 3:15 pm
Where: Sidney Smith Hall Rm 2105
Speaker: **Chen Xu, University of Ottawa**
Host: Dehan Kong

Distributed Feature Screening for Massive Data via ADMM

Feature screening is a popular technique in the analysis of high-dimensional data. When the number of observations and features are both huge (massive data), current screening methods faces a great computational burden. In this talk, we propose a new screening method for massive data using the idea of divide-and-conquer.

The new method splits the full data into several manageable segments and screens features based on the data segments. Under the framework of ADMM, the method iteratively aggregates the local screening results and obtains an improved global result. In the new method, information from all data segments, including the joint effects between features, are naturally taken into account in the screening process.

We further show that 1) the proposed method enjoys sure screening property; 2) its implementation procedure is convergent and computationally efficient. The promising performance of the new method is supported by a series of simulation studies and a real data example.

