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THE CHINESE UNIVERSITY OF HONG KONG

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THE CHINESE UNIVERSITY OF HONG KONG

Post-Shrinkage Strategies in High-Dimensional Data Analytics

INVITED SPEAKER

Syed Ejaz Ahmed

Professor

Mathematics & Statistics

Brock University

TIME

September 26, 2023 (Tue) · 2:30 pm - 3:30 pm

VENUE

SWH1 · Fung King Hey Building Swire Hall 1 · CUHK

ABSTRACT

The rapid growth in the size and scope of data sets in a host of disciplines has created a need for innovative statistical strategies for analyzing high-dimensional data. The need for novel statistical strategies to analyze such data sets is pressing. This talk focuses on the development of statistical strategies for a host of sparse regression models in the presence of weak signals. The existing penalized methods have often ignored contributions from the weak signals. We propose a new innovative “post-shrinkage strategy” that considers the impact of both strong and weak signals to improve the prediction accuracy of the selected submodel. We provide asymptotic properties of suggested estimators and verify it through simulation study. Some real data examples are given to demonstrate the applicability of the proposed strategies. I will present some open related research problems as well.

Reference: S. Ejaz Ahmed, Feryaal Ahmed and B. Yuzbasi (2022). Post-Shrinkage Strategies in Statistical and Machine Learning for High Dimensional Data. CRC Press, USA.