

# Statistical Inference on High-dimensional Covariance Matrices

Shurong Zheng<sup>1</sup>

<sup>1</sup>*Northeast Normal University, China*

## Abstract

With the rapid development of computer science, it is possible to collect, store and analyze high-dimensional data. But some classical statistical methods become invalid. For example, the log-likelihood ratio test for testing the identity of covariance matrix has the Type I errors tending to one as the data dimension and sample size tend to infinity proportionally. This talk will introduce some estimation methods and testing methods to deal with high-dimensional covariance matrices.