Econometrics **May 18, 2023**

Topic 16: Graphical Network Inference

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Key points:

Disclaimer: *The note is built on Prof. Jinchi Lv's lectures of the course at USC, DSO 607, High-Dimensional Statistics and Big Data Problems.*

16.1 Motivation

Consider a classic question: Suppose we have N observations of dimension p follow $\mathcal{N}(\mu, \Sigma)$. let $\Theta = \Sigma^{-1}$, and S be the empirical covariance matrix. How can we capture the statistical relationships between the variables of interest?