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Nonparanormal Structural VAR for Non-Gaussian Data

The vector autoregression (VAR) model profoundly uses the lagged causal relationships among variables. It is well known that VAR models say little about contemporaneous time correlation of these variables. However, ignoring causal orderings among a VAR endogenous variables in contemporaneous time may produce not representative impulse response functions. The recent advances in Machine Learning and Statistical Learning literature allow researchers to use Directed Acyclic Graphs(DAGs) to discover causal relationship from the data and help to impose structure on VAR. In this paper, we propose extended version of DAGs to impose structure on VAR when the data does not follow Gaussian distribution. We show the performance of our method using simulation studies and as well real Macroeconomic data.

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12:00 pm

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