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HeiKaMEtrics-Seminar

Joint Heidelberg, Karlsruhe and Mannheim research seminar in Econometrics

Community Detection in Partial Correlation Network Models

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Monday, July 09, 2018
13:30 – 14:30
Alfred-Weber-Institute
Bergheimer Str. 58, Room 00.010
Heidelberg University

Abstract:

We introduce a class of partial correlation network models with a community structure for large panels of time series. In the model, series are partitioned into latent groups such that correlation is higher within groups than between them. We then propose an algorithm that allows us to detect the communities using the eigenvectors of the sample covariance matrix. We study the properties of the procedure and establish its consistency. The methodology is used to study real activity clustering in the U.S. and Europe.