

ACMS Statistics Seminar

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Tues, April 25, 2017
154 Hurley Hall
4:00 – 5:00 PM



Graphical Models via Joint Quantile Regression with Component Selection

A graphical model is used for describing interrelationships among multiple variables. In many cases, the multivariate Gaussian assumption is made partly for its simplicity but the assumption is hardly met in actual applications. In order to avoid dependence on a rather strong assumption, we propose to infer the graphical model via joint quantile regression with component selection, since the components of quantile regression carry information to infer the conditional independence. We demonstrate the advantages of our approach using simulation studies and apply our method to an interesting real biological dataset, where the dependence structure is highly complex.

The Department of Applied and Computational
Mathematics and Statistics

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