

## **COMMUNITY DETECTION WITH COVARIATES**

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**Time:** 10:00-11:00 am., Monday, May 8, 2017

Venue: Room 2201, East Main Guanghua Tower, Handan Campus

Abstract: One of the most fundamental problems in network study is community detection. The stochastic block model (SBM) is one widely used model for network data with different estimation methods developed with their corresponding community detection consistency results unveiled. However, the SBM is restricted by the strong assumption that all nodes in the same community are stochastically equivalent, which may not be suitable for practical applications. In this work, we extend SBM to incorporate covariate information and provide theoretical support on the estimators.

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