Department of Decision Sciences

Statistics Seminar

Latent Variable Models for Networks and Nodal Attributes

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Abstract

Network data arise in a wide range of applications including social and biological sciences. A large amount of these kind of data comes along with other information such as different link interactions or nodal attributes. In this presentation we introduce a family of latent variable models for analyzing and visualizing network and nodal information, and multiple networks. All the likelihood functions of the models introduced involve integrals that cannot be evaluated analytically due to the complexity of network data. To overcome this issue we adopt a variational approach to estimation which turns out to be particularly efficient from a computational point of view.