High Dimensional Nonstationary Time Series

IRTG 1792 Short Course

Yang Feng

Statistical Analysis of Large Scale Social Networks

The past decade has witnessed a surge of the network data generation in the areas of technological, biological, social and informational. This trend has motivated the rapid development of statistical analysis in networks. This tutorial will give a brief overview of some recent works, including:

1. Introduction to networks. Overview different types of networks. Discuss the scientific impact of networks, and frontier problems of interest.

2. Models/methods. Briefly overview some popular models, with a focus on the stochastic block model and its variants. Review some state of the art methods on community detection under stochastic block model.

3. Model selection. Discuss the problem of choosing the number of communities. Testing of Erd¨os-Renyi model versus a bisection stochastic block model will also be discussed.

Yang Feng is an associate professor of statistics at Columbia University. In 2010, he got his Ph.D. in Operations Research & Financial Engineering from Princeton University. His recent research focuses on network models, high-dimensional statistics and nonparametric methods.

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HUB, SPA 1 | Room 21a, Room 401

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