THE UNIVERSITY OF GEORGIA
DEPARTMENT OF STATISTICS

Colloquium Series

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Joint statistical learning for high-dimensional heterogeneous networks

Increasing high-dimensional multi-view data are being generated by modern biotechnologies, which facilitate the discovery of regulatory relationships among diverse types of features in biological systems and complex traits. Motivated by data integration problems in biomedical research, we developed joint statistical learning methods for high-dimensional heterogeneous networks. To address the computational challenges, we formulated the optimization problems from two perspectives. One is based on penalized pseudo-likelihoods. The other is based on penalized approximate likelihood estimation. We also established a necessary and sufficient condition to enable fast variational inference.