

MICHIGAN STATE UNIVERSITY
Department of Statistics and Probability

COLLOQUIUM

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Inference in high-dimensional semi-parametric graphical models

Tuesday, April 12, 2016
10:20 a.m. - 11:10 am
Refreshments 10:00 am
C405 Wells Hall

Abstract

In this talk, we discuss root-n consistent estimators for elements of the latent precision matrix under high-dimensional elliptical copula models. Under mild conditions, the estimator is shown to be asymptotically normal, which allows for construction of tests about presence of edges in the underlying graphical model. The asymptotic distribution is robust to model selection mistakes and does not require non-zero elements to be separated away from zero. The key technical result is a new lemma on the “sign-subgaussian” property, which allows us to establish optimality of the estimator under the same conditions as in the gaussian setting. Extension to dynamic elliptical copula models will also be presented.

Joint work with Rina Foygel Barber, Junwei Lu, and Han Liu.

To request an interpreter or other accommodations for people with disabilities, please call the Department of Statistics and Probability at 517-355-9589.