Mathematics, Statistics, and Computer Science **@ UIC**

Statistics and Data Science Seminar

Bayesian high-dimensional logit models: categorical responses and group sparsity

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Abstract: This study investigates frequentist properties of Bayesian high-dimensional logit models for categorical response variables. For high-dimensional regression coefficients, group sparse modeling is adopted to handle model selection with categorical responses. A product of a point mass and a Laplace-type distribution is used for the prior distribution on sparse regression coefficients. The procedure exhibits nearly optimal posterior contraction. A shape approximation to the posterior distribution is characterized to show model selection consistency. The distributional approximation also leads to a Bernstein-von Mises theorem for uncertainty quantification through credible sets with guaranteed frequentist coverage.

Note the unusual time.

Wednesday, December 4 at 4:15 PM in 636 SEO