Department of Statistics

# MASTER'S THESIS PRESENTATION

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## Penalized Score Test for High Dimensional Logistic Regression

TUESDAY, February 16, 2016, at 9:00 AM
Eckhart 110, 5734 S. University Avenue

ABSTRACT

We deal with inference problem for high dimensional logistic regression. The main idea is to give penalized estimator by adding penalty to negative log likelihood function which penalizes all variables except the one we are interested in. It shows that this penalized estimator is a compromise between the multiple regression and simple regression. We then use the algorithm called penalized score test to give valid test for the variable of interest with asymptotic designed Type I error. We check our algorithm on both simulated and real datasets.

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