Colloquium

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Friday, May 2, 2014 at 3 pm in Bell Hall 143

Flexible Modeling of Medical Cost Data

Medical cost data are often skewed to the right and heteroscedastic, having a nonlinear relation with covariates. To tackle these issues, we consider an extension to generalized linear models by assuming nonlinear covariate effects in the mean function and allowing the variance to be an unknown but smooth function of the mean. We make no further assumption on the distributional form. The unknown functions are described by penalized splines, and the estimation is carried out using nonparametric quasi-likelihood. Simulation studies show the flexibility and advantages of our approach. We apply the model to the annual medical costs of heart failure patients in the clinical data repository (CDR) at the University of Virginia Hospital System. We also discuss how to adopt this modeling framework in correlated medical costs data.

For further information, please contact Dr. Emil Schwab, eschwab@utep.edu
Refreshments will be served in front of the colloquium room,
15 minutes before the start of the colloquium.