Academy of Mathematics and Systems Science, CAS
Colloquia & Seminars

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Inviter:

Title: Variable selection for generalized linear models with interval-censored failure time data

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Abstract:

Variable selection is often needed in many fields and has been discussed by many authors in various situations.
This is especially the case under linear models and when one observes complete data. Among others, one common situation where variable selection is required is to identify important risk factors from a large number of covariates. In this paper, we consider the problem when one observes interval-censored failure time data arising from generalized linear models, for which there does not seem to exist an established method. To address this, we propose a penalized least squares method with the use of an unbiased transformation and the oracle property of the method is established along with the asymptotic normality of the resulting estimators of regression parameters. Simulation studies were conducted and demonstrated that the proposed method performed well for practical situations. In addition, the method was applied to a motivating example about childrens mortality data of Nigeria.