Statistics Seminar

Department of Mathematical Sciences

DATE:	Thursday, November 29, 2018
TIME:	1:15pm – 2:15pm
LOCATION:	WH 100E
SPEAKER:	Qiqing Yu, Binghamton University
TITLE:	The Proportional Hazards Model with Linearly Time-dependent Covariates and Interval-censored Data

Abstract

The semi-parametric estimation under the proportional hazards (PH) model with a linearly time-dependent covariates and with interval-censored data has not been investigated before. The partial likelihood approach does not work and one has to use the generalized likelihood function (GLF). There is a challenge in this problem. The GLF must be in the form of the baseline hazard function, rather than the baseline survival function as in the PH model with time-independent covariates, and a feasible way to specify the hazard function is a piece-wise constant function. However, several naive ways do not yield a consistent estimator. We propose proper modifications of the GLF.