

**Statistics Seminar**  
Department of Mathematical Sciences

|                  |   |
|------------------|---|
| <b>DATE:</b>     | Thursday, September 8, 2016                   |
| <b>TIME:</b>     | 1:15p-2:40p                                   |
| <b>LOCATION:</b> | WH 100E                                       |
| <b>SPEAKER:</b>  | Qiqing Yu, Binghamton University              |
| <b>TITLE:</b>    | Piecewise Cox Models With Right-Censored Data |

**Abstract**

We study a general class of piecewise Cox models. We discuss the computation of the semi-parametric maximum likelihood estimates (SMLE) of the parameters, with right-censored data, and a simplified algorithm for the maximum partial likelihood estimates (MPLE). Our simulation study suggests that the relative efficiency of the PMLE of the parameter to the SMLE ranges from 96% to 99.9%, but the relative efficiency of the existing estimators of the baseline survival function to the SMLE ranges from 3% to 24%. Thus the SMLE is much better than the existing estimators. To assess the appropriateness of the model assumption, we propose a simple diagnostic plotting method. This method enables us to determine an appropriate cut point. We apply the piecewise Cox model to our cancer research data.

From:  
<http://www2.math.binghamton.edu/> - **Binghamton University Department of Mathematical Sciences**

Permanent link:  
<http://www2.math.binghamton.edu/p/seminars/stat/160908>

Last update: **2016/09/07 16:18**

