Statis 697G-01 (#69932)
ST-Survival Analysis
Spring 2016
MWF 11:15AM-12:05PM LGRT Rm 177
Course Website: http://www.math.umass.edu/∼h sieh/stat697G

Instructor: Professor H. K. Hsieh ("Shay")
Office: LGRT 1444; Office phone: 545-1796; Cell-phone: 665-0050
e-mail: huikhsieh@gmail.com
Office Hours: TBA + Appointments

Course Description:

Censored or incomplete data occur commonly in medical or engineering studies. Standard statistical methods do not deal with this kind of data. This course discusses statistical inferences based on such kind of data. This is an applied oriented methodology course. Topics include: Basic quantities and models for survival data; censoring; Product-Limit estimates of survival function and other non-parametric estimation of basic quantities for censored data; estimation procedures for parametric survival functions; graphical methods for survival distribution fitting; hypothesis testing; semi-parametric proportional hazards regression with fixed and time-dependent covariates; regression diagnostics; inference for parametric regression models.

Pre-requisites: Solid mathematical statistics courses equvalent to S515/S516 or S607/S608; familiar with at least one statistical package or a programming skill in , e.g., R. Graduate students in all priciples are welcome.

Textbook: "Methods for Survival Data Analysis," 3rd ed. , by Lee and Wang, Wiley, 2003)

SAS Manual: Survival Analysis Using the SAS System, by Paul D. Allison, SAS Institute Inc., 1998.
Computing Software: SAS or its equivalent

Grading: Class Participation 40%; Home-works 60%.