

GRADUATE SEMINAR

Qian Zhao

Introduction to Survival Analysis and Longitudinal Data Analysis: Applications to NBA Career Lengths and Player Trajectories

MSc Student supervised by James McVittie

September 26th

11:30 AM

ED 438

Abstract: The aim of survival analysis is to analyze the statistical properties for the time measured from one event to another event, typically referred to as the failure time. The proportional hazards model prevails as one of the most commonly used semiparametric models as it makes no assumptions on the distribution of the failure times. Similarly, longitudinal data is defined as the data resulting from the observations of subjects that are measured repeatedly over time. Since longitudinal data are correlated, the analysis of changes in the corresponding response variable over time is achieved using a linear mixed-effect model. In this seminar, we will introduce some standard concepts from the areas of survival analysis and longitudinal data analysis. Specifically, we will focus on the proportional hazards model as well as the linear-effects model and will illustrate the use of these modelling procedures on the number of games played by NBA players measured over time.